

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0001**

Comment submitted by: Du Wayne

Jackson

2002/01/04

Comment	Type Editorial	Starting Page # 222	Starting Line # 17	Section
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Table 232 Line 17 correct the spelling of the word "Channel"

Suggested Remedy

Proposed Resolution	Recommendation:	Recommendation by
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Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0002**

Comment submitted by: Du Wayne

Jackson

2002/01/04

Comment	Type Technical, Non-binding	Starting Page # 163	Starting Line # 6	Section
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The required and optional modes (and consequently the associated FFT sizes) should be made consistent between the Licensed and License-exempt frequency bands. By this we recommend that OFDM with FFT size 256 should be mandatory, OFDMA with FFT size 2K should be mandatory and all others should be optional. This applies to both the uplink and downlink.

The reasoning behind this is that system vendors would be able to build a single chip-set that works in both frequency bands and deploy systems simply by changing transceivers.

Suggested Remedy

Proposed Resolution	Recommendation:	Recommendation by
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Reason for Recommendation

Resolution of Group Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions **l) none needed**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0003**

Comment submitted by: Du Wayne

Jackson

2002/01/04

Comment	Type Editorial	Starting Page # 19	Starting Line # 4	Section
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Paragraph 1.2.3 delete redundant " that of"

Suggested Remedy

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

Paragraph 1.2.3 delete redundant " that of"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0004**

Comment submitted by: Du Wayne

Jackson

2002/01/04

Comment	Type Editorial	Starting Page # 47	Starting Line # 11	Section
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Paragraph 6.2.4.2 Line 11 omit "a"

Suggested Remedy

Proposed Resolution	Recommendation:	Recommendation by
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Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0005**Comment submitted by: [Du Wayne](#)[Jackson](#)[2002/01/04](#)Comment Type [Technical, Non-binding](#) Starting Page # **52** Starting Line # **31** Section[Question : Paragraph 6.2.6.5.1 line 31. What is the maximum allowable number of simultaneous subscribers?](#)

Suggested Remedy

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [l\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0006**Comment submitted by: [Du Wayne](#)[Jackson](#)[2002/01/04](#)Comment Type [Editorial](#) Starting Page # **154** Starting Line # **36** Section[Paragraph 8.3.5.1.5 Table 192 add Tg/Tb ratios to the OFDMA chart.](#)

Suggested Remedy

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0007**

Comment submitted by: Du Wayne Jackson

2002/01/04

Comment	Type Editorial	Starting Page # 159	Starting Line # 11	Section
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Table 194 either delate the table or fill it in.

Suggested Remedy

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions l) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0008**

Comment submitted by: Du Wayne Jackson

2002/01/04

Comment	Type Technical, Non-binding	Starting Page # 161	Starting Line # 44	Section
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Paragraph 8.3.5.2.5.1 Frequency Control requirement tolerance Lines 47,48,49 appear to conflict with 8.3.5.3.2.4.1 lines 29,30,31

Suggested Remedy

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Modified**
change 20 to 4 on page 161, line 48 and page 167, line 28 and line 31

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0009**Comment submitted by: [Du Wayne](#)[Jackson](#)[2002/01/04](#)Comment Type [Technical, Non-binding](#) Starting Page # [177](#) Starting Line # [47](#) Section[Paragraph 8.3.5.3.3.7.2](#) Some additional explanation or clarification is needed regarding the "Backoff Mechanism"

Suggested Remedy

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [1\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0010**Comment submitted by: [Du Wayne](#)[Jackson](#)[2002/01/04](#)Comment Type [Technical, Non-binding](#) Starting Page # [177](#) Starting Line # [50](#) Section[Paragraph 8.3.5.3.3.7.3](#), question: what about Power Control?

Suggested Remedy

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [1\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0011**

Comment submitted by: Du Wayne

Jackson

2002/01/04

Comment Type **Editorial**Starting Page # **183**Starting Line # **30**

Section

Figure 223, Clarify Burst Profile parameters (m,c,p)

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Use Yigal's suggestion

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

"Yigal's suggestion" is, I assumed, Yigal's reply comment.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0012**

Comment submitted by: Roger

Marks

Member

2001/01/04

Comment	Type	Technical, Satisfied (was	Starting Page #	Glo	Starting Line #	Section
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In far too many cases, the draft specifies multiple options such that compliance with any of them leads to compliance with the standard. These options are not interoperable. There are many (a large but unknown number) of sets of options, any one of which would be compliant but none of which would interoperate with another set. A network standard should provide for interoperability, and the scope statement of all the 802.16 PARs specifies as much.

Suggested Remedy

Eliminate options that are not absolutely necessary.

When it is essential to retain alternatives, choose a single one as mandatory and let the others be optional.

If it is impossible to consolidate to this degree, at least reduce the alternatives to a small number of option sets, each of which specifies an interoperable system. List the options sets (profiles) in a table, specifying the required options, and name them with a term of the format "WirelessMAN Type N". The number of option sets should be less than 5 and certainly less than 10. If necessary, the table could have two

Proposed Resolution	Recommendation:	Recommendation by
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Reason for Recommendation

Resolution of Group	Decision of Group: Accepted-Modified
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motion: delete mode C_L -> 17:7 -> fails

motion: give editor discretion to construct table using the approved **interoperable** air interface naming convention (see resolution to comment 015) to reflect the air interface modes in the draft and whether they are mandatory or optional

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes	Editor's Actions
	k) done

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0013**

Comment submitted by: Hikmet

Sari

2002/01/04

Comment Type

Starting Page # **146**Starting Line # **1**

Section

The OFDM-based PHY has not been sufficiently harmonized between licensed bands and license-exempt frequency bands. It is clear that , as they stand, the specifications for license-exempt frequency bands are (unnecessarily) too much influenced by IEEE 802.11. Although these bands will be shared between wireless LAN and wireless access applications, I see no technical reason why the OFDM parameters for license-exempt bands will follow the IEEE 802.11 specs.

My specific comment is that the FFT size of 64 is suitable for wireless LANs but not for wireless access, where a larger cell size is needed. Removing this from the specs would reduce the number of different possibilities and would be a significant step to harmonize wireless access in

Suggested Remedy

Take out of the specs the FFT size of 64, or as an alternative, change its status from mandatory to optional.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: **Superseded******Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0014**

Comment submitted by: Michael

Stewart

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **1** Starting Line # Section **all / general comment**
 The document allows for OFDM, OFDMA, single-carrier, and variants within these broad categories (e.g. for licensed and unlicensed). This is more of a survey of possible waveforms than a standard.

Suggested Remedy

Downselect to one or at most two waveforms to apply to both licensed and unlicensed bands.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Withdrawn**

Rejected: 10-0

Reason for Group's Decision/Resolution

Currently at 3.5 modes. Variants have been downselected to 3 mandatory modes and one optional mode.

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0015**

Comment submitted by: Nico

van Waes

2002/01/04

Comment	Type	Starting Page #	Starting Line #	Section
	Editorial	1	1	entire draft

Group should decide on consistent naming of the PHY modes

In the MAC, they're called SC, OFDM and OFDMA and sporadically WirelessHUMAN. In the PHY, they're named SC, A_L, B_L, C_L and A_E, B_E and C_E.

Assuming the interleaving can be resolved, the only difference is the availability of BPSK in the LE PHY's. It's therefor quite reasonable to not seperately name the license-exempt PHYs.

Suggested RemedyName the licensed PHY specs SC, A_L, B_L, C_L : WiMAN_{SC}, WiMAN_{OFDM}, WiMAN_{OFDMA} and WiMAN_{OFDMA2} respectivelyName the license-exempt PHY specs A_E, B_E and C_E: WiHUMAN_{OFDM2}, WiHUMAN_{OFDM} and WiHUMAN_{OFDMA} respectively OR only name A_E WiMAN_{OFDM2} and refer to B_E and C_E as WiMAN_{OFDM}, WiMAN_{OFDMA} as well to stress the similarity.

(The whole LE system would still be WirelessHUMAN of course, just based on a generic WiMAN OFDM based PHY)

Replace all occurences of 802.16b with WirelessHUMAN

Proposed Resolution	Recommendation:	Recommendation by
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Reason for Recommendation

Resolution of Group	Decision of Group: Accepted-Modified
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air interface names: WirelessMAN
WirelessHUMAN

(vote 16 in favor, 2 objections)

basic PHY indication -SCM, -OFDM, -OFDMA

second level PHY indication: numeric

Add paragraph explaining naming-structure in introduction.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes	Editor's Actions k) done
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Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0016**Comment submitted by: **Lei****Wang**

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **1** Starting Line # **39** Section **Abstract**
point-to-multipoint? how about other topology, such as, point-to-point, or Mesh.

Suggested Remedy

remove "point-to-multipoint"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

This document amends IEEE Standard 802.16 by enhancing the medium access control layer and providing additional physical layer specifications in support of broadband wireless access at frequencies from 2-11 GHz. The resulting standard specifies the air interface of fixed (stationary) broadband wireless access systems providing multiple services. The medium access control layer is capable of supporting multiple physical layer specifications optimized for the frequency bands of application. The standard includes particular physical layer specification applicable to systems operating between 2 and 66 GHz. It supports point-to-multipoint architectures and, in license-exempt bands, optional mesh topology.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0017**

Comment submitted by: **Kenneth**

Stanwood

2001/12/19

Comment Type **Editorial**

Starting Page # **1**

Starting Line # **46**

Section **title page**

Add ",microwave" to the list of keywords.

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Add ",microwave" to the list of keywords.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0018**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment	Type	Editorial	Starting Page #	5	Starting Line #	5	Section	Editorial Instructiona
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No name or reference to the base standard (IEEE P802.16/D5-2001)

Suggested Remedy

Add a reference to the base standard

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change "The editing instructions contained in this amendment/corrigendum define how to merge the material contained herein into the existing base standard and its amendments to form the comprehensive standard." to

"The editing instructions contained in this amendment/corrigendum define how to merge the material contained herein into the existing base standard (IEEE Standard 802.16-2002) to form the comprehensive standard."

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0019**

Comment submitted by: Walt

Roehr

2002/01/02

Comment	Type	Starting Page #	Starting Line #	Section
	Editorial	5	7	Editorial inst

These "Editorial instructions are NOT followed at all, as far as I have found -- e.g., I haven't found ANY bold italics. Also have verbs like "add" (not "insert").

Suggested Remedy

I don't think following these editorial instructions is that important, so long as the intent is clear (if that is not the case and these "Editorial Instructions" are really important then "there's a whole bunch of fixen 'ta be dun". I'd just modify these instructions to reflect reality:

Replace "The editing instructions are shown bold italic. Four" with:

"Editing instructions are indicated by plain italics and the intent of instruction must be clear to one who is not familiar with the history or the technology. It is recommended that the four"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Replace "add" with "insert" on Page 18, line 34 ; Page 22, line 49 ; Page 26, line 38 ; Page 29, line 52 ; Page 30, line 21 ; Page 42, line 6 ; Page 42, line 27 ; Page 51, line 61 ; Page 52, line 18 ; Page 54, line 40 ; Page 60, line 26 ; Page 64, line 53 ; Page 64, line 59 ; Page 219, line 12 ; Page 219, line 64 ; Page 220, line 43 ; Page 222, line 3 ; Page 223, line 3 ; Page 223, line 49 ; Page 224, line 33 ; Page 229, line 4 ; Page 233, line 1 ;

Replace "Please add" with "Insert" on Page 65, line 41

Replace "move" with "change" on Page 54, line 40

change "editor note" font weight to "bold"

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0020**

Comment submitted by: David

Trinkwon

2002/01/04

Comment Type **Editorial**Starting Page # **18**Starting Line # **28**Section **Overview**

The proposed amended standard is a confusing range of PHY modes, options, parameters and topologies. Comment 351 (and others) identified the need to tidy this up in a more satisfactory way.

Contribution C80216a-02/02 identifies the distinguishing elements, options and parameters which should be used to achieve better clarity for the intended Service Provider and Regulatory users of the proposed standard, and suggests three alternative ways to re-structure the Nomenclature and PHY sections (including the existing 10-66GHz PHY type). These are summarized in Tables www, xxx, yyy of the Contribution.

Suggested Remedy

After discussion at Meeting #17 (Levi), the WG should decide which nomenclature to adopt and then re-edit the Draft Amendment accordingly.

Depending on the outcome, the terms PMP (Point-to-Multipoint), MSH / Mesh (Mutipoint-to-Multipoint), DVB (Digital Video Broadcasting, and AMB (Adaptive Multi-Beam) might need to be added to the list of Abbreviations and Acronyms.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: **Superceded******Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0021**Comment submitted by: **Bob****Nelson**

2002/01/03

Comment Type **Technical, Non-binding** Starting Page # **18** Starting Line # **34** Section **1.1**

The text in the first paragraph of the base document states that the standard covers "fixed point-to-multipoint broadband wireless access (BWA) systems". However, the text to be inserted by D1-2001 conflicts and and says a system can consist of "multipoint-to-multipoint" entities "In license-exempt bands, where optional mesh systems".

Suggested Remedy

Amend the contents of the first paragraph of the base document to state that both models are comprehended in the standard and the circumstances when each is applicable.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: **Superseded******Reason for Group's Decision/Resolution**[see comment 40](#)**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) [none needed](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0022**

Comment submitted by: Kenneth

Stanwood

2001/12/19

Comment Type **Editorial** Starting Page # **18** Starting Line # **34** Section **1.1**

Per the editing instructions on page 5, the editing instructions should be in bold.

Suggested Remedy

Either change the font of the instructions to bold, or change page 5 to not require bold.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0023**

Comment submitted by: Scott

Marin

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **18** Starting Line # **36** Section **1.1**

The phrase "In License-exempt bands" unnecessarily restricts mesh systems. The 802.16 standard should permit use of mesh systems in both licensed and license-exempt bands. The applicable regulations for a band may restrict the type of system that can be used in a band.

Suggested Remedy

Delete the phrase "In License-exempt bands".

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0024**

Comment submitted by: Subbu

Ponnuswamy

2002/01/04

Comment	Type	Starting Page #	Starting Line #	Section
	Technical, Non-binding	18	39	1.1

The AAS option results in an architecture that is not point-to-multipoint. While the optional mesh mode is described as "multipoint-to-multipoint" separately, the optional AAS mode is not described consistently throughout the document. Similar to the mesh-mode the AAS option results in a mode that is not strictly point-to-multipoint (PMP). For example, a full AAS system is a multiple point-to-point system, where broadcast maps are not necessary. Therefore, the AAS option should be explicitly mentioned wherever necessary, similar to the text added for mesh-mode. The AAS option does provide compatible operation with PMP mode, thereby resulting in a hybrid PMP/multiple point-to-point system. This also needs to be described wherever necessary.

Suggested Remedy

Add the following paragraph:

Similarly for the optional AAS mode, a "system" consists of an 802.16 MAC and PHY implementation with the appropriate extensions for AAS support and at least one AAS-compatible subscriber station communicating with a AAS-compatible base station via a multiple point-to-point radio air interface, along with the interfaces to external networks and services transported by the MAC and PHY.

Proposed Resolution	Recommendation:	Recommendation by
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Reason for Recommendation

Resolution of Group	Decision of Group: Rejected
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Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes	Editor's Actions) none needed
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Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

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2002/01/02

Comment # **0025**

Comment submitted by: **Walt**

Roehr

Comment Type **Editorial**

Starting Page # **18**

Starting Line # **41**

Section **1.2.2**

editorial instruction should not be replace 1.2.2

Suggested Remedy

change intruction to "insert at end"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Page 18, Line 60: change:

"Replace clause 1.2.3 with:"

to:

"Add the following subclause:"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Modified to "Insert the following subclause:"

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

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2002/01/03

Comment # **0026**

Comment submitted by: Avraham

Freedman

Comment Type **Technical, Non-binding**

Starting Page # **18**

Starting Line # **48**

Section **1.2.2**

"Nomadic" is not the only option 802.16a/b covers. I suggest to remove it and keep the general part general.

Suggested Remedy

delete "nomadic"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

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Comment # **0027**Comment submitted by: **Bob****Nelson**

2002/01/03

Comment Type **Editorial**Starting Page # **18**Starting Line # **48**Section **1.2.3**

The last sentence of the paragraph (lines 48 and 49) is unneeded within the standard

Suggested Remedy

Delete lines 48 and 49

~~This environment is well suited for nomadic point to multipoint access serving applications from residential through medium office applications.~~

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Delete lines 48 and 49

~~This environment is well suited for nomadic point to multipoint access serving applications from residential through medium office applications.~~

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0028**

Comment submitted by: Bob

Nelson

2002/01/03

Comment Type **Editorial**Starting Page # **18**Starting Line # **51**Section **1.2.2**

Use of "support" at the end of the sentence is redundant". Delete it.

Suggested Remedy

The ability to support near- and non-line-of-sight scenarios requires additional PHY functionality, such as the support of advanced power management techniques, interference mitigation/coexistence and smart antennae ~~support~~.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

The ability to support near- and non-line-of-sight scenarios requires additional PHY functionality, such as the support of advanced power management techniques, interference mitigation/coexistence and smart antennae ~~support~~.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

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Comment Date

2002/01/02

Comment # **0029**

Comment submitted by: **Walt**

Roehr

Comment Type **Editorial**

Starting Page # **18**

Starting Line # **60**

Section **1.2.2**

editorial instruction should not be replace 1.2.3

Suggested Remedy

change intruction to "insert at end"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

change intruction to "insert at end"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0030**

Comment submitted by: **Bob**

Nelson

2002/01/03

Comment Type **Editorial**

Starting Page # **19**

Starting Line # **11**

Section **1.2.3**

The paragraph (lines 11-13) is unneeded within the standard

Suggested Remedy

Delete lines 11-13

~~This environment is well suited for point to multipoint and multipoint to multipoint (“mesh”) access serv-ing applications from residential through SOHO applications. The optional mesh component allows for rout-ing traffic from mesh system to mesh system around obstructions at low radiated power levels.~~

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Delete lines 11-13

~~This environment is well suited for point to multipoint and multipoint to multipoint (“mesh”) access serv-ing applications from residential through SOHO applications. The optional mesh component allows for rout-ing traffic from mesh system to mesh system around obstructions at low radiated power levels.~~

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/04

Comment # **0031**

Comment submitted by: Subbu

Ponnuswamy

Comment Type **Technical, Non-binding**Starting Page # **19**Starting Line # **11**Section **1.2.3**

While the optional mesh mode is described separately, the optional AAS mode is not described consistently throughout the document. Similar to the mesh-mode the AAS option results in a mode that is not strictly point-to-multipoint (PMP). For example, a full AAS system is a multiple point-to-point system, where broadcast maps are not necessary. Therefore, the AAS option should be explicitly mentioned wherever necessary, similar to the text added for mesh-mode.

Suggested Remedy

Change "This environment is well suited for point-to-multipoint and multipoint-to-multipoint ("mesh") access ..." to "This environment is well suited for point-to-multipoint , multiple point-to-point (AAS) and multipoint-to-multipoint ("mesh") access...."

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/04

Comment # **0032**Comment submitted by: **Itzik****Kitroser**Comment Type **Editorial**Starting Page # **19**Starting Line # **12**Section **1.2.3**

This is not the proper place to this sentence.

Suggested Remedy

Remove the sentence "The optional mesh component allows for routing traffic from mesh system to mesh system around obstructions at low radiated power levels."

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0033**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type **Technical, Satisfied (was** Starting Page # **19** Starting Line # **12** Section **1.2.3**

The sentence belongs in a marketing brochure not in a standard

Suggested Remedy

Remove the sentence "The optional mesh component allows for routing traffic from mesh system to mesh system around obstructions at low radiated power levels."

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0034**

Comment submitted by: David

Trinkwon

2002/01/04

Comment Type **Technical, Binding**Starting Page # **19**Starting Line # **15**Section **Overview**

With this proposed amendment, IEEE 802 will offer six (or more) air interfaces for license exempt bands :

- a) 802.11 variants
- b) 802.16 OFDM PMP 64-FFT
- c) 802.16 OFDM PMP 256-FFT
- d) 802.16 OFDM PMP 512-FFT
- e) 802.16 OFDM Mesh

Suggested Remedy

Add a Summary table of the various alternatives in the Overview, together with main characteristics / differentiators.

Create an ad hoc group to add an informative appendix containing the comparative performance / evaluation characteristics of the alternatives (incl 802.11).

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Rejected**

vote 7 in favor, 12 against

Reason for Group's Decision/Resolution

Rejected due to lack of text proposed for the document.

Rejected due to foreseeable lack of consensus on performance data.

Group's Notes**Group's Action Items****Editor's Notes****Editor's Actions** h) defer to next round

Commenter claimed comment was inappropriate superceded. Deferred to next round.

Comment will be rejected by default unless any discrete text changes are proposed.

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0035**

Comment submitted by: David

Trinkwon

2002/01/04

Comment	Type	Technical, Binding	Starting Page #	19	Starting Line #	15	Section	Overview
---------	------	--------------------	-----------------	----	-----------------	----	---------	----------

With this proposed amendment, IEEE 802 will offer five (or more) air interfaces for license bands :

- a) Single Carrier PMP (10-66GHz)
- b) Single Carrier PMP (2-11GHz)
- c) OFDM PMP (various FFT sizes)
- d) OFDMA (DVB) PMP
- e) OFDM (AMB) PMP

Suggested Remedy

Add a Summary table of the various alternatives in the Overview, together with main characteristics / differentiators

Create an ad hoc group to add an informative appendix containing the comparative performance / evaluation characteristics of the alternatives (incl the existing 802.16 air interface). Bearing in mind the NLOS FRD Requirements, all comparative analysis should be done at a 16-QAM benchmark modulation rate.

Contribution 802.16.3c-01/41 (accepted by TG3 at Mtg #12 (Hilton Head Island) includes the "Key System Characteristics and Evaluation Criteria"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Rejected**

vote 4 in favor, 11 against

Reason for Group's Decision/Resolution

Rejected due to lack of text proposed for the document.

Rejected due to foreseeable lack of consensus on performance data.

Group's Notes**Group's Action Items****Editor's Notes****Editor's Actions** h) defer to next round

Commenter claimed comment was inappropriate superceded. Deferred to next round.

Comment will be rejected by default unless any discrete text changes are proposed.

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0036**Comment submitted by: **Scott****Marin**

2002/01/04

Comment Type **Editorial** Starting Page # **19** Starting Line # **17** Section **2**

The normative reference section is blank.

Suggested Remedy

Delete "2. Normative References"

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

Delete "2. Normative References"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0037**Comment submitted by: **Walt****Roehr**

2002/01/02

Comment Type **Editorial** Starting Page # **19** Starting Line # **25** Section **3.1**"system" should be possessive
two locations: line 25 and 26

Suggested Remedy

change "systems" to "system's"

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

change "systems" to "system's"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

2002/01/03

Comment # **0038**

Comment submitted by: **Bob**

Nelson

Comment Type **Editorial**

Starting Page # **19**

Starting Line # **26**

Section **3.1**

"systems" should be possessive

Suggested Remedy

Change **systems** on line 26 and the first occurrence on line 27 to **system's**

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Change **systems** on line 26 and the first occurrence on line 27 to **system's**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0039**Comment submitted by: **Bob****Nelson**

2002/01/03

Comment Type **Editorial**Starting Page # **19**Starting Line # **34**Section **3.16**

"in between" is redundant

Suggested Remedy

Change text to:

3.16 dynamic frequency selection (DFS): The ability of a system to switch to different physical RF channels **in** between transmit and receive activity based on channel measurement criteria.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change text to:

3.16 dynamic frequency selection (DFS): The ability of a system to switch to different physical RF channels **in** between transmit and receive activity based on channel measurement criteria.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0040**

Comment submitted by: Jose

Costa

2002/01/02

Comment Type **Technical, Non-binding** Starting Page # **19** Starting Line # **42** Section **3.17**

It is very dangerous to change the definition of FWA that was in the original IEEE standard and also in the published Recommendation ITU-R F.1399. The proposed change is NOT editorial and the original definition should be retained.

Suggested Remedy

It is noted that the intent is to include the concept of nomadic operation. It would be better to do so in the context of BWA, rather than FWA. The definition of BWA in the original BWA standard (according to draft version 2001-07-24, which is the only one I have) is neutral with respect to mobility. BWA can be fixed, nomadic and mobile. The problem can be solved elegantly by referring to BWA throughout the document, rather than FWA, and adding "including nomadic operation" somewhere as part of the scope, for example at the end of the first sentence of the scope:

"This standard specifies the air interface, including the medium access control layer (MAC) and physical layers (PHY), of fixed point-to-multipoint broadband wireless access (BWA) systems providing multiple services, including nomadic operation."

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Accept the comment by making the following changes to the draft:

Page:	Line:	From:	To:
1	45	fixed broadband wireless access	broadband wireless access
94	42	Fixed wireless systems	Broadband wireless access systems
137	55	fixed wireless applications	broadband wireless access applications
205	9	fixed point to multipoint access	point-to-multipoint

"Page 25: Replace lines 28-32 with

'This standard specifies the physical layer (PHY) and medium access control layer (MAC) of the air interface of interoperable point-to-multipoint (and, in license-exempt bands, optional mesh topology) broadband wireless access systems. The specification enables access to data, video, and

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

2002/01/03

Comment # **0041**

Comment submitted by: **Bob**

Nelson

Comment Type **Editorial**

Starting Page # **19**

Starting Line # **43**

Section **3.??**

"Nomadic operation" is referenced in 3.17 but is not defined in either the base document or D1-2001

Suggested Remedy

Add definition of "nomadic" to clause 3

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/03

Comment # **0042**Comment submitted by: **Avraham****Freedman**Comment Type **Technical, Non-binding**Starting Page # **19**Starting Line # **50**Section **4**

Missing abbreviations

Suggested Remedy

Add:

BER Bit Error Rate

CINR Carrier to Noise and Interference Ratio

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Add:

BER Bit Error Ratio (<= check base!)

CINR Carrier to Noise and Interference Ratio

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2001/12/19

Comment # **0043**Comment submitted by: **Kenneth****Stanwood**Comment Type **Editorial**Starting Page # **19**Starting Line # **58**Section **4**

Some acronyms still need to be added. In particular CSF and DRFM.

Suggested Remedy

Add:

"CSF Channel State Feedback"

and

"DRFM Downlink Radio Frequency Management"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Add:

"CSF Channel State Feedback"

and

"DRFM Downlink Radio Frequency Management"

to the list of acronyms.

Reason for Group's Decision/Resolution

(see also 707)

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)

Ballot Number: **4b**

Comment Date

[2002/01/03](#)

Comment # **0044**

Comment submitted by: [Avraham](#)

[Freedman](#)

Comment Type [Editorial](#)

Starting Page # **19**

Starting Line # **62**

Section **4**

[Add an abbreviation for FCH](#)

Suggested Remedy

Add:

[FCH](#) [Frame Control Header](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Add:

[FCH](#) [Frame Control Header](#)

Reason for Group's Decision/Resolution

[see also 707](#)

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

2002/01/03

Comment # **0045**

Comment submitted by: **Avraham**

Freedman

Comment Type **Editorial**

Starting Page # **20**

Starting Line # **4**

Section **4**

Abbreviation for CP is missing

Suggested Remedy

Add:

"CP Cyclic Prefix"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Add:

"CP Cyclic Prefix"

Reason for Group's Decision/Resolution

see also 707

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/03

Comment # **0046**Comment submitted by: **Avraham****Freedman**Comment Type **Editorial**Starting Page # **20**Starting Line # **15**Section **4**

Missing abbreviation

Suggested Remedy

Add:

RTG RX/TX Transition Gap

TTG TX/RX Transition Gap

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Add:

RTG Receive/Transmit Transition Gap

TTG Transmit/Receive Transition Gap

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

2002/01/04

Comment # **0047**

Comment submitted by: **Subbu**

Ponnuswamy

Comment Type **Editorial**

Starting Page # **20**

Starting Line # **15**

Section **4**

Fix typo

Suggested Remedy

Change "Small Aperture Radar" to "Synthetic Aperture Radar"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change "Small Aperture Radar" to "Synthetic Aperture Radar"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0048**

Comment submitted by: David

Trinkwon

2002/01/04

Comment	Type	Starting Page #	Starting Line #	Section
	Editorial	20	20	Acronyms

SISO is defined as "Soft Input Soft Output"

Suggested Remedy

Change SISO to "Single Input Single Output"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

SISO is actually conflictingly used in the turbo coding context and in the antenna context

Modify as follows:

page 19, line 37: **3.27 Turbo decoding:** Soft input soft output decoding

page 20, line 30: replace "soft input soft output with "single input single output"

page 81, line 31: delete "(SISO)"

page 84, line 41: replace "soft input - soft output or SISO decoder" with "Turbo decoding"

page 84, line 42: replace "SISO" with "Turbo"

page 234, line 13: replace "soft input soft output (SISO)" with "Turbo"

page 234, line 24 & 29: replace "SISOs" with "Turbo decoders"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0049**

Comment submitted by: Tom

Kolze

2002/01/03

Comment Type **Technical, Binding** Starting Page # **22** Starting Line # **1** Section **6**.

This MAC departs greatly from DOCSIS 1.1 MAC, although our working group has heard from some license holders that consider it highly desirable to be aligned with DOCSIS MAC. The changes to DOCSIS 1.1 MAC necessary for adaptation to wireless is very minimal, as discussed and presented in numerous presentations to the working group. Even given the above two facts, the working group DID vote to eliminate from consideration all but a small set of documents for forming the basis of its common MAC, and specifically voted DOWN the motion for INCLUDING DOCSIS 1.1 MAC in the set of documents which could be drawn upon. It is not surprising that the 802.16 MAC is a vast departure from the DOCSIS MAC, given this set of votes. The only surprise is that the group voted in this pattern in the face of license holders expressed wishes otherwise. It is mv position that the 802.16 standard needs to align its MAC to the DOCSIS world.

Suggested Remedy

Adopt and build upon the recommendations and proposals from the individuals within 802.16 supporting the DOCSIS MAC.

Proposed Resolution Recommendation: Recommendation by**Reason for Recommendation****Resolution of Group Decision of Group: Rejected****Reason for Group's Decision/Resolution**

The title of the project PAR ("Medium Access Control Modifications and Additional Physical Layer Specifications for 2-11 GHz") makes it quite clear that the intent of the project is to develop modifications to the MAC described in IEEE Standard 802.16. The Working Group has consciously made the decision, again and again, that the 802.16 MAC is best suited for wireless metropolitan area networks.
[Reason developed by Roger Marks and entered 4 April 2002]

Group's Notes**MAC****Group's Action Items**

Retrieve rejection text from TG1 database

Editor's Notes Editor's Actions l) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0050**Comment submitted by: **Walt****Roehr**

2002/01/02

Comment Type **Editorial** Starting Page # **22** Starting Line # **6** Section **6**

"T" of Two-way is underlined

Suggested Remedy
take off the underline

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0051**Comment submitted by: **Avraham****Freedman**

2002/01/03

Comment Type **Technical, Non-binding** Starting Page # **22** Starting Line # **10** Section **6**

The base standard describes in section 6 the P-MP architecture, from the MAC point of view. If mesh architecture is to be introduced, it should be described in that paragraph in a similar manner.

Suggested Remedy
Add more text referring to mesh. The text should be provided by tg4/mesh proponents.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Modified**

Delegate the responsibility to Mika and Nico to pick the most appropriate text.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0052**Comment submitted by: **Mika****Kasslin**

2002/01/05

Comment Type **Technical, Satisfied (was** Starting Page # **22** Starting Line # **10** Section **6**

Define a new sub-header for the mesh mode only. One is needed to convey mesh mode only information that is related e.g. to addressing and message classification.

Note: If accepted, introduction in clause 6.2.2.2 of the basic 802.16 standard has to be updated accordingly.

Suggested Remedy

Add a new sub-clause as follows:

6.2.2.2.4 Mesh sub-header

The Mesh sub-header is four bytes in length and is used to convey information needed to uniquely identify receiver node and to classify messages. It shall be used in all unicast transmissions in mesh mode. The Mesh sub-header is shown in Table X1 and its fields are defined in Table X2.

Tables X1 and X2 in the separate submission!!! <C802.16a-02/11>

Proposed Resolution Recommendation: Recommendation by**Reason for Recommendation****Resolution of Group** Decision of Group: **Accepted-Modified****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items**

Carl or Mika will modify/add the submitted text to insure that there are no undefined terms or actions.

Editor's Notes Editor's Actions **k) done****Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/04

Comment # **0053**Comment submitted by: **Subbu****Ponnuswamy**Comment Type **Editorial**Starting Page # **22**Starting Line # **24**Section **6.2.2.3**

Fix typos in Message Name (DL-UL-MAP) and Message Description (Downlink-Uplink MAP message)

Suggested Remedy

Change line 24 to:

33 DL-UL-MAP Downlink-Uplink MAP message Broadcast

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

removed the word "message" for consistency

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/04

Comment # **0054**Comment submitted by: **Vladimir****Yanover**Comment Type **Editorial**Starting Page # **22**Starting Line # **24**Section **6.2.2.3**

Typo

Suggested Remedy

Change "D-UL-MAP" to "DL-UL-MAP"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **l) none needed**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0055**

Comment submitted by: Nico

van Waes

2002/01/04

Comment **Type** **Technical, Non-binding** **Starting Page #** **22** **Starting Line #** **46** **Section** **6.2.2.3.2**

There is high and pointless redundancy with the baseline text. It seems that the PHY sync field is adequate to shuffle the differences into.

The suggested text creates suitable PHY sync fields for SC and OFDMA. The text in red ought to be replaced with something more suitable as suggested during the last meeting.

Suggested Remedy

Delete clause 6.2.2.3.2 entirely.

Add new clauses:

8.3.4.8.2.1.1 DL-MAP PHY synchronization field

The format of the PHY Synchronization Field of the DL-MAP message, as described in 6.2.2.3.2, is given in

Proposed Resolution **Recommendation:** **Recommendation by**

Reason for Recommendation

Resolution of Group **Decision of Group:** **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes **Editor's Actions** [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0056**

Comment submitted by: Bob

Nelson

2002/01/03

Comment Type **Technical, Satisfied (was** Starting Page # **22** Starting Line # **49** Section **6.2.2.3.2**

PHY type / DL-MAP format correspondence is ambiguous. The applicability of the generic definition in the base document is not discussed while formats for two specific PHYs are provided.

For 2-11 GHz SC (possibly others?) there is no need to support more than 255 downlink bursts in a single map.

The following notation on page 23 line 5 is incorrect:

"An exception applies for the framed continuous FDD downlink transmission format. in which the

Suggested Remedy

Rename "PHY Synchronization Field" to be "PHY Specific Data" in the base document discussions of the DL-MAP. As had originally been intended (by the base document editors), move all PHY specific fields defined in "6.2.2.3.2.1 2-11 GHz SC PHY" and "6.2.2.3.2.2 2-11 GHz OFDMA PHY (B_L)" to the appropriate PHY sections and their discussion of the "PHY Specific Data" fields.

Delete section 6.2.2.3.2 from the D1-2001

Make the size of the number of elements field PHY specific (variable).

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

1,2, and 4 elements accepted. Element 3, variable size element count, was not accepted.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions e) editor disagrees

Element 1 results in confusion for the document

Editor's Questions and Concerns

change "PHY synchronization field" to "PHY specific data" has not been done. It is too vague a name and annoying to implement, given that it would require renaming the base standard as well.

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0057**

Comment submitted by: **Kenneth**

Stanwood

2001/12/19

Comment Type **Editorial**

Starting Page # **22**

Starting Line # **49**

Section **6.2.2.3.2**

If the 2-11 GHz SC PHY and the 2-11 GHz OFDMA PHY DL MAPS are in subsections under 6.2.2.3.2, the 10-66 GHz PHY DL MAP should be also. (Note that this is what is done for the UL-MAP on page 26, line 33.

Suggested Remedy

On page 22, line 48 insert:

"Insert the following subsection heading before the material already in this section:

6.2.2.3.2.1 10-66 GHz PHY"

On page 22, line 49, change "Add the following at the end of this clause:" to "Add the following subsections to the end of 6.2.2.3.2:"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Superseded

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0058**

Comment submitted by: Vladimir

Yanover

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **22** Starting Line # **51** Section **6.2.2.3.2**

There is no reference in the text to the format of DL-MAP for OFDM

Suggested Remedy

Add the following:

Note. The DL-MAP format specified in Table 15 is used for both 10-66 GHz PHY layer and 2-11 GHz OFDM PHY layer.**Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed

Requires tDL and UL ables be removed from 6.2 and grafted onto tables in D5

Formats are now valid for all PHY's /Nico

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0059**

Comment submitted by: Carl

Eklund

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **23** Starting Line # **1** Section **6.2.2.3.2.1**

The DL-MAP should not be redefined for a SC system. It might be appropriate to redefined the PHY specific fields i.e. PHY Synchronization and the information elements if this is warranted from a technical viewpoint.

Suggested Remedy

Delete the section and add sections in the PHY defining the PHY synchronization field and the IE.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** l) none needed**Editor's Questions and Concerns****Editor's Action Items**Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0060**

Comment submitted by: Lei

Wang

2002/01/04

Comment Type **Editorial** Starting Page # **23** Starting Line # **10** Section **Table 146**

make this table title different from Table 147

Suggested Remedy

Change the table title to "SC PHY DL-MAP Message Format"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

create unique names for all tables and figures

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0061**Comment submitted by: **Scott****Marin**

2002/01/04

Comment **Type** **Technical, Non-binding** **Starting Page #** **23** **Starting Line #** **16** **Section** **6.2.2.3.2.1**

It appears that message types are duplicated, e.g. a type=2 message exists for both a 2-11 GHz system and a 10 to 66 GHz system. How does the system know which Type=2 message format to use?

Is there a mode bit somewhere in the standard that designates what format of message types to use. The system software probably needs to know which interpretation of the messages to apply.

Does the standard permit . for example. 10-66 GHz downlink and 2-11 GHz uplink? Please clariv.

Suggested Remedy

Discuss and clarify if appropriate.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0062**

Comment submitted by: Brian

Gieschen

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **23** Starting Line # **18** Section **6.2.2.3.2.1**

In table 146 the 'DCD Change Count' and 'PHY Synchronization Field' are in reverse order with respect to P802.15/D5 table 15. The ordering should be consistent with the existing standard.

Suggested Remedy

reverse the order of 'DCD Change Count' and 'PHY Synchronization Field' in table 146.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0063**

Comment submitted by: Kenneth

Stanwood

2001/12/19

Comment Type **Technical, Non-binding** Starting Page # **23** Starting Line # **18** Section **6.2.2.3.2.1**

It's a shame we couldn't come to a common abstract specification of the DL-MAP, but we should at least try to minimize unnecessary differences. The order of the DCD Change Count and the PHY Synchronization Fields are reversed in the DL-MAP for the 2-11 GHz SC PHY compared to both the 10-66 GHz PHY and the 2-11 GHz OFDM A PHY.

Suggested Remedy

Swap the order of the DCD Change Count and the PHY Synchronization Fields on page 23, lines 18-20.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0064**

Comment submitted by: Kenneth

Stanwood

2001/12/19

Comment Type **Editorial**Starting Page # **23**Starting Line # **20**Section **6.2.2.3.2.1**

Notes column should state "See applicable PHY section." as it does in the 10-66 GHz PHY section.

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0065**

Comment submitted by: Kenneth

Stanwood

2001/12/19

Comment Type **Technical, Non-binding**Starting Page # **23**Starting Line # **25**Section **6.2.2.3.2.1**

The Allocation Start Time is really is part of the synchronization.

Suggested Remedy

Move the Allocation Start Time to be part of the PHY synchronization field for the 2-11 GHz SC PHY DL-MAP, opening the door for bot SC PHYS (2-11 and 10-66) to use the same description, deferring PHY specific differences to chapter 8.

Move lines 59-61 on page 23 to the place in section 8.3 where the 2-11 GHz SC PHY's PHY Synchronization Field is defined.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0066**Comment submitted by: **Kenneth****Stanwood**

2001/12/19

Comment Type **Editorial**Starting Page # **23**Starting Line # **29**Section **6.2.2.3.2.1**

The 10-66 GHz PHY and the 2-11 GHz OFDMA PHY DL-MAPs simply state DL MAP Information Elements, with the structure of those elements deferred to the appropriate section of chapter 8, as was agreed in Nov/Dec 2000. The 2-11 GHz SC PHY should follow the same format.

Suggested Remedy

Replace lines 29-33 of page 23 with a single row with "DL-MAP_Information_Element()" in the syntax column and "See appropriate PHY section" in the Notes column.

Page 23, line 65 through page 24, line 6 should be moved to an appropriate subsection of section 8.3, including a tabular description of the DL-MAP Information Element Structure (the rows removed from table 146).

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0067**Comment submitted by: **Walt****Roehr**

2002/01/02

Comment Type **Editorial** Starting Page # **23** Starting Line # **44** Section **6.2.2.3.2.1**

it does not appear that headers with non-integral byte count can be generated (the DIUC is always used with Offset)

Suggested Remedychange "length" to read:
"Length of DL-MAP message in bytes."**Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0068**

Comment submitted by: Brian

Gieschen

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **24** Starting Line # **4** Section **6.2.2.3.2.1**

It is unclear whether 'Offset' in this context uses mini slots or physical slots. My understanding that 802.16A uses mini slots as units with the exception of part of OFDMA.

Suggested Remedy

replace
" iii) Offset"
with
" iii) Offset (mini-slots)"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0069**

Comment submitted by: Brian

Gieschen

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **24** Starting Line # **6** Section **6.2.2.3.2.2**
There is no section describing the DL map message for the OFDM phy.

Suggested Remedy

change line 7 - '6.2.2.3.2.2 2-11GHz OFDMA PHY (BL)'
to '6.2.2.3.2.3 2-11 GHz OFDMA PHY (BL)'

insert at line 6 - '

6.2.2.3.2.2 2-11 GHz OFDM PHY

For systems using the 2-11 GHz OFDM PHY the DL-MAP message is defined as shown in Table 15.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

Changes were implented. Generic map definition is in Chapter 6. Specific PHY-related map issues are in each PHY section 8.???

Group's Notes

MAC

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Comment originator agreed to convert type to "Technical, Satisfied" in email of 4 April 2002./Roger

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/04

Comment # **0070**

Comment submitted by: Lei

Wang

Comment Type **Editorial**Starting Page # **24**Starting Line # **6**

Section

add a sub-section for 2-11 GHz OFDM PHY (AL)

Suggested Remedy

1. insert the following text in line 6, page 24

6.2.2.3.2.2 2-11GHz OFDM PHY (AL)

For systems using the 2-11 GHz OFDM PHY (see clause 8.3.5.3.3), the DL-MAP message is defined in Table 15. Its PHY synchronization field is defined in Table 198, and its DL-MAP Information Element is defined in Table 199.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: **Superseded******Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0071**

Comment submitted by: Carl

Eklund

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **24** Starting Line # **9** Section **6.2.2.3.2.2**

The DL-MAP should not be redefined for a OFDMA system. It might be appropriate to redefined the PHY specific fields i.e. PHY Synchronization and the information elements if this is warranted from a technical viewpoint. Furthermore the DL_MAP prefix is required before the DL-MAP message can be decoded. This is a clear layer violation. The PHY shall provide the MAC with correctly decoded MAC PDUs

Suggested Remedy

Define the PHY synchronization field in the appropriate place. Define the IEs in the appropriate place. Define a PHY protocol for conveying the information carried in the "DL-MAP Prefix" to remove the layer violation.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0072**Comment submitted by: **Subbu****Ponnuswamy**

2002/01/04

Comment Type **Editorial**Starting Page # **25**Starting Line # **2**Section **6.2.2.3.2.2**

Change table 150 to table 147 (typo)

Suggested Remedy

Change line 2 to:

the 4 pad bits. A BS shall generate DL-MAP messages in the format shown in Table 147.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0073**Comment submitted by: [Walt](#)[Roehr](#)

2002/01/02

Comment Type [Technical, Non-binding](#) Starting Page # [25](#) Starting Line # [2](#) Section [6.2.2.3.2.2](#)

the only element with a non-integral byte count is the DL-MAP_Information_Element, which has a length of 38 bits. This is 2 (not 4) bit off a byte boundry. Therefore, padding defined as 4 bit units may not suffice for padding the header to an integral number of bytes

Suggested Remedy

I don't know -- make the DL-MAP_Information_Element 40 bits long?

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

The PHY specific synchronization maps need to be padded to an integral number of bytes.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

[Only relevant to OFDMA PHY](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0074**Comment submitted by: [Lei](#)[Wang](#)

2002/01/04

Comment Type [Editorial](#) Starting Page # [25](#) Starting Line # [5](#) Section [Table 147](#)

[make this table title different from Table 146.](#)

Suggested Remedy

[Change the table title to "2-11GHz OFDMA PHY DL-MAP message format"](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [l\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0075**

Comment submitted by: Vladimir

Yanover

2002/01/04

Comment	Type	Starting Page #	Starting Line #	Section
	Technical, Non-binding	25	6	6.2.2.3.2.2

Specifying DL_MAP_prefix() as a part of MAC PDU would mean a violation of layering defined for 802.16 systems. Particularly, it is specified in 8.1.3 that MAC always receives a complete MAC PDU from PHY (PHY_MACPDU.indication primitive) with no communication in-between. Suggested remedy makes almost no change in the way data is transmitted but removes the definition of DL_MAP_prefix() to PHY.

Suggested Remedy

Replace at the line 16 "DUIC" with "Rate_ID"

Remove the whole DL_MAP_prefix() structure from the message to a separated table; add the following definition:

"DL_MAP_prefix() is a PHY field that occupies first 4 bytes of the payload of the first DL FEC block in the frame. The first FEC block is transmitted with the lowest possible data rate. DL_MAP_prefix() specifies
- PHY parameters of the following FEC blocks

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Superceded
---------------------	--------------------------------------

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes	Editor's Actions
	l) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0076**

Comment submitted by: **Itzik**

Kitroser

2002/01/04

Comment Type **Technical, Non-binding**

Starting Page # **25**

Starting Line # **7**

Section **6.2.2.3.2.2**

The format of DL-MAP should same as in the OFDM case and in 80216_D5.pdf document, the specific changes required for OFDMA are brought in the PHY section.

Suggested Remedy

Remove section 6.2.2.3.2.2

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Superseded

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0077**

Comment submitted by: Brian

Gieschen

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **25** Starting Line # **16** Section **6.2.2.3.2.2**
FCH should be separate from the DL map. The FCH section should be enhanced with an OFDMA version of FCH.

Suggested Remedy

Remove from table 147 the lines '

```
DL_MAP_prefix() {  
  DIUC  
  DL_MAP_Message_Rectangle() {  
    No_OFDM_Symbols  
    No_Sub_channels  
  }  
}
```

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: **Accepted****

This has been implemented as suggested in /D2

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0078**

Comment submitted by: Kenneth

Stanwood

2001/12/19

Comment Type **Editorial**Starting Page # **25**Starting Line # **16**Section **6.2.2.3.2.2**

Shouldn't the structure of the DL_MAP_prefix() be described in the appropriate PHY section rather than here. That would be more consistent with the way other PHY specific fields are handled.

Suggested Remedy

On page 25, move lines 16-28 and the descriptions of these fields on pages 25 and 26 to an appropriate subsection of section 8.3.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0079**

Comment submitted by: Kenneth

Stanwood

2001/12/19

Comment Type **Technical, Non-binding**Starting Page # **25**Starting Line # **16**Section **6.2.2.3.2.2**

If I'm not mistaken, what is called DIUC on line 16 is called Rate_ID on line 58.

Suggested Remedy

Either change "DIUC" on line 16 to "Rate_ID" or change "Rate_ID" on line 58 to "DIUC"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0080**

Comment submitted by: Brian

Gieschen

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **25** Starting Line # **18** Section **6.2.2.3.2.2**

Table 147 the row starting with 'DL_MAP_Message_Rectangle() {' , the notes column 'Defines the OFDMA Slot {N,n}' is unclear since there is no definition of N or n.

Suggested Remedy

Table 147 line 18 change

'Defines the OFDMA Slot {N,n}'

to

'Defines the OFDMA Slot {N,n}. N=# of symbols. n=# of channels.'

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded**

see 586 and 587

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0081**

Comment submitted by: **Subbu**

Ponnuswamy

2002/01/04

Comment Type **Editorial**

Starting Page # **25**

Starting Line # **20**

Section **6.2.2.3.2.2**

Fix typo in No_OFDM_Symbols (It should be No_OFDMA_Symbols)

Suggested Remedy

Change line 20 to:

No_OFDMA_Symbols 10 bits

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

All instances of NO_OFDMA_SYMBOLS to be replace with NO_OFDM_SYMBOLS

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0082**Comment submitted by: **Kenneth****Stanwood**

2001/12/19

Comment Type **Editorial**Starting Page # **25**Starting Line # **31**Section **6.2.2.3.2.2**

The 2-11 GHz SC PHY and teh 10-66 GHz PHY both defer the definition of the structure of the PHY synchronization field to chapter 8, as was agreed in Nov/Dec 2000, the description for the 2-11 GHz OFDMA PHY should do the same.

Suggested Remedy

On page 25, move lines 31-35 to the appropriate subsection of chapter 8.3.

On page 26, move lines 9-14 to the same subsection of 8.3.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: **Superceded******Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0083**

Comment submitted by: Kenneth

Stanwood

2001/12/19

Comment Type **Technical, Non-binding** Starting Page # **25** Starting Line # **40** Section **6.2.2.3.2.2**

The Allocation Start Time is really is part of the synchronization.

Suggested Remedy

Move the Allocation Start Time to be part of the PHY synchronization field for the 2-11 GHz OFDMA PHY DL-MAP

Move lines 23-26 on page 26 to the place in section 8.3 where the 2-11 GHz OFDMA PHY's PHY Synchronization Field is defined.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0084**

Comment submitted by: Subbu

Ponnuswamy

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **26** Starting Line # **26** Section **6.2.2.3.2.2**

Change the units from Physical Slots to mini-slots (consistent with other modes)

Suggested Remedy

Change Line 25 to:

DL-MAP in units of mini-slots. The start time is relative to the start of the frame in which

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0085**

Comment submitted by: **Scott**

Marin

2002/01/04

Comment Type **Editorial**

Starting Page # **26**

Starting Line # **28**

Section **6.2.2.3.2.2**

"information Element". Check capitalization

Suggested Remedy

replace "Element" with "element"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0086**

Comment submitted by: Bob

Nelson

2002/01/03

Comment Type **Technical, Non-binding** Starting Page # **26** Starting Line # **31** Section **6.2.2.3.4**

With the exception of the format and meaning of the *Allocation Start Time* field and the presence of the *Acknowledgement_Time*, *Ranging Backoff Start*, and *Ranging Backoff End* fields in the SC UL-MAP format the UL-MAP definitions in D1-2001 are essentially the same (and compatible) with the base document UL-MAP definition.

For 2-11 GHz SC there is no need to support more than 255 uplink bursts in a single map.

Suggested Remedy

Merge the definitions of the UL-MAP to the version in the base document (ie delete 6.2.2.3.4 from D1-2001).

Amend the definition of *Alloc Start Time* in the base document (IEEE P802.16/D5-2001) line 48 to be:

Effective start time of the uplink allocation defined by the UL-MAP ~~in units of mini-slots~~. The units and time relevance of the field are PHY specific.

Make the size of the number of elements field PHY specific (variable).

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Modified**

This includes the removal of the *Acknowledgement_Time* and modification of the definition of the UL-MAP in units of physical slots.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0087**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **26** Starting Line # **31** Section **6.2.2.3.5**

There is high and pointless redundancy with the baseline text.

It should be noted that for OFDMA, only the padding nibble is added, which would be harmless to other PHY's which allocate all fields in whole bytes. Therefor, adding the padding nibble to the generic UL-MAP should be fine.

For the SC PHY, a number of additional fields are defined. It seems sufficient to merely state those, rather than the whole MAP. I'm not sure what's so special about this UL-MAP element description here. compared to the generic description. so we could probably get rid of that as well.

Suggested Remedy

Replace 6.2.2.3.5 with:

6.2.2.3.5 Uplink MAP (UL-MAP) message

Insert Table TBD3 in Table 17 above last closing bracket:

Table TBD3-UL-MAP message format

Syntax	Size(bits)	Notes
--------	------------	-------

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Add the following to the end of this section.

6.2.2.3.4 Uplink MAP (UL-MAP) message

Insert Table TBD3 in Table 17 above last closing bracket:

Table TBD3-UL-MAP message format

Syntax	Size(bits)	Notes
if(!byte boundary) { Padding Nibble }	<8	Padding zeroes till byte boundary

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0088**

Comment submitted by: Vladimir

Yanover

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **26** Starting Line # **41** Section **6.2.2.3.4.1**

There is no reference in the text to the format of UL-MAP for OFDM

Suggested Remedy

Add the following:

Note. The UL-MAP format specified in Table 17 is used for both 10-66 GHz PHY layer and 2-11 GHz OFDM PHY layer.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Superseded

The UL-MAP formats have been merged in a previous comment.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Formats are now valid for all PHY's /Nico

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0089**

Comment submitted by: Carl

Eklund

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **27** Starting Line # **1** Section **6.2.2.3.4.2**

The UL-MAP message shall not be respecified in the amendment as there is zero technical justification for doing so. The concept of Ack Time is not needed on top of the already humungous of other ack mechanisms defined in the amendment.

Suggested Remedy

Delete entire section and insert the definition of the IE in the SC PHY section.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0090**

Comment submitted by: Kenneth

Stanwood

2001/12/19

Comment Type **Technical, Non-binding** Starting Page # **27** Starting Line # **22** Section **6.2.2.3.4.2**

The Acknowledgement Start Time is not used by the current request/grant protocol.

Suggested Remedy

On page 27 delete line 24 and lines 59-63.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0091**

Comment submitted by: Subbu

Ponnuswamy

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **27** Starting Line # **23** Section **6.2.2.3.4.2**

Acknowledgement_Time was removed from baseline document and other modes based one previous discussions. No need to reintroduce this at this point, as the "Acknowledgement_Time" serves no useful purpose.

Suggested Remedy

Remove line 23 "Acknowledgement_Time" from Table 148

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superceded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0092**

Comment submitted by: Subbu

Ponnuswamy

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **27** Starting Line # **23** Section **6.2.2.3.4.2**

Acknowledgement_Time was removed from baseline document and other modes based one previous discussions. No need to reintroduce this at this point, as the "Acknowledgement_Time" serves no useful purpose.

Suggested Remedy

Remove the description of Ack Time from line 59 to 63

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superceded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0093**Comment submitted by: **Kenneth****Stanwood**

2001/12/19

Comment **Type** **Technical, Non-binding** **Starting Page #** **27** **Starting Line #** **25** **Section** **6.2.2.3.4.2**

The Ranging Backoff Start and End are already in the UCD message. Unless systems using this PHY needs them more often, they should not be in teh UL-MAP also.

Suggested Remedy

On page 27, delete lines 25-28.

On page 27, delete line64 through page 28, line 6.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superceded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0094**

Comment submitted by: Kenneth

Stanwood

2001/12/19

Comment Type **Editorial**Starting Page # **27**Starting Line # **31**Section **6.2.2.3.4.2**

The 10-66 GHz PHY and the 2-11 GHz OFDMA PHY UL-MAPs simply state UL MAP Information Elements, with the structure of those elements deferred to the appropriate section of chapter 8, as was agreed in Nov/Dec 2000. The 2-11 GHz SC PHY should follow the same format.

Suggested Remedy

Replace lines 31-35 of page 27 with a single row with "UL-MAP_Information_Element()" in the syntax column and "See appropriate PHY section" in the Notes column.

Page 28, lines 14-54 should be moved to an appropriate subsection of section 8.3, including a tabular description of the UL-MAP Information Element Structure (the rows removed from table 148).

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0095**

Comment submitted by: Kenneth

Stanwood

2001/12/19

Comment Type **Editorial**Starting Page # **28**Starting Line # **7**Section **6.2.2.3.4.2**

The Request Backoff Start and End don't appear in table 148 and are already in the UCD message.

Suggested Remedy

On page 28, delete lines 7-13.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0096**

Comment submitted by: Kenneth

Stanwood

2001/12/19

Comment Type **Technical, Non-binding**Starting Page # **28**Starting Line # **8**Section **6.2.2..3.4.2**

There is currently no allowance for contention based data in the specification.

Suggested Remedy

On page 28, line 8, delete "data and"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0097**Comment submitted by: [Kenneth](#)[Stanwood](#)

2001/12/19

Comment Type [Editorial](#)Starting Page # **28**Starting Line # **48**Section **6.2.2.3.4.2**

An appropriate Table 150 does not exist in either the current document or in D5.

Suggested Remedy

Provide the missing table and reference it.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0098**Comment submitted by: [Kenneth](#)[Stanwood](#)

2001/12/19

Comment Type [Technical, Non-binding](#)Starting Page # **28**Starting Line # **51**Section **6.2.2.3.4.2**

Do you really want to require the first IE to have an offset of 0? It seems like an unnecessary limitation.

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: 802.16a/D2 [D1<770]

Ballot Number: 4b

Comment Date

Comment # 0099

Comment submitted by: Lei

Wang

2002/01/04

Comment Type Editorial

Starting Page # 28

Starting Line # 55

Section

add a subsection for OFDM UL MAP.

Suggested Remedy

1. insert the following text in line 6, page 24

6.2.2.3.4.3 2-11 GHz OFDM PHY

For systems using the 2-11 GHz OFDM PHY (see clause 8.3.5.3.3), the UL-MAP message is defined in Table 17. Its UL-MAP Information Element is defined in Table 200.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Superseded

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0100**

Comment submitted by: Kenneth

Stanwood

2001/12/19

Comment Type **Editorial**Starting Page # **29**Starting Line # **8**Section **6.2.2.3.4.3**

If Lines 27-32 are added to the UL-MAP Message format for the 10-66 GHz PHY, the size of the UL-MAP_Information_Element() on line 24 is set to "variable", and the notes column on the same line is set to "See applicable PHY section" then the UL-MAP section becomes identical for the 2-11 GHz OFDMA PHY and the 10-66 GHz PHY, allowing a simpler document.

Suggested Remedy

Do the above changes in anticipation of a merge of the two subsections, but don't merge them until it is certain that they don't require somehow incompatibly described UL-MAPs.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0101**Comment submitted by: **Lei****Wang**

2002/01/04

Comment **Type** **Technical, Non-binding** **Starting Page #** **29** **Starting Line #** **46** **Section**

All the PHYs except OFDMA use Mini-slot as the unit to specify the allocation start time in UL-MAP. why not keep consistent?
In addition, the OFDMA UL-MAP allocation start time only has 16 bits, while the other PHYs' UL-MAP allocation start time is 32 bits. So, the OFDMA UL-MAP allocation start time may need a bigger unit.

Suggested Remedy

change "Physical slots" to "Mini-slots".
change the size of the allocation start time from 16bits to 32 bits.

Proposed Resolution **Recommendation:** **Recommendation by****Reason for Recommendation****Resolution of Group** **Decision of Group:** **Accepted-Modified**

second element deferred

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Action item to Ken Stanwood concerning first element

Editor's Notes **Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0102**Comment submitted by: **Itzik****Kitroser**

2002/01/04

Comment Type **Technical, Non-binding**
Clarification.Starting Page # **29**Starting Line # **62**Section **6.2.2.3.6****Suggested Remedy**

For the parameters: Ranging Code, Ranging Symbol and Ranging sub-channel, change the line:" and the combination of Ranging Symbol, Ranging sub-channel and Ranging Code shall be used to address the sending SS."

to

" and the combination of Ranging Symbol, Ranging sub-channel, Ranging frame number and Ranging Code shall be used to address the sending SS."

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: **Accepted******Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** **k) done****Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0103**

Comment submitted by: [Itzik](#)

[Kitroser](#)

2002/01/04

Comment Type **Technical, Non-binding**

Starting Page # **30**

Starting Line # **17**

Section **6.2.2.3.6**

To be coherent with the previous lines.

Suggested Remedy

change "broadcast CID" to "initial ranging CID"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0104**Comment submitted by: **Bob****Nelson**

2002/01/03

Comment Type **Technical, Non-binding**Starting Page # **30**Starting Line # **24**Section **6.2.2.3.30**

The map format is applicable to any PHY.

Suggested RemedyRename section from *6.2.2.3.30 OFDM DL-UL-MAP* to *6.2.2.3.30 DL-UL-MAP*.

Alter the content of table 150 by setting the field definitions and field width values to match those of the corresponding fields of the UL-MAP and DL-MAP definitions in the base document.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0105**

Comment submitted by: Carl

Eklund

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **30** Starting Line # **26** Section **6.2.2.3.30**

There is very little technical justification for having a combined DL-UL-MAP. The bandwidth wasted by the generic MAC header does not warrant throwing away the synergy between the standard and the amendment.

Suggested Remedy

Define appropriate PHY synchronization field and IE for the DL-MAP message to be used with the OFDM PHY. Define appropriate IE for UL-MAP message. When defining the IEs correct the UL ie to 32 bits and the DL to be 16 bits.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group**Decision of Group: **Accepted-Clarified**

Additional action is to remove this message completely.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes**

Editor's Actions k) done

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0106**Comment submitted by: **Subbu****Ponnuswamy**

2002/01/04

Comment Type **Editorial**Starting Page # **30**Starting Line # **27**Section **6.2.2.3.30**

Include explicit reference the table in the text.

Suggested Remedy

Replace line 27 with:

downlink directions. The format of the DL-UL-MAP is shown in Table 150.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0107**Comment submitted by: **Lei****Wang**

2002/01/04

Comment Type **Technical, Satisfied (was**Starting Page # **30**Starting Line # **31**Section **Table 150**

Wrong sizes of UL-MAP IE and DL-MAP IE given in Table 150.

Suggested Remedy

change the size of DL-MAP_information_element from 32 bits to 16 bits.

change the size of UL-MAP_information_element from 16 bits to 32 bits.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0108**Comment submitted by: [Brian](#)[Gieschen](#)

2002/01/04

Comment Type [Technical, Satisfied \(was](#)Starting Page # **30**Starting Line # **40**Section **6.2.2.3.30**[The uplink Channel ID parameter is missing.](#)**Suggested Remedy**[add after the row starting with 'No_UL_MAP_elements'
a new row 'Uplink channel ID' with a size column entry of '8 bits'](#)**Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: [Superceded](#)****Reason for Group's Decision/Resolution**[Field appeared in DL_UL map which has been deleted.](#)**Group's Notes**[MAC](#)**Group's Action Items****Editor's Notes****Editor's Actions** [1\) none needed](#)[Comment originator agreed to convert type to "Technical, Satisfied" in email of 4 April 2002./Roger](#)**Editor's Questions and Concerns****Editor's Action Items**Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0109**Comment submitted by: [Kenneth](#)[Stanwood](#)

2001/12/19

Comment Type [Editorial](#)Starting Page # **30**Starting Line # **55**Section **6.2.2.3.30**[The notes column on lines 55 and 61 should read "See applicable PHY section".](#)**Suggested Remedy****Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: [Superceded](#)****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** [1\) none needed](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0110**

Comment submitted by: Vladimir

Yanover

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **30** Starting Line # **55** Section **6.2.2.3.30**
 The size of DL_MAP_Information_Element() should be 16 bits
 The size of UL_MAP_Information_Element() should be 32 bits

Suggested Remedy

Change the data in the Table 150 correspondently

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0111**

Comment submitted by: Lei

Wang

2002/01/04

Comment Type **Editorial** Starting Page # **31** Starting Line # **1** Section
 6.2.2.4.3 and 6.2.2.4.4 are invalid section numbers in both TG1 D5 and TG3/4 D1.

Suggested Remedy

change 6.2.2.4.3 and 6.2.2.4.4 to 6.2.2.3.2 and 6.2.2.3.4, respectively.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0112**

Comment submitted by: Vladimir

Yanover

2002/01/04

Comment Type **Editorial**Starting Page # **31**Starting Line # **3**Section **6.2.2.3.31****Editorial****Suggested Remedy****Replace****"6.2.2.3.31 Standalone ARQ Feedback"**

with

"6.2.2.3.31 Standalone ACK Message"**Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: **Accepted-Modified******Align all name instantiations to Standalone ARQ Feedback as well as abbreviated versions.****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**removed standalone term as ARQ feedback message is already standalone by definition****Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/04

Comment # **0113**Comment submitted by: **Lei****Wang**Comment Type **Technical, Satisfied (was**
needs a better term and a clear description.Starting Page # **31**Starting Line # **6**

Section

Suggested Remedy

Change the sentence to:

"This optional message is applicable to ARQ connections only."

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0114**Comment submitted by: **Carl****Eklund**

2002/01/04

Comment Type **Technical, Satisfied (was**Starting Page # **31**Starting Line # **8**Section **6.2.2.3.31**

The format of the ARQ feedback message is broken

Suggested Remedy

Replace section with:

The ARQ-Feedback message format is defined in <Table 151> below.

Replace table 151 with Table 7 from IEEE802.16a-02-04.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Rejected****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: 802.16a/D2 [D1<770]

Ballot Number: 4b

Comment Date

Comment # 0115

Comment submitted by: Bob

Nelson

2002/01/03

Comment Type Editorial

Starting Page # 31

Starting Line # 8

Section 6.2.3.3.31

Tinkering...

Suggested Remedy

Replace the current text:

~~The ARQ feedback message may take the format of a stand-alone MAC message as shown in Table 151. It can be used to signal a cumulative ACK or several selective ACKs similar to the piggybacked sub-header mechanism. The feedback shall be sent as a MAC management message on the basic management connection of the appropriate direction.~~

Replace with:

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

The message name needs to be made uniform as noted in other comments.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0116**Comment submitted by: **Subbu****Ponnuswamy**

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **31** Starting Line # **9** Section **6.2.2.3.31**

Change the text to reflect the addition of a new ACK type and changes in piggybacking

Suggested Remedy

Change line 9 from

"can be used to signal a cumulative ACK or several selective ACKs similar to the piggybacked sub-header"
to

"can be used to signal any combination of different ARQ ACKs (cumulative, selective, selective with cumulative), similar to the piggybacked ACKs"

Incorporate the specific changes described in contribution "C802.16a-02/08"

Incorporate the specific changes described in contribution "C802.16a-02/07"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [done](#)

Editor's Questions and Concerns

This was really an accept modified as the negotiated changes later in the meeting made modifications to the two above mentioned contribution. Subbu provided updated modifications.

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0117**

Comment submitted by: **Subbu**

Ponnuswamy

2002/01/04

Comment Type **Editorial**

Starting Page # **31**

Starting Line # **26**

Section **6.2.2.3.31**

Fix the size of ARQ_feedback_IE (it is variable size, not 16 bits) and remove the notes "The connection ID being referenced"

Suggested Remedy

Change lines 26-27 in Table 151 from:

ARQ_feedback_IE () 16 bits The connection ID being referenced

to

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0118**

Comment submitted by: Carl

Eklund

2002/01/04

Comment Type **Editorial** Starting Page # **31** Starting Line # **27** Section **6.2.2.3.31**
Copy and paste error?

Suggested Remedy

Delete text in Size and Value columns

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions l) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0119**

Comment submitted by: Brian

Gieschen

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **31** Starting Line # **27** Section **6.2.2.3.31**
in table 151 the size of the ARQ_feedback_IE is incorrect at 16 bits.
also the note for the same row is incorrect.

Suggested Remedy

in table 151 change the size of the ARQ_feedback_IE to "variable"
and change the note to "The block reciept feedback"

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0120**Comment submitted by: [Carl Eklund](#)[2002/01/04](#)Comment Type [Technical, Non-binding](#) Starting Page # **32** Starting Line # **8** Section **6.2.2.3.32.1.2**[It is not clear how DFS affects the CSF-RSP](#)

Suggested Remedy

[Delete sentence starting 'In some regulatory...'](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [l\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0121**Comment submitted by: [Subbu Ponnuswamy](#)[2002/01/04](#)Comment Type [Editorial](#) Starting Page # **32** Starting Line # **14** Section **6.2.2.3.32.1.2**[Fix typo](#)

Suggested Remedy

[Change "send" to "sent"](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0122**

Comment submitted by: Kenneth

Stanwood

2001/12/19

Comment Type **Editorial**Starting Page # **32**Starting Line # **32**Section **6.2.2.3.32.1.1**

The Notes column of the Channel estimation data row should say "See applicable PHY section"

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0123**

Comment submitted by: Bob

Nelson

2002/01/03

Comment Type **Editorial**Starting Page # **32**Starting Line # **43**Section **6.2.2.3.33**

Tinkering...

Suggested Remedy

Include message name in section header

6.2.2.3.33 Downlink Radio Frequency Management (DRFM)

Also, as with other messages, provide discussion of the message's usage.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0124**Comment submitted by: **Kenneth****Stanwood**

2001/12/19

Comment Type **Editorial**Starting Page # **32**Starting Line # **43**Section **6.2.2..3.33**

I think this is the first place DRFM is used.

Suggested Remedy

On page 32, line 43 change "DRFM" to "Downlink Radio Frequency Management (DRFM)"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Duplicate****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0125**Comment submitted by: **Kenneth****Stanwood**

2001/12/19

Comment Type **Editorial**Starting Page # **33**Starting Line # **35**Section **6.2.2.3.34.1**

For all the other MAC messages, the tables just specify the contents of the message payload. Figure 21 on page 62 of D5 shows the packet structure including the Generic MAC Header, so it is redundant to re-specify the need for the Generic MAC header.

Suggested Remedy

On page 33, delete line 35.

On page 35, delete line 32.

On page 36, delete line 11.

On page 40, delete line 11.

On page 41, delete line 16.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** [k\) done](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0126**Comment submitted by: **Itzik****Kitroser**

2002/01/04

Comment Type **Technical, Non-binding**Starting Page # **34**Starting Line # **9**Section **6.2.2.3.34.1**

The identification of notes in the network should be uniform as in the P2MP systems and should be big enough to convey more than 256 members.

Suggested Remedy

Change size of neighbor ID field to 16

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

The size of the field required would be better understood if additional explanation was present concerning the field's use.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Mika Kasslin update text required

Editor's Notes**Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0127**Comment submitted by: **Itzik****Kitroser**

2002/01/04

Comment Type **Technical, Non-binding**
ClarificationStarting Page # **34**Starting Line # **15**Section **6.2.2.3.34.1****Suggested Remedy**

The 3 bit Channel field is not clear, what is a logical channel?
Same goes for the Persistence field, what is the functionality of this parameter?
Those fields should be explained.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items**

[Mika Kasslin needs to update this text with explanations for these terms. Also need to define term "Priority"](#)

Editor's Notes**Editor's Actions** [k\) done](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0128**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type **Technical, Non-binding**

Starting Page # **34**

Starting Line # **31**

Section **6.2.2.3.34.1**

The description given for 'Start Frame Offset' parameter is not clear

Suggested Remedy

Provide a better explanation for this parameter. (What is it used for? How to set it? In what units is it measured?)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

Use Mika's explanation

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Extend from 4 bits to 6 bits and the field indicates the bottom 4 bits of the frame number for which the scheduling request or grant would take effect.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0129**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type **Technical, Non-binding** Starting Page # **34** Starting Line # **47** Section **6.2.2.3.34.1**

The units in which 'Persistence' is measured are not specified

Suggested Remedy

Specify units in which 'Persistence' is measured

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

"Extend from 2 bits to 3 bits and use in the following way: 0 - Cancel reservation□1 - single frame□2 - 2 frames□3 - 4 frames□4 - 8 frames□5 - 32 frames□6 - 128 frames□7 - Good until canceled or reduced"

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0130**

Comment submitted by: Subbu

Ponnuswamy

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **34** Starting Line # **47** Section **6.2.2.3.34.1**

Persistence and Priority fields require a little bit of more explanation.

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions l) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0131**Comment submitted by: **Mika****Kasslin**

2002/01/05

Comment Type **Editorial** Starting Page # **35** Starting Line # **1** Section **6.2.2.3.34.2**
 Unambiguous Flow Scale definition is needed.

Suggested Remedy

Extend the sentence with the following:
 "...in mini-slots"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Rejected****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** l) none needed**Editor's Questions and Concerns****Editor's Action Items**Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0132**Comment submitted by: **Scott****Marin**

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **35** Starting Line # **14** Section **6.2.2.3.34.2**
 Define "ingress" and "egress"

Suggested Remedy

Add definition of "ingress" and "egress"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

use Nico's suggestion

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0133**

Comment submitted by: Itzik

Kitroser

2002/01/04

Comment Type **Technical, Non-binding**Starting Page # **35**Starting Line # **18**Section **6.2.2.3.34.2**

Unclear definition.

Suggested Remedy

Explain the sentence "The nodes in the list are ordered according..."

What is the list?

How is the MSH-CSCH message is addressed to specific nodes?

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Use Mika's contribution #11, but further clarification is necessary on the table 156 Message name MSH-CSCH's usage.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0134**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type **Technical, Non-binding** Starting Page # **35** Starting Line # **18** Section **6.2.2.3.34.2**

The nodes in the list are ordered according to a (higher-layer) routing protocol's ordering of the current routing tree to and from the BS, known to all nodes in the network.

Suggested Remedy

Either remove the sentence "The nodes in the list are ordered according to a (higher-layer) routing protocol's ordering of the current routing tree to and from the BS, known to all nodes in the network.", or specify which routing protocol to use.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items**

Mika Kasslin needs to provide a SAP interface for routing protocols to use wrt mesh mode.

Editor's Notes**Editor's Actions** h) defer to next round

SAP will be provided before next meeting, ran out of time

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0135**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type **Editorial**Starting Page # **36**Starting Line # **9**Section **6.2.2.3.34.3**

Seems like a typo

Suggested Remedy

Change the text to read "MSH-NCFG_Message_Format() {"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

1. fix typo

2. Use Nico's suggested terminology, but with additional clarification

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Mika must clarify this terminology

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0136**Comment submitted by: **Mika****Kasslin**

2002/01/05

Comment Type **Technical, Non-binding** Starting Page # **36** Starting Line # **20** Section **6.2.2.3.34.3**

MAC addresses throughout the whole standard should be consistently 48 bit in length. Here it is 32 bits. If accepted, the field description on the following page lines 3-6 has to be updated accordingly: 0xFFFFFFFF to 0xFFFFFFFFFFFF, and 0x00000000 to 0x000000000000.

Suggested Remedy

Change the Net Entry Address size from 32 bits into 48 bits.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0137**Comment submitted by: **Mika****Kasslin**

2002/01/05

Comment Type **Technical, Non-binding** Starting Page # **36** Starting Line # **37** Section **6.2.2.3.34.3**

The proposal is to use 16-bit Node ID instead of a 48-bit MAC address to identify mesh nodes. Each node in the mesh network shall be assigned a unique identifier (Node ID) that shall be used extensively in all mesh messages as a node address.

Suggested Remedy

Replace the Nbr MAC Adr with Node ID. The size is 16 bits.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **l) none needed**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0138**Comment submitted by: **Mika****Kasslin**

2002/01/05

Comment Type **Editorial** Starting Page # **36** Starting Line # **38**Section **6.2.2.3.34.3**

Term Node Identifier is misleading and Neighbor ID should be used instead throught the whole standard.
If accepted, change the terms also on page 37 line 31.

Suggested Remedy

Replace Node Identifier with Neighbor ID

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified****Make this change on P37, L31 and P36, L38 only. Rules governing global substitution are unclear.**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0139**Comment submitted by: **Yigal****Leiba**

2002/01/02

Comment Type **Technical, Non-binding** Starting Page # **37** Starting Line # **12**Section **6.2.2.3.34.3****Units for the parameter 'Next Xmt Time' are not specified**

Suggested Remedy

Specify units for the parameter 'Next Xmt Time'

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected****note later definition**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **l) none needed**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0140**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type **Technical, Non-binding** Starting Page # **37** Starting Line # **14** Section **6.2.2.3.34.3**
Units for the parameter 'Xmt Holdoff' are not specified

Suggested Remedy

Specify units for the parameter 'Xmt Holdoff'

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0141**

Comment submitted by: Mika

Kasslin

2002/01/05

Comment Type **Technical, Non-binding** Starting Page # **37** Starting Line # **29** Section **6.2.2.3.34.3**
If Node ID is used instead of Nbr MAC Adr, description has to be updated as well.

Suggested Remedy

Replace the Nbr MAC Adr description with the following:

Node ID
16-bit node identifier that is unique in the network. Shall be present only in full neighbor information list.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0142**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type [Technical, Non-binding](#) Starting Page # **37** Starting Line # **30** Section **6.2.2.3.34.3**
IEEE 802.16 MAC address is 48 bits long (see section 6.2.1 in IEEE P802.16/D5-2001)

Suggested Remedy

[Change '32-bit MAC address' to '48-bit MAC address'](#)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [l\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0143**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type [Technical, Non-binding](#) Starting Page # **38** Starting Line # **4** Section **6.2.2.3.34.3**
[The referenced 'time slots' are not defined](#)

Suggested Remedy

[Replace 'time slots' with 'physical slots'](#)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0144**Comment submitted by: [Itzik](#)[Kitroser](#)[2002/01/04](#)Comment Type [Technical, Non-binding](#)Starting Page # **38**Starting Line # **6**Section **6.2.2.3.34.3**[Unclear definition.](#)**Suggested Remedy**[Add units to the Rcv Link Quality and Rcv Xmt Power fields](#)**Proposed Resolution****Recommendation:****Recommendation by**

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)[ned help here](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0145**Comment submitted by: [Yigal](#)[Leiba](#)[2002/01/02](#)Comment Type [Technical, Non-binding](#)Starting Page # **38**Starting Line # **8**Section **6.2.2.3.34.3**[The use and values allowed for the parameter 'Rcv PHY' are not clear](#)**Suggested Remedy**[Clarify](#)**Proposed Resolution****Recommendation:****Recommendation by**

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0146**Comment submitted by: [Yigal](#)[Leiba](#)

2002/01/02

Comment Type [Technical, Non-binding](#) Starting Page # **38** Starting Line # **11** Section **6.2.2.3.34.3**[Units for the parameter 'Rcv Xmt Power' are not defined](#)

Suggested Remedy

[Define units for the parameter 'Rcv Xmt Power'](#)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**[employ both proposed resolutions](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [k\) done](#)[Field size makes copying definition impossible, Mika to clarify. Could use in 3 dB steps under regulatory limit](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0147**Comment submitted by: [Scott](#)[Marin](#)

2002/01/04

Comment Type [Technical, Non-binding](#) Starting Page # **38** Starting Line # **12** Section **6.2.2.3.34.3**[What are the units for transmit power?](#)

Suggested Remedy

[add transmit power units](#)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Modified**[use term "Receive Transmit Power"](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0148**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **38** Starting Line # **13** Section **6.2.2.3.34.3**

Insert support to negotiate preambles in the data portion. This allows the use of the short preamble for data (not for control) on a link by link basis, without destroying interoperability.

Suggested Remedy

Insert

Preamble

Preamble used in data transmissions

0: long preamble, default setting

1: short preamble

Insert in table 158 above "Reserved", "Preamble 1 bit"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Insert

Preamble

Preamble used in data transmissions

0: long preamble, default setting

1: short preamble

Insert in table 158 above "Reserved", "Preamble 1 bit"
change reserved value to 1 bit

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done

Two more sentences of explanation added in accordance with comments demanding additional information on mesh message fields.

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0149**Comment submitted by: [Scott](#)[Marin](#)[2002/01/04](#)Comment Type [Editorial](#)Starting Page # **38**Starting Line # **57**Section **6.2.2.3.34.3**[add article "The" to beginning of sentence beginning with "NetInfo element"](#)

Suggested Remedy

[add article "The" to beginning of sentence beginning with "NetInfo element"](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0150**Comment submitted by: [Scott](#)[Marin](#)[2002/01/04](#)Comment Type [Technical, Non-binding](#)Starting Page # **38**Starting Line # **57**Section **6.2.2.3.34.3**[Regarding the phrase "shall be sent periodically", how often is required.](#)

Suggested Remedy

[Add numeric requirement or indicate approximate periodicity.](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)[Described in 6.2.7.6.4.5.2 of the new draft](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0151**Comment submitted by: **Mika****Kasslin**

2002/01/05

Comment Type **Editorial**Starting Page # **39**Starting Line # **17**Section **6.2.2.3.34.3**

Describe the Version field consistently, i.e. use definition as in the following clause.

Suggested RemedyReplace the Notes of the Version field with the following:
Protocol version used in the network.**Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items**

Mika Kasslin needs to provide more clarification on the intended use of this field. Is it a duplicate of those parameters exchanged for initial connection?

Editor's Notes**Editor's Actions** k) done

Version field deleted though use is obvious (see also version in RNG-RSP etc..)

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0152**Comment submitted by: **Itzik****Kitroser**

2002/01/04

Comment Type **Technical, Non-binding**Starting Page # **39**Starting Line # **19**Section **6.2.2.3.34.3**

Unclear definition.

Suggested Remedy

Explain the Capabilities field possible values.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group**Decision of Group: **Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** h) defer to next round

Deferred this, since capabilities will depend on options in the PHY among others, which hasn't stabilized yet.

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0153**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type **Technical, Non-binding**Starting Page # **39**Starting Line # **48**Section **6.2.2.3.34.4**

Units for the 'Xmt Power' parameter are not specified

Suggested Remedy

Specify units for 'Xmt Power' parameter

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0154**

Comment submitted by: Vladimir

Yanover

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **40** Starting Line # **53** Section **6.2.6.6**

It was pointed more than once that "Mesh Mode" needs a section that describes the theory of operations and defines basic terms. Meanwhile meaning of basic terms (like "BS" and its role) remain unknown to 802.16 community.

Suggested Remedy

Rewrite completely 6.2.6.6 "License-exempt optional mesh topology support "

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Instead of using BS and SS, use terms access node and node

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Mika Kasslin needs to provide better definition of the terms BS and SS within the context of mesh mode or use different terms.

Editor's Notes**Editor's Actions** k) done

I've include everything from the contributions and comments, but group action item still is unaddressed.
mesh BS defined in clause 6.

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0155**

Comment submitted by: Itzik

Kitroser

2002/01/04

Comment Type **Technical, Non-binding**Starting Page # **40**Starting Line # **56**Section **6.2.2.3.34.4**

Need a clear definition

Suggested Remedy

The self-authentication mechanism is not well defined:

The Hash function for the HMAC calculation should be defined (probably SHA-1 hash function as defined in clause 7.5.3) also, it is not clear what authorization key is used. (Currently is written "where the secret(authorization) key is the BS's network entry key or a similar key")

This property should be well defined or the authentication mechanisms of the 80216_D5 document should be reused.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items**

Mika Kasslin should provide the requested explanatory text.

Editor's Notes**Editor's Actions** k) done

"HMAC" appears to be a full algorithm definition, don't understand the ambiguity. Added behind authorization key that it is provided by the operator.

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0156**Comment submitted by: **Mika****Kasslin**

2002/01/05

Comment Type **Editorial**Starting Page # **41**Starting Line # **3**Section **6.2.2.3.34.5**

Address is a vague term here and Node ID should be used instead since it is an unambiguous term.

Suggested Remedy

Rewrite

"...ordered by address."

as

"...ordered by Node ID."

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Mika must explain the type of address being used, wrt the rest of the Node ID v IEEE 802 address scheme

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Mika Kasslin needs to explain scope of proposed changes wrt addressing

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0157**Comment submitted by: **Mika****Kasslin**

2002/01/05

Comment Type **Editorial**Starting Page # **41**Starting Line # **45**Section **6.2.2.3.34.5**

Unambiguous Flow Scale definition is needed.

Suggested Remedy

Extend the sentence with the following:

"...in kilobits per second"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

There are no units on an exponent.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Mika Kasslin must provide text on obtaining value for this exponent, and realize that an exponent is a scalar.

Editor's Notes**Editor's Actions** h) defer to next round

Deferred to next round. This requires more text to explain the mapping from flow-allocation to actual schedule. Ran out of time to provide this.

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0158**Comment submitted by: **Mika****Kasslin**

2002/01/05

Comment Type **Technical, Satisfied (was** Starting Page # **41** Starting Line # **60** Section **6.2.2.3.34.5**

A new mesh management message needed for centralized scheduling mode. The new message shall be used to disseminate the centralized scheduling tree that defines the structure of the MSH-CSCH message and thus is needed.

Suggested Remedy

Add a new sub-clause:

6.2.2.3.34.6 Mesh centralized scheduling configuration (MSH-CSCF) message

A Mesh Centralized Scheduling Configuration (MSH-CSCF) message shall be broadcasted in a mesh mode when using centralized scheduling.

The BS shall broadcast the MSH-CSCF message to all its neighbors, and all the SSs shall forward (rebroadcast) the message according to its index number specified in the message. The BS shall generate MSH-CSCFs in the format shown in Table X3, including all of the following parameters:

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted-Modified

Add a new sub-clause:

6.2.2.3.34.6 Mesh centralized scheduling configuration (MSH-CSCF) message

A Mesh Centralized Scheduling Configuration (MSH-CSCF) message shall be broadcast^{ed} in a mesh mode when using centralized scheduling.

The BS shall broadcast the MSH-CSCF message to all its neighbors, and all the SSs shall forward (rebroadcast) the message according to its index number specified in the message. The BS shall generate MSH-CSCFs in the format shown in Table X3, including all of the following parameters:

Parameter list and Table X3 in a separate submission. <C802.16a-02/11>

The rules for the rebroadcast of a message by an SS are needed. I.E. Should the SS rebroadcast the message back to the originating BS? etc.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Mika Kasslin needs to add explanatory text as noted above.

Editor's Notes Editor's Actions k) done

First two items done. Need info for third

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0159**

Comment submitted by: Lei

Wang

2002/01/04

Comment	Type	Technical, Satisfied (was	Starting Page #	42	Starting Line #	8	Section
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The packing & fragmentation differences between the TG1/D5 and the TG3/4 D1 results from the introduction of ARQ blocks to the TG3/4, not from 10-66GHz and 2-11 GHz. So, the two different packing & fragmentation schemes should be properly named as Non-ARQ Connection Packing or Fragmentation, and ARQ Connection Packing or Fragmentation.

In addition, the Non-ARQ connections in 2-11GHz systems shall not be affected by the ARQ implementation.

Suggested Remedy

1. replace the first sentence of the paragraph starting from line 8 with the following:

The construction of PDUs varies for non-ARQ connections and the ARQ connections with respect to packing and fragmentation syntax.

2. throughout the section 6.2.3, change the terms from "10-66GHz" / "2-11GHZ" to "Non-ARQ connection" / "ARQ-connection" for the two packing & fragmentation schemes, for example,

Proposed Resolution	Recommendation:	Recommendation by
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Reason for Recommendation

Resolution of Group	Decision of Group: Superseded
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Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes	Editor's Actions) none needed
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Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0160**

Comment submitted by: [Itzik](#)

[Kitroser](#)

[2002/01/04](#)

Comment Type [Editorial](#)

Starting Page # **42**

Starting Line # **34**

Section **6.2.3.4.3**

Suggested Remedy

[No reference to figure 135, either put preceding text explaining the figure or remove the figure](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [|\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0161**Comment submitted by: **Subbu****Ponnuswamy**

2002/01/04

Comment **Type** **Technical, Non-binding** **Starting Page #** **42** **Starting Line #** **49** **Section** **6.2.3.4.3**

If we are still going to use the "block numbering" scheme in order to support ARQ, call it "802.16a block numbering" or something else, rather than referring it as "ARQ Block Numbering". Since the proposed block numbering scheme must be used by both ARQ and non-ARQ connections, it is appropriate and less confusing to call it something other than "ARQ block numbering".

This comment is not applicable, if the "ARQ Sequence Numbering for 802.16a" comment is accepted.

Suggested Remedy

Line 49:

Change Figure 135 caption to:

Figure 135—SDU encapsulation and 802.16a Block Numbering of PDUs

Proposed Resolution **Recommendation:** **Recommendation by****Reason for Recommendation****Resolution of Group** **Decision of Group:** **Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes** **Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0162**

Comment submitted by: Subbu

Ponnuswamy

2002/01/04

Comment	Type	Technical, Non-binding	Starting Page #	42	Starting Line #	59	Section	6.2.3.4.3
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If we are still going to use the "block numbering" scheme in order to support ARQ, move the description of the block numbering scheme to the common section 6.2.3. Note that the block numbering scheme is applicable to both ARQ and non-ARQ connections.

This comment is not applicable, if the "ARQ Sequence Numbering for 802.16a" comment is accepted.

Suggested Remedy

Line 59:

Add a new section "6.2.3.7. 802.16a Block Numbering Scheme" and the following text:

A block is a uniquely identifiable entity on which the fragmentation and reassembly and the ARQ algorithms operate. Each block is identified by a Block Sequence Number (BSN), which is assigned by the MAC. Block

Proposed Resolution	Recommendation:	Recommendation by
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Reason for Recommendation

Resolution of Group	Decision of Group: Superceded
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Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes	Editor's Actions	l) none needed
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Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/04

Comment # **0163**

Comment submitted by: Vladimir

Yanover

Comment Type **Technical, Non-binding**Starting Page # **43**Starting Line # **1**Section **6.2.3**

There is no clear definition what is the order of sub-headers placed at the beginning of MAC PDU, just an example at Fig. 136

Suggested Remedy

Add the text from "Order of Sub-headers" document by Vladimir Yanover: <C802.16a-02/03>

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0164**

Comment submitted by: Kenneth

Stanwood

2001/12/19

Comment	Type Editorial	Starting Page # 43	Starting Line # 11	Section 6.2.3.4.3
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For consistency, half the information in this section really belongs in section 6.2.2.2

Suggested Remedy

Rename section 6.2.2.2.1 of D5 to "Fragmentation Subheader for 10-66 GHz systems".

Rename section 6.2.2.2.3 of D5 to "Packing Subheader for 10-66 GHz systems".

On page 43, remove the 4 occurrences of "2-11 GHz" in Table 162 and replace Table 4, section 6.2.2.1.1 of D5 with the modified Table 162.

On page 44, remove the 8 occurrences of "2-11 GHz" in Table 163 and replace Table 5, section 6.2.2.1.1 of D5 with the modified Table 163.

On page 44, line 40, delete the word "sub-header"

Proposed Resolution	Recommendation:	Recommendation by
----------------------------	------------------------	--------------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Accepted-Modified
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Rename section 6.2.2.2.1 of D5 to "Fragmentation Subheader for 10-66 GHz systems".

Rename section 6.2.2.2.3 of D5 to "Packing Subheader for 10-66 GHz systems".

On page 43, remove the 4 occurrences of "2-11 GHz" in Table 162 and replace Table 4, section 6.2.2.1.1 of D5 with the modified Table 162.

On page 44, remove the 8 occurrences of "2-11 GHz" in Table 163 and replace Table 5, section 6.2.2.1.1 of D5 with the modified Table 163.

On page 44, line 40, delete the word "sub-header"

On page 45, line 1, Move table 164 to a new subsection in D5 immediately following 6.2.2.2.1. Title the subsection "Fragmentation Subheader for 2-11 GHz systems".

On page 45, line 33, delete the word "sub-header"

On page 46, line 1. Move table 165 to a new subsection in D5 immediately following 6.2.2.2.3. Title the subsection "Packing Subheader for 2-11 GHz systems".

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Subbu will provide a corrected version of these changes wrt new ARQ text.

Editor's Notes	Editor's Actions k) done
-----------------------	---------------------------------

Subbu's changes have been integrated into the text I'm giving you.

This seems done. /Nico

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0165**

Comment submitted by: Brian

Gieschen

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **43** Starting Line # **12** Section **6.2.3.4.3**

The downlink type encoding does not belong here. It should be appended to table 4. Types 2 and 4 should not replace the 802.16/D5 existing Packing and Fragmentation sub-headers with ones modified for ARQ. Not all connections will implement ARQ.

Suggested Remedy

Types 0x5 and higher from table 162 should be appended to table 4

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted****Reason for Group's Decision/Resolution**

Changes have been implemented

Group's Notes

MAC

Group's Action Items**Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0166**

Comment submitted by: Bob

Nelson

2002/01/03

Comment Type **Editorial** Starting Page # **43** Starting Line # **12** Section

Tables 162 and 163 (page 43 line 12 through page 44 line 37) are misplaced. They belong in clause *6.2.2.1.1 Generic MAC Header*

The information starting on page 44 line 37 through page 46 line 27 is misplaced. It belongs in clause *6.2.2.2 MAC sub-headers*

Suggested Remedy

Immediately following *6.2.2.2.1 Fragmentation sub-header*, insert the clause header *6.2.2.2.1.1 10 - 66 GHz Systems*

Insert the D1-2001 clause *6.2.3.4.3.1 2 - 11 GHz Fragmentation sub-header* following the body of *6.2.2.2.1.1 10 - 66 GHz Systems* and rename it *6.2.2.2.1.2 2-11 GHz Systems*

Immediately following *6.2.2.2.3 Packing sub-header*, insert the clause header *6.2.2.2.3.1 10 - 66 GHz Systems*

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superseded**

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0167**

Comment submitted by: Brian

Gieschen

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **44** Starting Line # **4** Section **6.2.3.4.3**

The uplink type encoding does not belong here. It should be appended to table 5. Types 2,3,4,5 should not replace the 802.16/D5 existing packing and fragmentation subheaders with ones modified for ARQ. Not all connections will use ARQ.

Suggested Remedy

append types 6 and higher from table 163 to table 5

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified****Reason for Group's Decision/Resolution**

This has been implemented in D2

Group's Notes

MAC

Group's Action Items

Subbu needs to use information in this comment in rewriting part of the ARQ text.

Editor's Notes**Editor's Actions** k) done

as noted in comment 58 this needs to be merged with THE RELEVANT base document taBLE

This seems done. /Nico

Comment originator agreed to convert type to "Technical. Satisfied" in email of 4 April 2002./Roer

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0168**

Comment submitted by: Kenneth

Stanwood

2001/12/19

Comment Type **Technical, Non-binding** Starting Page # **44** Starting Line # **24** Section **6.2.3.4.3**

The ARQ-feedback sub-header is not explicitly defined. There is a statement on page 47, line 11, the an ARQ Feedback IE "may" be transported as part of the sub-header, but this is a very weak statement.

Suggested Remedy

Explicitly define an ARQ-Feedback Subheader is a subsection of 6.2.2.2.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Use modified version of Subbu's (contribution #7) text for ARQ subheader description.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Use modified version of Subbu's (contribution #7) text for ARQ subheader description.

Editor's Notes**Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0169**

Comment submitted by: Brian

Gieschen

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **44** Starting Line # **40** Section **6.2.3.4.3.1.2**

This section does not belong here it should be added to the sub-header section 6.2.2.2

Suggested Remedy

insert the contents of section 6.2.3.4.3.1 in a new section named 'ARQ Fragmentation sub-header' immediately after 6.2.2.2.1

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution**

Change has been implemented

Group's Notes

MAC

Group's Action Items**Editor's Notes****Editor's Actions** 1) none needed

Comment originator agreed to convert type to "Technical, Satisfied" in email of 4 April 2002./Roger

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0170**Comment submitted by: **Subbu****Ponnuswamy**

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **44** Starting Line # **42** Section **6.2.3.4.3.1**
If we are still going to use the "block numbering" scheme in order to support ARQ, replace "ARQ_BLOCK_SIZE" with "BLOCK_SIZE"

This is not necessary, if the "ARQ Sequence Numbering for 802.16a" comment is accepted.

Suggested Remedy

Replace the paragraph starting from lines 42-48 with:

In this case each PDU will contain a whole MAC SDU or fragment of an MAC SDU. The reader shall note that the `BLOCK_SIZE` parameter must be set even if ARQ is not in use. Knowledge of the BSN of the first block, the length of the MAC SDU or fragment (conveyed in the MAC header) and the `BLOCK_SIZE` parameter enable the calculation of the range of blocks contained in the PDU.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0171**Comment submitted by: **Itzik****Kitroser**

2002/01/04

Comment **Type** **Technical, Non-binding** **Starting Page #** **44** **Starting Line #** **43** **Section** **6.2.3.4.3.1.2**

At the meeting 16 comment resolution process, the comment no. 392 was accepted and defined this change.

Suggested Remedy

Add the word MAC before each instance of the word PDU, starting from this line and continuing through the rest of the document, when referring to PDU containing MAC packet

Proposed Resolution **Recommendation:** **Recommendation by****Reason for Recommendation****Resolution of Group** **Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes** **Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0172**

Comment submitted by: Carl

Eklund

2002/01/04

Comment Type Technical, Satisfied (was Starting Page # 45 Starting Line # 9 Section 6.2.3.4.3.2

The fragmentation and packing headers for sub 11 systems should utilize the fields already defined for 802.16 to maximize commonality and common MAC HW availability. Also the ARQ protocol should not break the current fragmentation and packing procedures by imposing unnecessary restrictions. Especially the concept of a 'block' goes a long way of breaking the existing protocol.

Suggested Remedy

p.45 l. 1 Replace table164 with tables 1 and 2 from IEEE802.16a-02-04.

p.46 l. 1 Replace table 165 with tables 3 and 4 from IEEE802.16a-02-04.

p.47 l.26 Replace table 166 with Table 6 from IEEE802.16a-02-04.

p. 47 l.7 Replace text in 6.2.4.2 with "Table <ref to table> defines the ARQ feedback element format used in the ARQ-Feedback Message"

Merge section 6.2.4.2 with 6.2.2.3.31

Change 6.2.4.6.2 to read

"6.2.4.6.2 ARQ Transmission and retransmission

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions l) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0173**

Comment submitted by: **Subbu**

Ponnuswamy

2002/01/04

Comment Type **Technical, Non-binding**

Starting Page # **45**

Starting Line # **21**

Section **6.2.3.4.3.1**

Clarify the use of A-bit

Suggested Remedy

Change lines 21-24 of Table 164 to:

ARQ ACK Request ("A-bit") 1 bit

Receiver must send an acknowledgement when this bit is set and ARQ is enabled for this connection. Non ARQ connections shall ignore this bit.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0174**Comment submitted by: **Subbu****Ponnuswamy**

2002/01/04

Comment Type **Technical, Non-binding**Starting Page # **45**Starting Line # **25**Section **6.2.3.4.3.1**

Replace "ARQ block" with block

Suggested Remedy

Replace lines 25-28 of Table 164 with:

BSN 11 bits Block Sequence Number of the first block in the MAC SDU fragment

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0175**

Comment submitted by: Brian

Gieschen

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **45** Starting Line # **33** Section **6.2.3.4.3.2.2**

This section does not belong here it should be added to the sub-header section 6.2.2.2.

Suggested Remedy

insert the contents of section 6.2.3.4.3.2 in a new section named 'ARQ Packing sub-header' immediately after 6.2.2.2.3

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution**

Suggested change has been implemented

Group's Notes

MAC

Group's Action Items**Editor's Notes****Editor's Actions** 1) none needed

Comment originator agreed to convert type to "Technical, Satisfied" in email of 4 April 2002./Roger

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0176**Comment submitted by: **Subbu****Ponnuswamy**

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **45** Starting Line # **35** Section **6.2.3.4.3.2**

Replace "ARQ block" and "block" and "ARQ_BLOCK_SIZE" with "BLOCK_SIZE". Rewrite 42-43

Suggested Remedy

Replace text from lines 35-45 with:

In this case each PDU may contain multiple MAC SDUs or fragments thereof. Each of the packed MAC SDU or MAC SDU fragments requires its own packing sub-header as some of them may be transmissions while other are re-transmissions. The reader shall note that the BLOCK_SIZE parameter must be set even if ARQ is not in use. Knowledge of the BSN of the first block, the length of each MAC SDU

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0177**

Comment submitted by: Lei

Wang

2002/01/04

Comment	Type	Starting Page #	Starting Line #	Section
The ARQ sub-header is not defined.	Technical, Satisfied (was	45	35	

Suggested Remedy

There are two options:

1. in Table 162 and Table 163, define a type for just ARQ sub-header present for DL and UL, respectively. and then, add a subsection in line 28, page 46, "6.2.3.4.3.3 ARQ Sub-Header", to define the ARQ sub-header.

or

2. use the fragmentation sub-header defined in Table 164, with FC=00, as the ARQ sub-header, and add a paragraph in line 31, page 45, like:

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for Recommendation

Resolution of Group Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0178**Comment submitted by: **Subbu****Ponnuswamy**

2002/01/04

Comment Type **Editorial**Starting Page # **46**Starting Line # **18**Section **6.2.3.4.3.2**

Replace "Packing_and_ARQ sub-header" with "2-11 GHz Packing sub-header" (consistent use of the term)

Suggested Remedy

Lines 18-21, replace text in column 3 of table 165 with:

The length in bytes of the MAC SDU or MAC
SDU fragment, including the three-byte
2-11 GHz Packing sub-header

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0179**

Comment submitted by: **Subbu**

Ponnuswamy

2002/01/04

Comment Type **Technical, Non-binding**

Starting Page # **46**

Starting Line # **22**

Section **6.2.3.4.3.2**

Replace "ARQ block" with "block"

Suggested Remedy

Lines 22-24, replace text in column 3 of table 165 with:

Block Sequence number for the first block
in the MAC SDU fragment

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Superseded

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0180**Comment submitted by: **Bob****Nelson**

2002/01/03

Comment Type **Editorial**Starting Page # **46**Starting Line # **40**Section **6.2.4**

Tinkering...

Suggested Remedy

Replace

A connection cannot have a ~~mixed~~ ARQ and non-ARQ traffic. Similar to other properties of the MAC protocol the scope of a specific instance of ARQ is limited to one unidirectional connection.

With

A connection cannot have a ~~mixture~~ of ARQ and non-ARQ traffic. Similar to other properties of the MAC protocol, the scope of a specific instance of ARQ is limited to one unidirectional connection.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0181**

Comment submitted by: Vladimir

Yanover

2002/01/04

Comment Type **Editorial**
EditorialStarting Page # **46**Starting Line # **42**Section **6.2.4**Suggested Remedy
Replace

"The ARQ feedback information can be sent as a standalone MAC management message on the appropriate basic management connection, or as piggybacked sub-headers on an existing connection. ARQ feedback cannot be fragmented. "

with the following:

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0182**Comment submitted by: **Bob****Nelson**

2002/01/03

Comment Type **Editorial** Starting Page # **46** Starting Line # **43** Section **6.2.4**
Tinkering...

Suggested Remedy

Replace

~~The~~ ARQ feedback information ~~can~~ be sent as a standalone MAC management message on the appropriate basic management connection, or as piggybacked sub-headers on an existing connection. ARQ feedback ~~cannot~~ be fragmented. The implementation of ARQ is optional.

With

ARQ feedback information ~~shall~~ be sent as a standalone MAC management message on the appropriate

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Modified**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Subbu will incorporate relevant text corrections in new ARQ text.

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/04

Comment # **0183**Comment submitted by: **Lei****Wang**

Comment	Type	Starting Page #	Starting Line #	Section
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Technical, Non-binding

46

47

It is not appropriate to use the term PDU to indicate a MAC PDU.

Suggested Remedy

1. Change the first sentence of the paragraph on line 47, page 46 to "The term MAC PDU (Protocol Data Unit) refers to a PDU with a single MAC header."
2. Throughout the clause, change "PDU" to "MAC PDU".

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0184**Comment submitted by: **Bob****Nelson**

2002/01/03

Comment Type **Editorial** Starting Page # **46** Starting Line # **50** Section **6.2.4**
[Tinkering...](#)

Suggested Remedy

~~A~~ PDU may carry one or more whole or fragmented SDUs.

A PDU may carry one or more whole or fragmented SDUs.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0185**Comment submitted by: **Subbu****Ponnuswamy**

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **46** Starting Line # **53** Section **6.2.4.1**
[Move description of block sequence numbering out of the ARQ section](#)

Suggested Remedy

[Remove section 6.2.4.1](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [l\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0186**Comment submitted by: **Subbu****Ponnuswamy**

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **46** Starting Line # **53** Section **6.2.4.1**

Replace the complex block numbering scheme with a simple ARQ numbering scheme based on the FSN

Suggested Remedy

Incorporate specific changes proposed in the contribution "ARQ Sequence Numbering for 802.16a"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Correct the reserved bits from 2 to 3 in fragmentation header table.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0187**

Comment submitted by: Bob

Nelson

2002/01/03

Comment Type **Technical, Satisfied (was**

Starting Page # **46**

Starting Line # **58**

Section **6.2.4.1**

The label ARQ_MAX_BSN is never defined.

Suggested Remedy

In the discussion of the 2-11 GHz packing subheader, define MAX_BSN = 2^11 and replace all occurrences of ARQ_MAX_BSN with MAX_BSN.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

Doc needs to provide a definition for FSN

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Subbu needs to provide a definition for FSN

Editor's Notes

Editor's Actions |) none needed

Blocks/BSN no longer used

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0188**

Comment submitted by: Brian

Gieschen

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **47** Starting Line # **1** Section **6.2.4.1**
Variable sized blocks should also be supported.

Suggested Remedy

change 'The value of ARQ_BLOCK_SIZE shall be between 64 to 2047 bytes, inclusive, with a resolution of one byte'
to 'The value of ARQ_BLOCK_SIZE shall be either 0 or between 64 to 2047 bytes, inclusive, with a resolution of one byte.'
insert after this sentence:

'A value of 0 indicates variable block size, blocks are fragments.'

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution**

Block size was purged from document at session 17

Group's Notes**MAC****Group's Action Items****Editor's Notes****Editor's Actions** 1) none needed

Comment originator agreed to convert type to "Technical, Satisfied" in email of 4 April 2002./Roger

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/03

Comment # **0189**

Comment submitted by: Bob

Nelson

Comment Type Technical, Satisfied (was Starting Page # 47 Starting Line # 1 Section 6.2.4.1

Block size limits are incompatible with values specified in table 236 page 225
Minimum value of ARQ_BLOCK_SIZE is too large.

Suggested Remedy*Replace the sentence*

The value of ARQ_BLOCK_SIZE shall be between ~~64~~ to ~~2047~~ bytes, inclusive, with a resolution of one byte.

With

The value of ARQ_BLOCK_SIZE shall be between 4 to 2048 bytes, inclusive, with a resolution of one byte.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0190**

Comment submitted by: Vladimir

Yanover

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **47** Starting Line # **1** Section **6.2.4.1**

To simplify implementation, the block size should be power of 2

Suggested Remedy

replace

"The value of ARQ_BLOCK_SIZE shall be between 64 to 2047 bytes, inclusive, with resolution of one byte"

with

"The value of ARQ_BLOCK_SIZE shall be power of 2, from 16 to 1024 bytes, inclusive"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0191**Comment submitted by: [Subbu](#)[Ponnuswamy](#)

2002/01/04

Comment Type [Technical, Non-binding](#)Starting Page # [47](#)Starting Line # [27](#)Section [6.2.4.2](#)[Add a new ACK type "Cumulative with Selective ACK entry"](#)

Suggested Remedy

[Incorporate the specific changes described in contribution "C802.16a-02/08"](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0192**Comment submitted by: [Subbu](#)[Ponnuswamy](#)

2002/01/04

Comment Type [Editorial](#)Starting Page # [47](#)Starting Line # [31](#)Section [6.2.4.2](#)[Change "Block Sequential Number" to "Block Sequence Number"](#)

Suggested Remedy

[Line 31, Column 3 of Table 166:](#)[Replace the text with "Block Sequence Number for the acknowledged ARQ block"](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [l\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0193**

Comment submitted by: Kenneth

Stanwood

2001/12/19

Comment Type **Technical, Non-binding** Starting Page # **47** Starting Line # **33** Section **6.2.4.2**

If ACK Type = 01, there is no valid value for the "Number of 16 bits ACK Maps field".

Suggested Remedy

On line 33, in the notes column explicitly state that if ACK Type = 00, the bits have the meaning shown, and if ACK Type = 01, the field is reversed and set to 00.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0194**

Comment submitted by: Subbu

Ponnuswamy

2002/01/04

Comment Type **Editorial** Starting Page # **47** Starting Line # **38** Section **6.2.4.2**

Fix typo in the "while" loop

Suggested Remedy

Change "while (" to "for ("

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0195**

Comment submitted by: Vladimir

Yanover

[2002/01/04](#)Comment Type [Editorial](#)Starting Page # **47**Starting Line # **39**Section **6.2.4.2**[To fit "C" language syntax](#)

Suggested Remedy

[Replace "while" with "for"](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [1\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0196**

Comment submitted by: Bob

Nelson

[2002/01/03](#)Comment Type [Editorial](#)Starting Page # **49**Starting Line # **13**Section **6.2.4.6.2**[This section deals with construction of messages. Should it remain in its current location or be moved to 6.2.3.4.3?](#)

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [1\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0197**

Comment submitted by: Brian

Gieschen

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **49** Starting Line # **22** Section **6.2.4.6.2**

Fragmentation should not be limited to ARQ block boundaries. This will cause increasing wasted bandwidth with increasing ARQ block sizes. Packing Mac PDUs into a burst will result with waste padding.

Suggested Remedy

remove the sentence "If fragmentation is enabled for this connection, the fragmentation shall occur only on ARQ block boundaries"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution**

Blocking was removed from the document at session 17

Group's Notes

MAC

Group's Action Items**Editor's Notes****Editor's Actions** 1) none needed

Comment originator agreed to convert type to "Technical, Satisfied" in email of 4 April 2002./Roger

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0198**Comment submitted by: **Scott****Marin**

2002/01/04

Comment Type **Editorial**Starting Page # **49**Starting Line # **45**Section **6.2.4.6.2**

What does the big X mean in figure 139.

Suggested Remedy

remove big X

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

illustrations needed to depict ARQ dealing with packet or fragment loss

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Subbu will provide illustrations needed to depict ARQ dealing with packet or fragment loss

Editor's Notes

Editor's Actions h) defer to next round

can't get hold of Subbu.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0199**Comment submitted by: [Subbu](#)[Ponnuswamy](#)

2002/01/04

Comment Type [Technical, Non-binding](#) Starting Page # **50** Starting Line # **1** Section **6.2.4.6.3**[Need more messages to detect and react to loss of ARQ synchronization](#)

Suggested Remedy

[Incorporate specific changes proposed in contribution "ARQ Synchronization Messages for 802.16a"](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**[Use a 3 way handshake on an ARQ reset](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

[Subbu will provide text for a 3 way handshake on an ARQ reset](#)

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0200**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type **Technical, Satisfied (was** Starting Page # **50** Starting Line # **48** Section **6.2.4.6.3**

The sentence "(ARQ_TX_WINDOW_START + ARQ_WINDOW_SIZE ARQ_TX_NEXT_BSN) ARQ full or partial AC ARQ_TX_NEXT_BSN ARQ_TX_NEXT_BSN full or partial AC" seems to be truncated

Suggested Remedy

Replace the truncated sentence with the text adapted from P802.16ab-01/01r2 (with the exclusion of the sentence about the A-bit, due to an accepted comment by Bob):

"The transmitter checks (ARQ_TX_WINDOW_START + ARQ_WINDOW_SIZE - ARQ_TX_NEXT_BSN) to see how many ARQ blocks can be transmitted, and creates a full or partial MAC PDU that does not exceed this value. The state variable ARQ_TX_NEXT_BSN is copied into the BSN field before transmission, and ARQ_TX_NEXT_BSN is incremented after transmission by the number of blocks in the full or partial MAC PDU"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Use term FSN instead of BSN

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Subbu will supply text

Editor's Notes**Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0201**Comment submitted by: **Subbu****Ponnuswamy**

2002/01/04

Comment	Type Technical, Non-binding	Starting Page # 50	Starting Line # 48	Section 6.2.4.6.3
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Include missing text. Editorial mistake. Also clarify the use of A-bit (change "must" to "may")

Suggested Remedy

Replace lines 48-49 with:

The transmitter checks (ARQ_TX_WINDOW_START + ARQ_WINDOW_SIZE - ARQ_TX_NEXT_BSN) to see how many ARQ blocks can be transmitted, and creates a full or partial MAC PDU that does not exceed this value. The state variable ARQ_TX_NEXT_BSN is copied into the BSN field before transmission, and ARQ_TX_NEXT_BSN is incremented after transmission by the number of blocks in the full or partial MAC PDU. If the ARQ_WINDOW_SIZE limit is reached due to the transmission of MAC PDU, then the A-bit may be set to 1.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Superseded

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0202**Comment submitted by: **Bob****Nelson**

2002/01/03

Comment Type **Editorial**Starting Page # **50**Starting Line # **61**Section **6.2.4.6.3**

The meaning of the contents of the feedback subheader bit map appear in the subheader definition, no need to repeat the definition here

Suggested Remedy*Replace*

On receiving a valid selective acknowledgement message, the transmitter shall consider all blocks **with the corresponding bit set to 1 in the** bitmap as acknowledged and those with the corresponding bit set to 0 as negatively acknowledged.

With

On receiving a valid selective acknowledgement message, the transmitter shall consider all blocks **the bitmap indicates were received**

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: **Accepted-Modified******use FSN instead of BSN****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** **k) done****Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0203**Comment submitted by: **Subbu****Ponnuswamy**

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **50** Starting Line # **65** Section **6.2.4.6.3**

Add description of the new ACK type to the transmitter state machine section

Suggested Remedy

Add the following text at line 65:

When a cumulative with selective acknowledgement is received, if the BSN is valid, then the transmitter shall consider all blocks in the range [ARQ_TX_WINDOW_START, BSN) as acknowledged, set ARQ_TX_WINDOW_START to BSN. All timers associated with acknowledged blocks shall be cancelled. For the rest of the bitmaps, except the most significant bit of the first 16-bitmap, the transmitter shall consider all blocks with the corresponding bit set to 1 in the bitmap as

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

use term FSN instead of BSN

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0204**Comment submitted by: **Scott****Marin**

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **51** Starting Line # **1** Section **6.2.4.6.4**

The pervious section, Transitter States, does a good job of explaining states and provides a good figure. The Receiver State paragraph doesn't describe states or provide a pictures. The Receiver State paragraph text seems to describe a flow chart.

Suggested Remedy

Add text that describes the receiver states. Add a state diagram.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items**

Itzik volunteered to make up new FSM

Editor's Notes**Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0205**

Comment submitted by: Carl

Eklund

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **51** Starting Line # **34** Section **6.2.4.6.4**

The ARQ Acknowledgement protocol is only implied and not defined. Also the current protocol is kludge with every imaginable mechanism included. This makes it utterly inefficient. Also the suggested method of having transport PDU with subheaders contain information for other connections than the one the PDU is sent on is contrary to the IEEE 802.16 protocol design philosophy.

Suggested Remedy

Page 51 line 34 Replace paragraph with

" MAC PDUs received may be acknowledged either by sending an ARQ-Feedback message on the Basic connection or by including a ARQ-Feedback sub-header in a PDU being sent on the connection, in the opposite direction, with an identical CID to the connection the MAC PDU was received on. The receiver shall, if ARQ has been enabled on a connection, issue a negative acknowledgement upon detecting gaps in the TSN sequence. The receiver may also selectively ack/nack received MAC PDUs.

When issuing a cumulative acknowledgement the receiver shall set the TSN value equal to the last TSN correctly received and set the most significant bit in the ACK MAP. When issuing a nack or/and a selective ack the receiver shall set the TSN to equal the first TSN value missing

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0206**Comment submitted by: **Subbu****Ponnuswamy**

2002/01/04

Comment Type **Technical, Non-binding**
Include the new ACK type in the description

Starting Page # **51**Starting Line # **38**Section **6.2.4.6.4**

Suggested Remedy

Replace line 38 with the following::

"ber below which all ARQ blocks have been received correctly) or a combination of both (i.e., cumulative with selective). Acknowledgments shall be sent in the order"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0207**

Comment submitted by: Bob

Nelson

2002/01/03

Comment Type **Editorial**Starting Page # **51**Starting Line # **48**Section **6.2.4.6.4**

The possible values for ARQ_DELIVER_IN_ORDER are defined in the TLV encoding in chapter 11 and need not be duplicated here.

Suggested Remedy*Replace*

When ARQ_DELIVER_IN_ORDER is ~~set (to 1)~~, a MAC SDU is handed to the upper layers as soon as all the ARQ blocks of the MAC SDU have been correctly received within the defined time-out values and all blocks with sequence numbers smaller than those of the completed message have either been discarded due to time-out violation or delivered to the upper layers. When ARQ_DELIVER_IN_ORDER is ~~not set (equals 0)~~, MAC SDUs are handed to the upper layers as soon as all blocks of the MAC SDU have been successfully received within the defined time-out values.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0208**

Comment submitted by: Ken

Peirce

Member

Comment Type **Editorial**Starting Page # **52**Starting Line # **1**Section **6.2.6**

This is a delta document. What does the editor do with this repeat of the subclause header?

Suggested Remedy

Delete this confusing and unnecessary line.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **withdrawn**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0209**

Comment submitted by: Bob

Nelson

2002/01/03

Comment Type **Technical, Non-binding**Starting Page # **52**Starting Line # **3**Section **6.2.6.3**

Something is awry. In the base document the section with the title *Time Division Duplexing (TDD)* is 6.2.7.3 not 6.2.6.3?????

Also the information is specific to 2-11GHz, but the text has no notation to that effect.

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0210**

Comment submitted by: Kenneth

Stanwood

2001/12/19

Comment Type **Technical, Non-binding** Starting Page # **52** Starting Line # **3** Section **6.2.6.3**

The title of this section in D5 is "Grant per Subscriber Station (GPSS) Mode". This is the correct title as the section is about bandwidth grant modes independant of the duplex strategy. There is no requirement that TDD systems use GPSS mode.

Suggested Remedy

Change the section title back to what it is in D5.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** e) editor disagrees

clause moved to 6.2.7.3 (as also suggested in comment 211)

Editor's Questions and Concerns**Editor's Action Items**Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0211**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial** Starting Page # **52** Starting Line # **4** Section **6.2.6.3**

It seems to me that this section belongs to 6.2.7 - MAC support of PHY, rather than 6.2.6 "Bandwidth allocation and support mechanism".

Suggested Remedy

Change section number 6.2.6.3 to 6.2.7.3

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superceded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** l) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0212**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial** Starting Page # **52** Starting Line # **6** Section **6.2.6.3**

The last sentence in the base standard section 6.2.7.3 (which is where this section belongs to) is repeated and detailed in the current text.

Suggested Remedy

Change the editorial comment as follows:

Replace the sentence "The split between uplink and downlink is a system parameter and is controlled at higher layers within the system" with:

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

I'm assuming the recommendation to superceed is accepted.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0213**

Comment submitted by: Carl

Eklund

2002/01/04

Comment Type **Editorial** Starting Page # **52** Starting Line # **8** Section **6.2.6.3**

The section provides a duplicate definition of mini-slots. Also the PS defintions are misplaced

Suggested Remedy

Delete the duplicate definition of mini-slot. Move definition of PS to appropriate PHY sections

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

2001/12/19

Comment # **0214**

Comment submitted by: Kenneth

Stanwood

Comment Type **Editorial**

Starting Page # **52**

Starting Line # **8**

Section **6.2.6.3**

The text in this section falls into three basic categories:

Line 8 through the first sentence on line 16 are applicable to all situations and PHYs.

The second sentence on line 16 through line 18 is PHY dependant descriptive material.

Lines 20-23 are PHY specific parameter values. For teh 10-66 GHz PHY they are defined in section 10.3 PHY-specific Values

Suggested Remedy

Move line 8 through the first sentence on line 16 between teh first and second paragraphs of the initial section 6.2.6, adding "(See section 10.3)" after the word "PHY".

Move the second sentence on line 16 through line 18 to the appropriate PHY section.

Make a section "10.3.2 2-11 GHz OFDM(A) parameter and constant definitions"

Make a section "10.3.2.1 Physical Slot"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

second sentence on line 16 through line 18 moved to 8.3.3.1.2

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0215**

Comment submitted by: Vladimir

Yanover

2002/01/04

Comment Type **Editorial**

Starting Page # **52**

Starting Line # **8**

Section **6.2.6.3**

the statement in the text is not correct for OFDMA

Suggested Remedy

Replace

"Allocation of bandwidth within a frame is performed in terms of mini-slots (MS)."

with

"Time intervals within a frame are measured in the units of mini-slots (MS)"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

using Nico's suggestion

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0216**Comment submitted by: [Jori](#)[Arrakoski](#)

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **52** Starting Line # **13** Section **6.2.6.3**

The relationship between mini-slot (MS) and physical slot (PS) is critical as MS is used for timing purposes. The value for "m" in the formula for MS must be determined unambiguously to prevent potential timing screw-ups. Either the value of "m" must be told in messages or it must be tied for a certain FFT-size and channel bandwidth.

Suggested Remedy

"m" should be defined such that the MS granularity is sufficient for the timing purposes (I don't know the value). Then the value for "m" can be calculated and included in the specification for every pair of FFT-size and channel bandwidth.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0217**Comment submitted by: [Kenneth](#)[Stanwood](#)

2001/12/19

Comment Type [Editorial](#)Starting Page # **52**Starting Line # **27**Section **6.2.6.5**[Having 6.2.6.5.1 nested under 6.2.6.5 serves no purpose.](#)

Suggested Remedy

[On page 52, delete lines 29-34.](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**[L32 Can be removed.](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

[Joe Kwak will rewrite line 30 -done see above](#)

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0218**Comment submitted by: [Kenneth](#)[Stanwood](#)

2001/12/19

Comment Type [Editorial](#)Starting Page # **52**Starting Line # **27**Section **6.2.6.5**[This section does not describe the complete Bandwidth request mechanism for OFDMA PHYs, just the contention based request mechanism](#)

Suggested Remedy

[Change the title to "Contention-based Bandwidth Request mechanism Using CDMA Codes"](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0219**Comment submitted by: [Kenneth](#)[Stanwood](#)[2001/12/19](#)Comment Type [Editorial](#)Starting Page # **52**Starting Line # **36**Section **6.2.6.5**[Missing space.](#)

Suggested Remedy

[Change "codes.The" to "codes. The"](#)

Proposed Resolution Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0220**Comment submitted by: [Moritz](#)[Harteneck](#)[2001/12/28](#)Comment Type [Editorial](#)Starting Page # **52**Starting Line # **40**Section **6.2.6.5.1**['contentious' is not the right wording. Maybe 'contention' may be better.](#)

Suggested Remedy

Proposed Resolution Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0221**

Comment submitted by: Heinz

Lycklama

2002/01/04

Comment Type **Technical, Binding** Starting Page # **52** Starting Line # **53** Section **6.2.7.7.2.1**

The standard needs to support both TDD and FDD for both licensed and licensed-exempt bands. This makes it easier to use the same chipsets for various licensed and licensed-exempt bands. For example, some equipment suppliers for the UNII band wish to use both the 5.25 GHz and the 5.725 GHz bands. The most efficient way to use this spectrum is to use FDD.

Suggested Remedy

Delete the sentence starting at line 53 in Section 6.2.7.7.2.1 "Systems in the licensed-exempt bands shall use TDD only."

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

This necessitate addressing TDD/FDD co-existence problems in the license-exempt bands. From a chip perspective, it makes no difference. It would also lead to more interoperability issues. Further, with FDD in license-exempt bands, periodic DFS presents the challenge of switching frequencies on the Rx chain to check the Tx channel, during which the Tx chain must cease.

Group's Notes**Group's Action Items**

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0222**Comment submitted by: **Itzik****Kitroser**

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **53** Starting Line # **32** Section **6.2.6.5.1**
Expansion of current text for clarification.

Suggested Remedy

Add the following text at beginning of the line:

"In case of a collision, the SS shall use the truncated binary exponential backoff algorithm as explained in section 6.2.8, the transmission opportunities in this case shall be Ranging Slots"

Proposed Resolution Recommendation: Recommendation by**Reason for Recommendation****Resolution of Group Decision of Group: **Accepted******Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes Editor's Actions **k) done******Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0223**Comment submitted by: [Yigal](#)[Leiba](#)[2002/01/02](#)Comment Type [Editorial](#)Starting Page # **53**Starting Line # **42**Section **6.2.6.6**[Does the term '802.16b' still apply?](#)

Suggested Remedy

[Replace with the appropriate term](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0224**Comment submitted by: [Scott](#)[Marin](#)[2002/01/04](#)Comment Type [Editorial](#)Starting Page # **53**Starting Line # **42**Section **6.2.6.6**[What is an 802.16b system?](#)

Suggested Remedy

[Add reference to IEEE 802.16b and/or add text that explains the relationships between IEEE 802.16a and IEEE 802.16b.](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0225**

Comment submitted by: Ken

Peirce

Member

Comment Type **Technical, Non-binding**Starting Page # **53**Starting Line # **59**Section **6.2.6.6.1**

The terms "neighborhood" and "extended neighborhood" are defined in this paragraph. Next, in section 6.2.6.6.2, centralized scheduling is said to operate on all SS within a certain hop range. This is unnecessarily confusing as the "neighborhood" is simply a case where the range is 2 or less. There are also other concepts for distributed scheduling like coordinated v. uncoordinated that deserve their own paragraphs to clarify the concepts.

Suggested Remedy

Please replace sections 6.2.6.6, 6.2.6.6.1 and 6.2.6.6.2 with the following:

6.2.6.6 Bandwidth Requests for optional mesh topology used in Unlicensed Bands Only

This standard provides support for an optional mesh topology when used in the unlicensed bands. In mesh mode, each station is able to create direct communication links to a number of other stations in the network instead of communicating only with a BS. Thus, all the SSs may have direct

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items**

[Carl will merge with following comment by Mika](#)

Editor's Notes**Editor's Actions** [k\) done](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0226**Comment submitted by: [Mika](#)[Kasslin](#)

2002/01/05

Comment Type [Editorial](#)Starting Page # [54](#)Starting Line # [20](#)Section [6.2.6.6.2](#)

[Order of the description is not clear enough. The proposal is to reorder some of the text in the sub-clause and add a new sub-clause.](#)

Suggested Remedy

[Replace the current sub-clause 6.2.6.6.2 with the following one \(with new sub-clauses added\):](#)

6.2.6.6.2 Centralized scheduling

[In the centralized scheduling mesh mode the schedule shall be determined in more centralized manner than in the distributed scheduling mode. Two forms of centralized scheduling are defined. Either the BS shall act as a centralized scheduler for the SSs within a certain hop range \(HR threshold \) from the BS, or all the SSs themselves run the scheduling algorithm to compute the new schedule. The latter form of the centralized scheduling is called Centralized scheduling without schedule distribution.](#)

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: [Accepted-Modified](#)****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items**[Carl will merge this and the previous comment's text](#)**Editor's Notes****Editor's Actions** [k\) done](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0227**

Comment submitted by: Kenneth

Stanwood

2001/12/19

Comment Type **Technical, Non-binding** Starting Page # **55** Starting Line # **31** Section **6.2.7.6.2**

Since the Allocation Start Time is under the control of the scheduler (see line 62, same page) Figures 142 and 143 show neither the maximum nor the minimum time relavance, just the general case dependant on the value of Allocation Start Time.

Suggested Remedy

On page 55, line 31 delete "Maximum"

On page 55, line 54 delete "Maximum"

In the applicable PHY sections, define the minimum time into the future that can be used for Allocation Start Time, other wise all SSSs will be required to work with a BS that allows the DL-MAP to be valid immediately following the DL and UL Maps (as in the 10-66 GHz case.).

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation**Resolution of Group** Decision of Group: **Accepted****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes** Editor's Actions k) done

Added the minimum requirement to 10.3.2.1

Editor's Questions and Concerns

Current definition of Allocation start time makes no sense whatsoever.

Nico. we removed this element

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0228**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type **Technical, Satisfied (was** Starting Page # **56** Starting Line # **7** Section **6.2.7.6.3**

The statements made in the two bullets are not accurate for OFDMA

Suggested Remedy

Replace the two bullets by:

- DL-MAP and the correspondent part of DL-UL-MAP: the start of the first symbol (including the pre-amble if present) of the burst where the message is transmitted + Allocation Start Time value if present
- UL-MAP and the correspondent part of DL-UL-MAP: the start of the first symbol (including the pre-amble if present) of the burst where the message is transmitted + Allocation Start Time value"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Replace the two bullets by:

- DL-MAP: the start of the first symbol (including the pre-amble if present) of the burst where the message is transmitted + Allocation Start Time value if present
- UL-MAP: the start of the first symbol (including the pre-amble if present) of the burst where the message is transmitted + Allocation Start Time value"

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0229**

Comment submitted by: Ken

Peirce

Member

Comment Type **Technical, Non-binding**
emphasize optional status of mesh mode in headingStarting Page # **56**Starting Line # **14**Section **6.2.7.6.4**

Suggested Remedy

change 6.2.7.6.4 heading to "Map Relevance - optional Mesh Mode topology for Unlicensed Bands .

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Skipped the words "Map Relevance", since it's in the H4 header.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0230**

Comment submitted by: Ken

Peirce

Member

Comment Type **Editorial**

Starting Page # **56**

Starting Line # **14**

Section **6.2.7.6.3**

The text in this section should be changed if the changes to the previous comment are accepted. change the header and text to follow. Add green text and deleted red text.

Suggested Remedy

6.2.7.6.4 Optional Mesh Mode

Only TDD is supported in mesh mode. Contrary to the basic P-MP mode, there are no clearly separate downlink and uplink subframes in the mesh mode. Stations shall transmit to each other either in scheduled channels or in random access channels **as just like** in P-MP mode. The basic frame structure is also similar

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Note to editor include green and omit red text

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0231**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type **Technical, Non-binding** Starting Page # **56** Starting Line # **25** Section **6.2.7.6.4**

Physical slots are already defined for all PHY modes (Physical slots is also a PHY definition, and not a MAC one).

Suggested Remedy

Remove the following sentences:

"Time is divided into physical slots of duration 2 X microseconds (X integer).

Using 20 MHz channelization, the default slot duration (T dslot) is 32 microseconds.

Using 10 MHz channelization, the default slot duration (T dslot) is TBD microseconds."

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done

Not clear whether the original remedy or the proposed resolution is accepted. Implemented the proposed resolution.

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0232**Comment submitted by: **Kenneth****Stanwood**

2001/12/19

Comment **Type** **Technical, Non-binding** **Starting Page #** **56** **Starting Line #** **25** **Section** **6.2.7.6.4**

This definition of Physical Slot is contradictory with the definitions on page 52, lines 20-23.

Suggested Remedy

If this is not the same concept being expressed on page 52, come up with a different name.

If it is the same concept then:

Make a section "10.3.4 2-11 GHz Mesh parameter and constant definitions"

Make a section "10.3.4.1 Physical Slot"

Put lines 25-28 in this new section.

Proposed Resolution **Recommendation:** **Recommendation by****Reason for Recommendation****Resolution of Group** **Decision of Group: Accepted****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes** **Editor's Actions** |) none needed

This one is actually superceded by 231.

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0233**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial**

Starting Page # **56**

Starting Line # **26**

Section **6.2.7.6.4**

Does the 32 micorseconds refer to "physical slots" / symbol time/ minislot ?

Suggested Remedy

Change the sentence to:

...the default physical slot duration

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0234**Comment submitted by: **Mika****Kasslin**

2002/01/05

Comment Type **Technical, Satisfied (was** Starting Page # **56** Starting Line # **62** Section **6.2.7.6.4.1**

If the earlier comments about the use of 16-bit Node ID instead of MAC addresses is approved one should replace all the related parts of the draft accordingly. This is one of those.

Suggested Remedy

Replace the MAC Address description with the following:

Node ID

16-bit node identifier that is unique in the network

Proposed Resolution Recommendation: Recommendation by**Reason for Recommendation****Resolution of Group Decision of Group: **Rejected******Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0235**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type **Technical, Non-binding** Starting Page # **57** Starting Line # **1** Section **6.2.7.6.4.1**

IEEE 802.16 MAC address is 48 bits long (see section 6.2.1 in IEEE P802.16/D5-2001)

Suggested Remedy

Change '32-bit MAC address' to '48-bit MAC address'

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0236**

Comment submitted by: **Mika**

Kasslin

2002/01/05

Comment Type **Editorial**

Starting Page # **57**

Starting Line # **7**

Section **6.2.7.6.4.1**

Node Identifier is wrong term. Use ExtNeighborID instead.
Same comment applies to the sentences on lines 29 and 35 where Node Identifier term is used.

Nbr ID on lines 31, 38, 40 and 41 is not use anywhere else and Neighbor ID should be used instead.

Suggested Remedy

Replace Node Identifier with ExtNeighborID
Use Neighbor ID instead of Nbr ID

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

First component is rejected as part of larger Node ID v IEEE address issue.
Second component is accepted.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0237**Comment submitted by: [Scott](#)[Marin](#)

2002/01/04

Comment Type [Editorial](#)Starting Page # **57**Starting Line # **61**Section **6.2.7.6.4.2**[\[REF\] needs to be defined.](#)

Suggested Remedy

[define \[REF\].](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0238**Comment submitted by: [Ken](#)[Peirce](#)

Member

Comment Type [Technical, Non-binding](#)Starting Page # **59**Starting Line # **17**Section **6.2.7.6.4.4**[Is this mesh network synchronization applicable to both centralized and distributed mesh networks? If yes, then it should be stated clearly.](#)

Suggested Remedy

[add a sentence at line 23: "These packets are used to synchronize both centralized and distributed control mesh networks."](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0239**Comment submitted by: **Mika****Kasslin**

2002/01/05

Comment Type **Technical, Satisfied (was** Starting Page # **60** Starting Line # **3** Section **6.2.7.6.4.5****Scheduling of the MSH-NCFG messages is missing and to ensure some low level interoperability one should be provided.****Suggested Remedy****Include a new sub-clause (6.2.7.6.4.5.1 Scheduling next MSH-NCFG transmission) as described in a separate submission. <C802.16a-02/11>****Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** **k) done****Editor's Questions and Concerns****Editor's Action Items**Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0240**Comment submitted by: **Mika****Kasslin**

2002/01/05

Comment Type **Technical, Satisfied (was** Starting Page # **60** Starting Line # **3** Section **6.2.7.6.4.5****Scheduling of the MSH-NENT messages is missing and to ensure some low level interoperability one should be provided.****Suggested Remedy****Include a new sub-clause (6.2.7.6.4.5.2 Scheduling MSH-NENT messages) as described in a separate submission. <C802.16a-02/11>****Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** **k) done****Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0241**

Comment submitted by: Ken

Peirce

Member

Comment Type **Technical, Non-binding**Starting Page # **60**Starting Line # **7**Section **6.2.7.6.4.6**

This is very awkwardly written.

Suggested Remedy

Replace the sentences on lines 7 - 11 with:

" When a MSH-NCFG packet is received, the hop count field is incremented by 1."

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** e) editor disagrees**Replaced it with:**

"The hop count field for the neighbor itself is set to 1. The hop count field for other nodes listed in the MSH-NCFG message is set to 2 unless they already have a hop count of 1."

Editor's Questions and Concerns

Nico, If the group buys it OK. I have pretty decent english skills - all A's in college - and I find your text confusing, - Ken

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0242**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **60** Starting Line # **29** Section **6.2.7.7**

The support of AAS is important. It should however not be specified at the cost of compatibility with the mandatory MAC implementation. Currently we have a AAS MAC text that is incompatible with the main MAC, build on an AAS specific PHY mode that is incompatible with all other modes, which is rather undesirable.

First discussing a non-AAS compatible AAS implementation, followed by that statements that this compatibility doesn't need to be implemented under some self-fulfilling prophecy logic is not the way to create standards.

Suggested Remedy

Delete any statements that allow AAS implementations that are incompatible with the mandatory non-AAS mode. It should at any time support the broadcast messages that allow a non-AAS system to join.

Specifically:

Replace 6.2.7.7.1 and 6.2.7.7.2 with:

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0243**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Technical, Non-binding** Starting Page # **60** Starting Line # **34** Section **6.2.7.7.1**

The overview should provide more insight to the reader about the nature of the AAS. In the MAC part there is no description of the architecture, as promised in this section.

Suggested Remedy

Change the section as

Advanced Antenna Systems, AAS, (see [B59], [B60], [B61], [B62], [B63], [B65] for generic literature), through the use of more than one antenna element, can improve range and system capacity, by adapting the antenna pattern and concentrating its radiation to each individual subscriber. This clause specifies the detailed mechanisms by which AAS can be supported. The AAS system is capable of delivering the benefits of adaptive arrays and may also be compatible with non-AAS systems. The application of AAS requires both the MAC and PHY components of the AAS support to be implemented.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0244**Comment submitted by: [Avraham](#)[Freedman](#)[2002/01/03](#)Comment Type [Editorial](#) Starting Page # **60** Starting Line # **52** Section **6.2.7.7.1.2**

Suggested Remedy

[remove comma from:](#)["...the mixture between AAS and non-AAS improves\(,\) the system capacity,](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [l\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0245**Comment submitted by: [Lei](#)[Wang](#)[2002/01/04](#)Comment Type [Technical, Non-binding](#) Starting Page # **61** Starting Line # **25** Section[Uplink is scheduled in UL-MAP.](#)

Suggested Remedy

[change the second "scheduled according to DL-MAP" \(i.e., above the uplink box\) to "scheduled according to UL-MAP"](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0246**Comment submitted by: [Avraham](#)[Freedman](#)[2002/01/03](#)Comment Type [Editorial](#)Starting Page # **62**Starting Line # **52**Section **6.2.7.7.3**

It says in bullet 6: signals "may not be inadequate" . Shouldn't it be "may not be adequate" or is it "may be adequate"?

Suggested Remedy

[Change "inadequate" to "adequate"](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0247**Comment submitted by: [Subbu](#)[Ponnuswamy](#)[2002/01/04](#)Comment Type [Editorial](#)Starting Page # **62**Starting Line # **53**Section **6.2.7.7.3**

[Fix typo in line 53](#)

Suggested Remedy

[Replace "inadequate" with "adequate"](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [l\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0248**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type **Technical, Non-binding** Starting Page # **63** Starting Line # **6** Section **6.2.7.7.4**

The paragraph states that AAS systems use a specific DIUC/UIUC for their identification. The question is what modulation/FEC are these AAS systems going to use?

Suggested Remedy

No specific text, maybe use the extended DUIC/UIUC for to convey both the AAS identification and the modulation/FEC.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Use the extended DUIC/UIUC for to convey both the AAS identification and the modulation/FEC.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Randall Schwartz needs to examine this proposal for acceptance by the AAS community.

Editor's Notes**Editor's Actions** h) defer to next round

Since the resolution is too vague to do anything with, I'm deferring this one so the AAS adhoc can take this up as well.

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0249**

Comment submitted by: Paul

Struhsaker

2002/01/03

Comment Type **Technical, Satisfied (was** Starting Page # **63** Starting Line # **12** Section **6.2.7.7.4**

Broadcast messages will still need to be employed with or without AAS. For Dense subscriber spacing the Adaptive antenna may not be able to make any spatial resolution of a subscriber and as such the AAS will need to address multiple subscribers and use broadcast techniques.

Further, a broadcast message may be required for initial synchronization and net entry. As this has not been well defined it is premature to remove broadcast

Suggested Remedy

Remove the line and retain the broadcast message. It can be a null or empty message.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: **Accepted******Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Actually duplicate****Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0250**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type **Technical, Non-binding** Starting Page # **63** Starting Line # **16** Section **6.2.7.7.4**

The requirement "AAS subscriber stations shall ignore all messages associated with the broadcast CID" does not allow operation of a non-AAS BST with an AAS SS. Unless there is a technical reason why this mode of operation is excluded, I think it will be better to allow it.

Suggested Remedy

Delete the sentence "AAS subscriber stations shall ignore all messages associated with the broadcast CID"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0251**

Comment submitted by: Kenneth

Stanwood

2001/12/19

Comment Type **Technical, Non-binding** Starting Page # **63** Starting Line # **23** Section **6.2.7.7.4**

Why can't the private DL and UL MAPs use the same format as the public ones, just addressed to the Basic CID? If there is a good reason why, this new message must be given a unique message ID and should be moved to section 6.2.2.3.

Suggested Remedy**Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

2002/01/04

Comment # **0252**

Comment submitted by: Subir

Varma

Comment Type **Technical, Satisfied (was**

Starting Page # **63**

Starting Line # **29**

Section **6.2.7.8.3.5**

The DL_MAP section 6.2.7.8.3.5 does not have the definitions of the DL_MAP Information Elements

Suggested Remedy

Insert Table 1 from contribution from Subir Varma into Section 6.2.7.8.3.5 <C802.16a-02/01>

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Use Nico's suggestion

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Inserted in SC PHY, Brian E. to reshuffle in rewrite

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0253**

Comment submitted by: Paul

Struhsaker

2002/01/03

Comment Type **Technical, Satisfied (was** Starting Page # **63** Starting Line # **49** Section **6.2.7.7.5**

This section needs to be rewritten and also provide a flow diagram of the process.

What is clearly missing is the concept that the Subscriber must have access to some sort of broadcast message for teh subscriber to acieve receive synchronization. This is followed by uplink synchronization and network entry

Suggested Remedy

Provide a flow diagram and directly address the downlink synchronization issue for a subscriber.

In general more detailed information is required. The issues of BS corrdination some sort of broadcast beam ofra scanned beam that address an area of coverage and coverage dutycycle/repetition should be included

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Randall Schwartz **MUST** provide the required text.

Editor's Notes Editor's Actions h) defer to next round

Shoved onto the AAS pile.

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0254**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Technical, Non-binding** Starting Page # **64** Starting Line # **2** Section **6.2.7.7.5**
 The AAS registration channel is not defined

Suggested Remedy

Define "AAS registration channel" or change it to the actual logical channel used

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions h) defer to next round

Need input from AAS adhoc

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0255**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial** Starting Page # **64** Starting Line # **55** Section **6.2.9**
 To start this part with the mesh mode is putting the unified standard upside down. It seems more logical to me to describe the sections in the order they are written.

Suggested Remedy

This clause describes the procedures for entering and registering a new SS or a new node to the network. All network entry procedures described hereunder till and including subclause 6.2.9.12 apply only to the point-to-multipoint operation. The network entry procedure for mesh mode operation is described in subclause 6.2.9.13.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0256**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Technical, Non-binding** Starting Page # **65** Starting Line # **1** Section **6.2.9.13**

Compared to the specification of the PMP mode entry and registration (12 sub-clauses, 16 pages, 14 tables and figures) the level of specification of the mesh mode , 1 sub-clause, 1/2 page, no diagrams at all) seems highly unbalanced. It seems to me that a lot of parameters are missing (establish IP connectivity, for one). Isn't there anything to be taken from the PMP parts?

Suggested Remedy

[Expand the sub-clause](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

[Delegate responsibility to Mika Kasslin/ Nico](#)

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0257**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial** Starting Page # **65** Starting Line # **17** Section **6.2.9.13**

The reference made (6.2.2.4.32) does not exist

Suggested Remedy

[Change "6.2.2.4.32" to "6.2.2.3.34.4"](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0258**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **65** Starting Line # **43** Section **6.2.11.2**

Ranging method#1 seems to involve a rather huge overhead for OFDMA. It's more the OFDM method, but that's not the description of it. To improve interoperability, it would be better only to have the best of the two, which intuitively seems to be method#2.

Suggested Remedy

Delete method 1.

The OFDM ranging method is in the PHY (8.3.5.3.3.7.1). It'd be more consistent to move that here instead as 6.2.11.3.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Do not use the text solutions provided. See action items below.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Itzak, Kiho, Nico and Yigal should discuss the OFDMA ranging situation and provide a unified approach. This acceptance was really just to provide a reminder/placeholder.

Editor's Notes**Editor's Actions** k) done

The editor understands that both methods are really realizations of allocations, since the allocation is flexibly defined in the UL-MAP. Hence the methods description has been changed into examples to avoid the false notion that two distinct incompatible mechanisms are depicted. Kiho's suggestion, which apparently wasn't discussed, seems to be an implementation mechanism for this random code selection. Any other mechanism

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0259**Comment submitted by: [Moritz](#)[Harteneck](#)

2001/12/28

Comment Type [Editorial](#)Starting Page # **65**Starting Line # **52**Section **6.2.11.2**[Substitute '\(e.g.slot\)' by '\(i.e. slot\)'](#)

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0260**Comment submitted by: [Avraham](#)[Freedman](#)

2002/01/03

Comment Type [Editorial](#)Starting Page # **66**Starting Line # **60**Section **6.2.11.2**[Typo](#)

Suggested Remedy

[Change "whishes" to "wishes"](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/04

Comment # **0261**

Comment submitted by: David

Husson

Comment Type **Editorial**Starting Page # **66**Starting Line # **60**

Section

Spelling of "whishes" should be "wishes"

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/04

Comment # **0262**

Comment submitted by: Subir

Varma

Comment Type **Technical, Satisfied (was**Starting Page # **67**Starting Line # **6**Section **6.2.7.8.3.6**

Information Element for Upstream ACK missing in Table 169

Suggested Remedy

Add new Information Element for an Upstream ACK, as shown in Table 2 of contribution from Subir Varma <C802.16a-02/01>

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions l) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0263**Comment submitted by: **Lei****Wang**

2002/01/04

Comment	Type Technical, Non-binding	Starting Page # 67	Starting Line # 8	Section
---------	------------------------------------	---------------------------	--------------------------	---------

For the OFDMA PHY, the CDMA based ranging described on page 67 indicates that the BS can figure out the ranging requester SS just by receiving the ranging code. So, the question is how? does a ranging code contain a sender's ID?

Suggested Remedy

explain with necessary information.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

use Yigal's suggestion

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0264**Comment submitted by: **Avraham****Freedman**

2002/01/03

Comment	Type Editorial	Starting Page # 67	Starting Line # 13	Section 6.2.11.2.1
---------	-----------------------	---------------------------	---------------------------	---------------------------

typo

Suggested Remedy

change "addressed" to "addresses"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **l) none needed**

actually superceded by 263.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0265**

Comment submitted by: Subir

Varma

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **67** Starting Line # **50** Section **6.2.7.8.3.6**

For TDD systems, a MAP with both downlink and uplink Information Elements can be used to reduce overhead, such a MAP has not been defined for Single Carrier systems.

Suggested Remedy

Insert Section 3.1 from Subir Varma's contribution, that has a definition for a combined downlink + uplink MAP <C802.16a-02/01>

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions l) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0266**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type **Editorial** Starting Page # **69** Starting Line # **42** Section **6.2.11.3**

Pointing to a description 'above' is a bad idea in a changing document

Suggested Remedy

Replace the word 'above' with the relevant section number

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: [4b](#)

Comment Date

Comment # [0267](#)Comment submitted by: [Kenneth](#)[Stanwood](#)[2001/12/19](#)Comment Type [Editorial](#)Starting Page # [69](#)Starting Line # [50](#)Section [6.2.11.3](#)["tagged onto" is improper grammar](#)

Suggested Remedy

[Change "tagged onto" to "appended to"](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: [Accepted](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)[Also deleted "To improve system efficiency"](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: [4b](#)

Comment Date

Comment # [0268](#)Comment submitted by: [Nico](#)[van Waes](#)[2002/01/04](#)Comment Type [Technical, Non-binding](#)Starting Page # [70](#)Starting Line # [1](#)Section [8](#)

Suggested Remedy

[Align PHY according to changes suggested in document 802.161-01/24.](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: [Withdrawn](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [l\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0269**

Comment submitted by: Eric

Jacobsen

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **70** Starting Line # **12** Section **8.3.1**

One of the primary purposes of a standard is to assure equipment interoperability. This simplifies deployments for both service providers and consumers. In this case the proposed "standard" allows for a wide variety of configurations that are not interoperable. The disparities between many of the configurations make it impractical to provide a SS that is compliant to all possible configurations, so assured interoperability between a BS in any given mode and all "compliant" SSs is precluded. This suggests that this document does not embody a "standard" at all.

For example, it is not practical to provide a SS that operates in both FDD and TDD modes. FDD SSs achieve TX/RX isolation by frequency selective filtering that precludes TDD operation. TDD SSs achieve TX/RX isolation by time division, which precludes full FDD operation.

Suggested Remedy

This document is not ready for balloting. Reduce the number of major configurations to those that can be practically constructed in a single embodiment that can be shown to provide the performance required as indicated in the FRD. Call this embodiment "mandatory" and "compliant" and all other modes optional, or split the non-interoperable embodiments into separate, easily identifiable documents. This is the path taken by previously successful "standards", with 802.11/11a/11b being one pertinent example.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution**

The standard has been reduced to define four major PHY configurations and a common MAC. Splitting the embodiments into separate documents is not permitted under the PAR. Furthermore, the 802.11 example is a bad one, since the various documents are logically a single document (and will eventually be united into a single physical document). A better solution is to name the embodiments. A good example is 10Base T and 100BaseT, both defined in IEEE standard 802.3

Group's Notes**Group's Action Items****Editor's Notes****Editor's Actions** |) none needed

The following comment was received from the comment originator during Confirmation Ballot #4B:

"Please change my vote on the 802.16a letter ballot from "Disapprove" to "Abstain for Other Reasons". I do not wish to be on record as voting to approve the document in its current state, but I also do not want to impede the activities of the participating working group membership.

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0270**

Comment submitted by: Tom

Kolze

2002/01/03

Comment	Type	Starting Page #	Starting Line #	Section
	Technical, Binding	70	12	8.3.1

The compliance with 802.16 allows for (at least) two separate systems which do not interoperate. There are multiple PHYs, but a BS does not have to support both, or even a subset of both, and the SS does not have to support both, either. This is effectively two different standards, which means the group did not do its work. In some other standardization activities, wireless and otherwise, a related family of modulation formats was selected for the standard: one example is a standard using single carrier, with various, well-thought-out modulation constellations of varying bits per symbol, and FEC from a family with great commonality, such as Reed-Solomon with common field; another example is multi-tone (OFDM) with family of constellations and FEC family from a convolutional code with various puncturing. There is even an example now with two different U/S modulation types. but with the "SS-like" units supporting BOTH. so that the benefits of standardization are provided for the industry and the

Suggested Remedy

Pick a standard, or develop an inclusion strategy that makes sense and shows the benefit to the industry of standardizing in common equipment multiple disparate solutions. DO NOT just have separate standards for separate systems, which is AT ODDS with IEEE policy for its standards.

Proposed Resolution	Recommendation:	Recommendation by
----------------------------	------------------------	--------------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Superseded
----------------------------	---

Reason for Group's Decision/Resolution

The standard has been reduced to define four major PHY configurations and a common MAC. Splitting the embodiments into separate documents is not permitted under the PAR. Furthermore, the 802.11 example is a bad one, since the various documents are logically a single document (and will eventually be united into a single physical document. A better solution is to name the embodiments. A good example is 10Base T and 100BaseT, both defined in IEEE standard 802.3.

Group's Notes**Group's Action Items**

Editor's Notes	Editor's Actions) none needed
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Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0271**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type **Editorial**Starting Page # **70**Starting Line # **48**Section **8.3.1.1.1**

consistency and less redundancy

Suggested Remedy

Insert 3 blocks, "Pilot/Training Symbol Insertion" "Baseband Shaping" "Quadrature modulator" within the "modulation block"

Move the last two paragraphs under 8.3.1.1.4 to "Time/Frequency map"

Move the relevant text from 8.3.4.5.3 under 8.3.1.1.1.4 and delete the rest of 8.3.4.5.3

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Insert 3 blocks, "Pilot/Training Symbol Insertion" "Baseband Shaping" "Quadrature modulator" within the "modulation block"

Move the last two paragraphs under 8.3.1.1.4 to "Time/Frequency map"

Move the relevant text from 8.3.4.5.3 under 8.3.1.1.1.4 and delete the rest of 8.3.4.5.3

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes**

Editor's Actions k) done

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

2002/01/04

Comment # **0272**

Comment submitted by: **Ronald**

Murias

Comment Type **Technical, Non-binding**

Starting Page # **71**

Starting Line # **12**

Section

change "average" to "additive" for "additive white Gaussian noise".

Suggested Remedy

change "average" to "additive" for "additive white Gaussian noise".

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

change "average" to "additive" for "additive white Gaussian noise".

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0273**Comment submitted by: **Gordon****Antonello**

2002/01/04

Comment Type **Editorial**Starting Page # **72**Starting Line # **6**Section **8.3.1.1.1.5**

Grammer correction.

Suggested Remedy

Change sentence to read from:

" . . . temporal convolutional filter, when confronted channels with longer . . "

to

" . . . temporal convolutional filter, when confronted by channels with longer . . . "

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Change sentence to read from:

" . . . temporal convolutional filter, when confronted channels with longer . . "

to

" . . . temporal convolutional filter, when confronted by channels with longer . . . "

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** l) none needed

superceeded by decision to remove FDE text

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0274**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial**Starting Page # **72**Starting Line # **33**Section **8.3.1.1.1.5**

The paragraph starting with "Both multi carrier (MC)" to the end of the section is out of place, as it does not refer to the SC-FDE.

Suggested Remedy

Move the paragraph to the end of 8.3.1.1.1 (p.70 l.ine 64)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

delete entire paragraph

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0275**

Comment submitted by: Gordon

Antonello

2002/01/04

Comment Type **Editorial**Starting Page # **72**Starting Line # **35**Section **8.3.1.1.1.5**

Grammer correction.

Suggested Remedy

Change sentence from:

" In addition, OFDM can be incorporate peak-to-average . . "

to:

"In addition, OFDM can incorporate peak-to-average . . ".

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions l) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0276**Comment submitted by: [Malik](#)[Audeh](#)

2002/01/04

Comment Type [Editorial](#)Starting Page # **72**Starting Line # **35**Section **8.3.1.1.1.5**[Remove the word "be" in the following sentence:](#)["In addition OFDM can be incorporate peak-to-average reduction...."](#)

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [1\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0277**Comment submitted by: [Avraham](#)[Freedman](#)

2002/01/03

Comment Type [Editorial](#)Starting Page # **72**Starting Line # **35**Section **5.3.1.1.1.5**[The word "be" in the sentence "OFDM can be incorporate..." should not be there](#)

Suggested Remedy

[Remove the "be"](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [1\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/04

Comment # **0278**Comment submitted by: **Ronald****Murias**Comment Type **Editorial**Starting Page # **72**Starting Line # **36**

Section

"partially (but not completely)" is redundant.

Suggested Remedy

remove "(but not completely)"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions l) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/02

Comment # **0279**Comment submitted by: **Walt****Roehr**Comment Type **Editorial**Starting Page # **73**Starting Line # **3**Section **8.3.1.1.1.6**

two instances of "MAP"

Suggested Remedy

replace with "map"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0280**Comment submitted by: **Scott****Marin**

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **74** Starting Line # **2** Section **8.3.2**

Are all paragraphs in section 8.3.2 informative or just 8.3.2.1? In my opinion, regulatory issues should be informative in an IEEE 802 standard so as to not potentially conflict with or omit some regulatory requirements.

Note however, that paragraph 8.3.2 items seem to be invoked as requirements by clauses later in the standard.

Suggested Remedy

Add sentence "This clause is informative" to paragraph 8.3.2 and delete sentence "This clause is informative" in section 8.3.2.1.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Add sentence "This clause is informative" to paragraph 8.3.2 and delete sentence "This clause is informative" in section 8.3.2.1.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: [4b](#)

Comment Date

Comment # [0281](#)Comment submitted by: [Avraham](#)[Freedman](#)[2002/01/03](#)Comment Type [Editorial](#)Starting Page # [74](#)Starting Line # [28](#)Section [8.3.2.1](#)[It's time to replace the ??? with a real reference](#)

Suggested Remedy

[David T](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: [Accepted-Modified](#)[Remove Canada allocation lines from 2.5-2.69 GHz](#)

Reason for Group's Decision/Resolution

[No specific text provided](#)

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [h\) defer to next round](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: [4b](#)

Comment Date

Comment # [0282](#)Comment submitted by: [Jose](#)[Costa](#)[2002/01/02](#)Comment Type [Technical, Non-binding](#)Starting Page # [74](#)Starting Line # [37](#)Section [8.3.2.1](#)[The references to ITU-R Recommendations in the table lack the ITU-R letter series, which is required. This occurs in two places, lines 37 and 42.](#)

Suggested Remedy

[Replace "ITU-R Rec. 1488..." by "Rec. ITU-R F.1488" in page 74, lines 37 and 42.](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: [Accepted](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0283**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial**Starting Page # **74**Starting Line # **38**Section **8.3.2.1**

Add a reference number to the documents in the list, which are referenced in the Bibliography. In anticipation of discussion, in my 2c worth opinion, there is no point in adding all the documents in the list to the Bibliography, as they appear only here and the reference given provides sufficient details to find them.

Suggested Remedy

Change "EN 301 021" to "EN 301 021 [B18]" in lines 38 and 63

Change "USA CFR 47 Part 15, subpart E" to "USA CFR 47 Part 15, subpart E [B19]" in lines 36 and 57

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Change "EN 301 021" to "EN 301 021 [B18]" in lines 38 and 63

Change "USA CFR 47 Part 15, subpart E" to "USA CFR 47 Part 15, subpart E [B19]" in lines 36 and 57

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/03

Comment # **0284**

Comment submitted by: Avraham

Freedman

Comment Type **Technical, Non-binding**Starting Page # **74**Starting Line # **58**Section **8.3.2**

FCC Docket 99-231 appears in Table 222, and should also appear in Table 168

Suggested Remedy

Add

"USA FCC Docket ET 99-231"

To third column under UNII (upper UNII band)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Add

"USA FCC Docket ET 99-231"

To third column under UNII (upper UNII band)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0285**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type [Editorial](#)Starting Page # **75**Starting Line # **4**Section **8.3.2.2**

In figure 154, the breakpoints are not defined. The definition is in the ETSI standards, and is not trivial.

Suggested Remedy

Rewrite the first sentence as follows:

"The ETSI masks are shown in Figure 154. For details see [B18]

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: [Accepted-Modified](#)**

Rewrite the first sentence as follows:

"The ETSI masks are shown in Figure 154. For details see [B18]

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** [k\) done](#)**Editor's Questions and Concerns****Editor's Action Items**Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0286**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type [Editorial](#)Starting Page # **77**Starting Line # **25**Section **8.3.2.3.2**

Spelling mistake

Suggested Remedy

change "an BWA" to "a BWA"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: [Accepted](#)****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** [k\) done](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0287**Comment submitted by: **Ronald****Murias**

2002/01/04

Comment	Type	Technical, Satisfied (was	Starting Page #	78	Starting Line #	Section	8.3.3.1.5
---------	------	----------------------------------	-----------------	-----------	-----------------	---------	------------------

Channel encoding schemes section discusses the downlink, but there is no description of the uplink.

Suggested Remedy

Remove "Downlink" from the section title 8.3.3.1.5.1, and on line 55, change "shall be supported on the downlink" to "shall be supported on the downlink and on the uplink"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Remove "Downlink" from the section title 8.3.3.1.5.1, and on line 55, change "shall be supported on the downlink" to "shall be supported on the downlink and on the uplink"

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0288**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Technical, Non-binding** Starting Page # **78** Starting Line # **24** Section **8.3.3**

If the document is to incorporate mesh architecture, the relevant sub sections should be added with reference to it.

Suggested Remedy

Change title to: 8.3.3 Downlink, uplink and mesh channels

Add text to (at least) sections 8.3.3.1.2 Multiple access

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Delete clause 8.3.3.1.2.

Change 8.3.3 to "Common characteristics"

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0289**Comment submitted by: [Moshe](#)[Ran](#)[2002/01/04](#)Comment Type [Editorial](#)Starting Page # **78**Starting Line # **58**Section **8.3.3.1.5.2**[reed solomon](#)

Suggested Remedy

[Reed-Solomon. For consistency - "Reed-Solomon" should replace any other appearance of these two words.](#)

Proposed Resolution Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0290**Comment submitted by: [Avraham](#)[Freedman](#)[2002/01/03](#)Comment Type [Editorial](#)Starting Page # **79**Starting Line # **24**Section **8.3.3.1.5.2**["punctured using puncturing" is superflous](#)

Suggested Remedy

[delete "using puncturing"](#)

Proposed Resolution Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

2002/01/04

Comment # **0291**

Comment submitted by: **Ronald**

Murias

Comment Type **Editorial**

Starting Page # **79**

Starting Line # **25**

Section

"are punctured using puncturing" is redundant

Suggested Remedy

remove "using puncturing"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0292**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type **Editorial**Starting Page # **79**Starting Line # **25**Section **8.3.3.1.5.2**

text is clear enough without the proposed deleted words.

Suggested Remedy

delete "using puncturing"

delete line 29, 30

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

delete "using puncturing"

delete line 29, 30

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0293**Comment submitted by: **Lars****Lindh**

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **79** Starting Line # **35** Section **8.3.3.1.5.2.1**
The field over which the RS-symbols are generated must be defined

Suggested Remedy

Define the field as GF(256)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Modified**insert "using GF(2⁸)" after "code"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0294**Comment submitted by: **Ronald****Murias**

2002/01/04

Comment Type **Editorial** Starting Page # **79** Starting Line # **48** Section
gx) should be g(x)

Suggested Remedy

Change to g(x)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

Change to g(x)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0295**

Comment submitted by: **Walt**

Roehr

2002/01/02

Comment Type **Editorial**

Starting Page # **79**

Starting Line # **60**

Section **8.3.3.1.5.2.2**

The only way that code rates other than 1/2 will be generated is by puncturing. Therefore, "may" is the wrong verb.

Suggested Remedy

replace "may be" with "are"

same problem and solution on page 80 line 33

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

replace "may be" with "are"

same problem and solution on page 80 line 33

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0296**Comment submitted by: [Avraham](#)[Freedman](#)[2002/01/03](#)Comment Type [Editorial](#)Starting Page # **80**Starting Line # **40**Section **8.3.3.1.5.2.2**[The paragraph is repeated \(with some more details\)](#)

Suggested Remedy

[Remove the pragraph \(lines 40-43\)](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

[see 298](#)

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [l\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0297**Comment submitted by: [Walt](#)[Roehr](#)[2002/01/02](#)Comment Type [Editorial](#)Starting Page # **80**Starting Line # **41**Section **8.3.3.1.5.2.2**[line 41 - 43 are redundant with line 46 forward.](#)

Suggested Remedy

[delete lines 41-43](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

[see 298](#)

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [l\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0298**

Comment submitted by: Nico

van Waes

2002/01/04

Comment	Type Editorial	Starting Page # 80	Starting Line # 42	Section 8.3.3.1.5.2.2
---------	-----------------------	---------------------------	---------------------------	------------------------------

IQ mapping was removed from this table, and redundancy cleanup

Suggested Remedy

replace lines 41 through 50 with:

Puncturing patterns and serialization order are described separately for the SC-PHY and the OFDM PHY. In the table, "1" means transmitted bit while "0" denotes removed bit. For the SC PHY the IQ mapping is also given. Puncturing patterns and serialization order which shall be used to realize the code rates are defined in Table 170. In the table, "1" means a transmitted bit and "0" denotes a removed bit, whereas X and Y are in reference to Figure 158.

Proposed Resolution	Recommendation:	Recommendation by
----------------------------	------------------------	--------------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Accepted-Modified
----------------------------	--

replace lines 41 through 50 with:

Puncturing patterns and serialization order are described separately for the SC-PHY and the OFDM PHY. Puncturing patterns and serialization order which shall be used to realize the code rates are defined in Table 170. In the table, "1" means a transmitted bit and "0" denotes a removed bit, whereas X and Y are in reference to Figure 158.

Delete page 79, line 59.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes	Editor's Actions k) done
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Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0299**Comment submitted by: **Moshe**

Ran

2002/01/04

Comment Type **Editorial** Starting Page # **81** Starting Line # **42** Section **8.3.3.1.5.3**

Typo- Subscript y in formula (n_y, k_y)

Suggested Remedy

 (n_y, k_y)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted** (n_y, k_y)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0300**Comment submitted by: **Moshe**

Ran

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **82** Starting Line # **24** Section **8.3.3.1.5.3.1**

The sentence starting with "The encoder for TPC has near zero latency, and is constructed from linear feedback shift registers..." implies a specific implementation for encoders based on LFSR's. This is not necessarily required by the standard.

Suggested Remedy

"The encoder for TPC has near zero latency, and may be constructed from linear feedback shift registers..."

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Delete page 82, line 24 entire sentence.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0301**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial**Starting Page # **84**Starting Line # **52**Section **8.3.3.1.5.4**

This section should not belong under channel coding (8.3.3.1.5) but deserves a level of its own

Suggested Remedy

Renumber:

8.3.3.1.5.4 -> 8.3.3.1.6

8.3.3.1.6 -> 8.3.3.1.7

8.3.3.1.7 > 8.3.3.1.8

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group**Decision of Group: **Accepted**

renumber:

8.3.3.1.5.4 -> 8.3.3.1.6

8.3.3.1.6 -> 8.3.3.1.7

8.3.3.1.7 > 8.3.3.1.8

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes**

Editor's Actions k) done

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0302**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial**

Starting Page # **84**

Starting Line # **55**

Section **8.3.3.1.5.4**

The paragrpah is a little bit cumbersome

Suggested Remedy

Rephrase the paragaraph as:

All FEC schemes in the OFDM modes, and selected (but not all) code rates and modulations for the single carrier mode use Grey code mapping illustrated in Figure 161 and Figure 162. For details about single carrier modes see 8.3.3.4.5.5.2

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Rephrase the paragaraph as:

All FEC schemes in the OFDM modes, and selected (but not all) code rates and modulations for the single carrier mode use Grey code mapping illustrated in Figure 161 and Figure 162. For details about single carrier modes see 8.3.3.4.5.5.2.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0303**

Comment submitted by: **Moshe**

Ran

2002/01/04

Comment Type **Technical, Non-binding**

Starting Page # **85**

Starting Line # **7**

Section **8.3.3.1.5**

Figure 161 and 162 are Gray maps not consistent with Gray maps given later at Section 8.3.4.5.2 Figure 178. No need for two different Gray maps.

Suggested Remedy

Remove the bit-to-symbol description from subsection 8.3.3.1.5 ("Channel Coding schemes"). However, normalization table (Table 173) is referring to the constellation map. A possible way to correct the current draft is to rename 8.3.3.1.6 "mapping and modulation" with two subsections: 8.3.3.1.6.1 Constellation mapping, 8.3.3.1.6.2 Adaptive Modulation. The content of Constellation Mapping of the new subsection 8.3.3.1.6.1 should be the same as given in 8.3.4.5.2 Fig. 178.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

delete Fig. 178.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0304**

Comment submitted by: Lars

Lindh

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **86** Starting Line # **52** Section **8.3.3.1.5.4**

There are no justification presented for the different kind of boosting levels for the "Normalization factors" presented in Table 173. The "boosting options" seem to affect all the modulation schemes in the same way. What is instead needed are "boosting factors" that can give different relative power levels to the modulation schemes. This has been done in the 802.16 10-66 GHz standard and will let the operator optimize for covery/availability or capacity

Suggested Remedy

Change table 173 to have only two columns with headers "equal average power" and "equal peak power".
Let the coefficients be

	equal avg power	equal peak power
--	-----------------	------------------

BPSK	1	1
QPSK	1/sqrt(2)	1/sqrt(2)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

Change table 173 to have only two columns with headers "equal average power" and "equal peak power".
Let the coefficients be

	equal avg power	equal peak power
--	-----------------	------------------

BPSK	1	1
QPSK	1/sqrt(2)	1/sqrt(2)
16QAM	1/sqrt(10)	1/sqrt(18)
64QAM	1/sqrt(42)	1/sqrt(98)

specify +/- 6 dB boosting in the OFDMA PHY

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0305**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Technical, Non-binding** Starting Page # **87** Starting Line # **9** Section **8.3.3.1.7**
Couldn't this clause be more general and include also BS signal measurement ?

Suggested Remedy

Delete "at the SS" in the title.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Delete "at the SS" in the title.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0306**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial** Starting Page # **87** Starting Line # **20** Section **8.3.3.1.7.1**
Typo

Suggested Remedy

Change "it decision-making" to "its decision making"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change "it decision-making" to "its decision making"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: [4b](#)

Comment Date

Comment # [0307](#)Comment submitted by: [Ronald](#)[Murias](#)[2002/01/04](#)

Comment	Type Editorial	Starting Page # 87	Starting Line # 25	Section
---------	--------------------------------	------------------------------------	------------------------------------	---------

"or if perhaps, if the SS should solicit a channel" should be "or if the SS solicits a channel"

Suggested Remedy

change to "or if the SS solicits a channel"

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: [Accepted](#)

change to "or if the SS solicits a channel"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: [4b](#)

Comment Date

Comment # [0308](#)Comment submitted by: [Ronald](#)[Murias](#)[2002/01/04](#)

Comment	Type Editorial	Starting Page # 87	Starting Line # 29	Section
---------	--------------------------------	------------------------------------	------------------------------------	---------

"aforesaid"?

Suggested Remedy

change to "aforementioned"

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: [Accepted-Modified](#)[previously stated](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0309**Comment submitted by: [Avraham](#)[Freedman](#)

2002/01/03

Comment Type [Editorial](#)Starting Page # **87**Starting Line # **31**Section **8.3.3.1.7.1**[Missing definition of BER, while there is one for RSSI and CINR](#)

Suggested Remedy

[Change last sentence to read:](#)[A third is the Bit Error Rate \(BER\)](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

[see 310](#)

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [1\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0310**

Comment submitted by: **Moritz**

Harteneck

2001/12/28

Comment Type **Editorial**

Starting Page # **87**

Starting Line # **31**

Section **8.3.3.1.7.1**

'A thrid is the uncoded (BER)'. This should be changed to '... and the third being the uncoded BER'.

In total, it might be better to change the wording of bit error rate within this context since the real transmitted bit sequence is not known at the SS and so a comparison of the decoded sequence (assumed to be error free) and the received sequence is performed, which is not the same as BER.

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

... and the third being the uncoded BER

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

changed to "..., needs: RSSI, CINR and uncoded BER."

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0311**Comment submitted by: [Ronald](#)[Murias](#)[2002/01/04](#)

Comment	Type Editorial	Starting Page # 87	Starting Line # 31	Section
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"unencoded (BER)" should be "unencoded bit error rate (BER)"

Suggested Remedy

["change to unencoded bit error rate \(BER\)"](#)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

[see 310](#)

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [l\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0312**Comment submitted by: [Lei](#)[Wang](#)[2002/01/04](#)

Comment	Type Technical, Non-binding	Starting Page # 87	Starting Line # 65	Section
---------	---	------------------------------------	------------------------------------	---------

Since DL supports adaptive modulation, a SS should also measures the DL channel quality of its DL modulation, too, not just broadcast modulation. So, both broadcasting and SS-specific channel quality parameters should be measured.

Suggested Remedy

[remove this paragraph.](#)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**[remove this paragraph.](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0313**Comment submitted by: **Lei****Wang**

2002/01/04

Comment	Type	Starting Page #	Starting Line #	Section
MAC header may not be in the broadcast message.	Technical, Non-binding	88	16	

also on page 89, line 23.

also on page 91, line 4.

Suggested Remedy

Change to "MAC MAP messages."

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group**Decision of Group: **Accepted**

MAC header may not be in the broadcast message.

also on page 89, line 23.

also on page 91, line 4.

Change to "MAC MAP messages."

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes**Editor's Actions **k) done****Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0314**

Comment submitted by: Lei

Wang

2002/01/04

Comment	Type	Starting Page #	Starting Line #	Section
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	Technical, Non-binding	88	19	
--	------------------------	----	----	--

needs clarification about which MAC message and the corresponding TLVs for reporting SS channel quality measurement. Same comment on line 26, page 89; and line 7, page 91, since the SS channel quality measures include RSSI mean and standard deviation, CINR mean and standard deviation, uncoded BER mean.

Suggested Remedy

Which MAC message?

RNG_REQ with the TLV specified in Table 232, which is currently defined only for license-exempt bands.

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for Recommendation

Resolution of Group	Decision of Group:
---------------------	--------------------

remove footnotes on table 232 and table 233 add uncoded BER in the TLV tables 232 and 233 change "MAC messages" to "the RNG_REQ message"	Accepted-Modified
--	--------------------------

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes	Editor's Actions
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k) done

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0315**Comment submitted by: **Anader****Benyamin-Seeyar**

2002/01/04

Comment Type **Editorial**Starting Page # **90**Starting Line # **21**Section **8.3.3.1.7.3**

Repeated part of the sentence (; and s[k,n] is the detected sample....) on lines 21 and 22.

Suggested Remedy

Delete the repeated part of the sentence on line 22.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Delete the repeated part of the sentence on line 22.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0316**Comment submitted by: **Moritz****Harteneck**

2001/12/28

Comment Type **Editorial**Starting Page # **91**Starting Line # **21**Section **8.3.3.1.7.4**

Change '...dissimilar bit locations, e.g. the number of...' to '...dissimilar bit locations, i.e. the number of...'

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change '...dissimilar bit locations, e.g. the number of...' to '...dissimilar bit locations, i.e. the number of...'

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0317**Comment submitted by: **Moritz****Harteneck**

2001/12/28

Comment Type **Technical, Non-binding** Starting Page # **92** Starting Line # **11** Section **8.3.3.2.2**

Why is BPSK part of the optional downlink modes? In the rest of the document it is assumed that QPSK is the most robust mode and so if a SS needs BPSK in the downlink it cannot acquire synchronisation in the beginning. I think BPSK should be removed from the downlink modes to simplify the document.

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

change BPSK on line 11 to N/A.

vote: 11 in favor, 4 against

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0318**Comment submitted by: **Lei****Wang**

2002/01/04

Comment	Type	Starting Page #	Starting Line #	Section
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Technical, Non-binding

92

45

The "downlink mode B" is not defined in the document.

Suggested Remedy

change "the downlink mode B" to "the framed downlink".

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group**Decision of Group: **Accepted**

change "the downlink mode B" to "the framed downlink".

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes**Editor's Actions **k) done**

terminated after "allowed." instead

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/04

Comment # **0319**Comment submitted by: **Lei****Wang**Comment Type **Technical, Non-binding**Starting Page # **92**Starting Line # **48**Section **Table 176**

Have different max frame sizes for TDD and FDD.

Suggested Remedy

replace the last entry in Table 176 with:

16-25	N-5 (for TDD only)	N
26-255	reserved	reserved

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Rejected**

vote: 19 in favor, 10 against

Reason for Group's Decision/Resolutionno identifiable increase in efficiency is shown.
increases the latency in the system**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** 1) none needed

Changed from Binding to Non-binding per request of comment originator (4 April 2002)/Roger

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0320**

Comment submitted by: Carl

Eklund

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **92** Starting Line # **56** Section **8.3.3.4**

The number of frame lengths is ridiculously high. Also the the frame lengths are specified inaccurately leading to the fact that currently all cases are covered by the frame length code= 0 .

Suggested Remedy

Reduce the number of frame times. Specify the lengths in appropriate units i.e. PSs

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

The 0 value ought to be set to Reserved. The current definition makes the rest of the table meaningless.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done

Also deleted values up to 1.5 ms as agreed (appearantly forgot to note it down in the resolution)

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0321**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type **Technical, Satisfied (was** Starting Page # **93** Starting Line # **1** Section **8.3.3.4**

The definition using mini-slot duration does not make much sense, as it is a variable unit of measurement defined for uplink BW allocations. It is desirable to have a frame length that is a multiple of OFDM symbol duration.

Suggested Remedy

Change 'minislot duration' to 'OFDM/OFDMA symbol duration'

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/04

Comment # **0322**

Comment submitted by: Lei

Wang

Comment	Type	Starting Page #	Starting Line #	Section
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Technical, Non-binding

93

1

For OFDM, the frame length should be an integer multiple of OFDM symbols, not minislot, duration.

Also, the frame duration for the OFDMA PHY is specifically discussed in the next paragraph, i.e., line 4, page 93.

Suggested Remedy

1. remove "and OFDMA", and
2. change "the minislot duration" to "the OFDM symbol duration".

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Rejected**

change "the minislot duration" to "the OFDM symbol duration".

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0323**

Comment submitted by: Carl

Eklund

2002/01/04

Comment Type **Editorial** Starting Page # **93** Starting Line # **8** Section **8.3.3.4**

The SI unit for time is seconds not Siemens

Suggested Remedy

Change uS to us

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0324**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial** Starting Page # **93** Starting Line # **8** Section **8.3.3.4**

This is the first time the terms RTG and TTG are mentioned, and they should be better defined

Suggested Remedy

Change "plus a RTG and TTG guard interval (each not exceeding 20uS duration)" to
plus a RX/TX Transition Gap (RTG) and TX/RX Transition Gap (TTG), each not exceeding 20us duration (see 8.3.5.2.1)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Modified**delete" (each not exceeding 20uS duration)"
Add "The RTG and TTG shall be greater than 5us."

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0325**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type Technical, Satisfied (was Starting Page # **93** Starting Line # **10** Section **8.3.3.4**
Alamouti STC Encoding requires an even number of OFDM/OFDMA symbol

Suggested Remedy

Add the following text at the end of the section:

"When using Alamouti STC Encoding, the frame shall contain (in addition to all other requirements) an even number of OFDM/OFDMA symbols. This requirement shall be taken into account when deriving the actual frame duration from table 176."

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Add the following text at the end of the section:

"When using Alamouti STC Encoding, the frame shall contain (in addition to all other requirements) an even number of OFDM/OFDMA symbols. This requirement shall be taken into account when deriving the actual frame duration from table 176."

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0326**

Comment submitted by: Brian

Eidson

2002/01/04

Comment Type **Editorial**Starting Page # **94**Starting Line # **18**Section **8.3.4.2**

Make sections 8.3.4.2-8.3.4.5 subheadings under 8.3.4.1 (Introduction), since they contain introductory material, and logically should be under the Introduction.

Suggested Remedy

8.3.4.2 --> 8.3.4.1.1

8.3.4.3 --> 8.3.4.1.2

8.3.4.4 --> 8.3.4.1.3

8.3.4.5 --> 8.3.4.1.4

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

8.3.4.2 --> 8.3.4.1.1

8.3.4.3 --> 8.3.4.1.2

8.3.4.4 --> 8.3.4.1.3

8.3.4.5 --> 8.3.4.1.4

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0327**Comment submitted by: **Anader****Benyamin-Seeyar**

2002/01/04

Comment Type **Editorial**Starting Page # **94**Starting Line # **44**Section **8.3.4.3**

An article is missing!

Suggested Remedy

Replace "in n typical MMDS operating condistions,..." with "in a typical MMDS operating condistions',..."

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **l) none needed**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0328**Comment submitted by: **Moritz****Harteneck**

2001/12/28

Comment Type **Editorial**Starting Page # **94**Starting Line # **44**Section **8.3.4.3**

There is an 'n' too much. It should read 'However, in typical MMDS operating...'

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

There is an 'n' too much. It should read 'However, in typical MMDS operating...'

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0329**Comment submitted by: **Avraham****Freedman**

2002/01/03

Comment Type **Editorial**Starting Page # **94**Starting Line # **45**Section **8.3.4.3**

The reference [B22] seems not to be correct . The channel model document is not included, although it is highly relevant.

Suggested Remedy

Replace [B22] with [B64], or add [B64]

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change "[B21], [B22], [B34]." to "[B34], [B35], [B64]."

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0330**

Comment submitted by: Gordon

Antonello

2002/01/04

Comment	Type	Starting Page #	Starting Line #	Section
	Editorial (was Technical)	94	47	8.3.4.3

Comparisons between SC and OFDM always suggest that with FDE SC is similar in performance to OFDM. Meaning that without FDE SC performs less well when compared to OFDM. FDE is stated as recommended and not mandatory. In order to ensure robust systems are developed for the 2 - 11 GHz frequency band, if SC is used, would it not make logical sense to make the implementation of FDE in a SC system mandatory?

Suggested Remedy

1) Change sentence in lines 49-52 on page 94 to read:

"To economically and effectively combat NLOS multipath channel conditions, equalization with a frequency (or mixed time-frequency) domain equalizer is mandatory when implementing a SC PHY receiver."

2) Remove sentence in line 28 on page 95 which reads:

"Similar FFT sizes might be seen with OFDM equalizers."

3) Change sentence starting on line 56 page 95 from:

"The equalizer of Figure 164 uses approximately $\log_2(M)$ multiplies per symbol, which is similar to the equalization complexity required by an

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

1) Remove FDE text from spec. 15 in favor, 8 against -> passes

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done

Eliminated "Framing structures that facilitate use of frequency domain equalization" from list of SC PHY features

by merging it with another list element, to read

"Framing elements and structures that facilitate equalization and channel estimation in delay spread environments."

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0331**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **94** Starting Line # **50** Section **8.3.4.3**

It is clear from several previous contributions on SC, that the system performance is only similar to OFDM if FDE with time domain decision feedback (SC_DFE) is implemented and inferior otherwise. A standard should not allow for clearly inferior implementations, especially if it defines highly redundant modes, because such implementations severely damage the marketing status of any implementation of a standard. The argument that it is a receiver side definition, which is generally not specified, is as such irrelevant, since the issue here is minimum performance, not interoperability.

Suggested Remedy

Replace "recommended" with "mandatory" and restate any other text that leaves FDE optional to read mandatory. delete page 95 line 1 through 60 and replace the word "another" with "the mandatory" in line 61

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0332**

Comment submitted by: Carl

Eklund

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **95** Starting Line # **39** Section **8.3.4.3**

Misplaced text from a college textbook. The entire text contains nothing normative. Also it seems more like general speculation than an overview of the actual system.

Suggested Remedy

Delete entire section. Delete also bullets on lines 10 and 12 on page 94.

Proposed Resolution Recommendation: Recommendation by**Reason for Recommendation****Resolution of Group Decision of Group: **Superceded******Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0333**Comment submitted by: [Gordon](#)[Antonello](#)[2002/01/04](#)Comment Type [Editorial](#)Starting Page # **96**Starting Line # **5**Section **8.3.4.3**[Informational text belongs in appendix.](#)

Suggested Remedy

[Remove paragraphs starting from line 5 through line 16.](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [|\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0334**Comment submitted by: [Carl](#)[Eklund](#)[2002/01/04](#)Comment Type [Editorial](#)Starting Page # **96**Starting Line # **45**Section **8.3.4.4**[The text of the section is neither normative or informative for purposes of the standard](#)

Suggested Remedy

[Delete entire section](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [|\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0335**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type **Editorial**Starting Page # **96**Starting Line # **46**Section **8.3.4.4**

inconsistent abbreviation, either use SC or SCM (don't see a difference between a Single Carrier system and a Single Carrier Modulation system.)

Suggested Remedy

change SCM to SC throughout the text

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**vote: in favor of SCM 5
in favor of SC 17

change SCM to SC throughout document

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0336**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type [Editorial](#) Starting Page # **96** Starting Line # **46** Section **8.3.4.4**
[consolidation of the OFDM/SC compatibility text and cleanup](#)

Suggested Remedy

[Move entire clause to appendix B.5](#)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [l\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0337**

Comment submitted by: Moritz

Harteneck

2001/12/28

Comment Type [Editorial](#) Starting Page # **96** Starting Line # **53** Section **8.3.4.4**
[It should read '...using an inverse fast Fourier transform \(IFFT\) at the ...' and not '...using an inverse fast Fourier transform \(FFT\) at the ...'](#)

Suggested Remedy

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [l\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0338**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type [Editorial](#)Starting Page # [96](#)Starting Line # [55](#)Section [8.3.4.4](#)

The abbreviation SCM refers to Single Carrier Modulation and should refer to the whole expression and not to a part of it.

Suggested Remedy

Change "single carrier (SCM) modulation" to "single carrier modulation (SCM)"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [1\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0339**

Comment submitted by: Moritz

Harteneck

2001/12/28

Comment Type [Editorial](#)Starting Page # [96](#)Starting Line # [55](#)Section [8.3.4.4](#)

It should read 'A single carrier modulation (SCM) system...' and not 'A single carrier (SCM) modulation system...'

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [1\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0340**Comment submitted by: **Gordon****Antonello**

2002/01/04

Comment	Type Editorial	Starting Page # 96	Starting Line # 62	Section 8.3.4.4
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Informational text belongs in appendix.

Suggested Remedy

Remove text and diagram beginning at line 62 of page 96 and ending at line 40 of page 97.

Proposed Resolution	Recommendation:	Recommendation by
----------------------------	------------------------	--------------------------

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions *) none needed*

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0341**Comment submitted by: **Nico****van Waes**

2002/01/04

Comment	Type Editorial	Starting Page # 97	Starting Line # 5	Section 8.3.4.4
---------	-----------------------	---------------------------	--------------------------	------------------------

Pointless narrative

Suggested Remedy

Delete lines 6 through 11

Delete lines 43 through 46 (this is what a TOC is for, it even refers to itself)

Delete 8.3.4.5.2. This is already defined in 8.3.3.2.1.

Proposed Resolution	Recommendation:	Recommendation by
----------------------------	------------------------	--------------------------

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions *) none needed*

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0342**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial**Starting Page # **99**Starting Line # **29**Section **8.3.4.5.5.**

The section repeats the general section of 8.3.3.1.5. This might lead to contradiction and may be difficult to maintain. It is suggested to refer the reader to 8.3.3.1.5 as much as possible for the technical details, and leave here only the "SC flavor".

Suggested Remedy

[Rewrite the section](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0343**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type **Editorial**Starting Page # **99**Starting Line # **29**Section **8.3.4.5.5**

I lost count of the number of times this was deleted due to redundancy with 8.3.3.1.5, better settle this in the official process.

Suggested Remedy

Delete line 31 through line 25 on page 101 and reduce the depth of the remaining subclauses to H6

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group**Decision of Group: **Accepted-Modified**

Replace line 31 through line 25 on page 101 with:

"DL broadcast messages shall use QPSK and a concatenated FEC with rate 1/2 convolutional (inner) code as defined in clause 8.3.3.1.5.2.2. Non-broadcast messages shall support adaptive modulation as defined in clause 8.3.3.1.6. and concatenated RS-CC coding as defined in 8.3.3.1.5." Optionally, the FEC may be suppressed entirely when ARQ is being used."

8.3.4.5.5.1 Concatenated Reed-Solomon + Convolutional Code

Details on the baseline Reed Solomon (N=255,K=239) code may be found in section 8.3.3.1.5.2.1. The capability to puncture and shorten the code to handle smaller N and K code blocks [for N-K <= 16] shall be supported.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes**Editor's Actions **k) done****Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0344**Comment submitted by: **Carl****Eklund****2002/01/04**Comment Type **Editorial**Starting Page # **99**Starting Line # **31**Section **8.3.4.5.5**

This section and its subsections contain very little if any normative text.(almost total lack of shall, should).

Suggested Remedy

Delete text or reword appropriate parts to actually state some requirements!

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: **Rejected******Reason for Group's Decision/Resolution**

no specific changes suggested

Group's Notes**Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0345**Comment submitted by: **Moritz****Harteneck**

2001/12/28

Comment **Type** **Technical, Non-binding** **Starting Page #** **100** **Starting Line #** **20** **Section** **8.3.4.5.5.1.1**

In this section, the outer FEC is defined. The input comes from the randomiser and is a bit stream and the output goes to the inner FEC and is a bit stream. However, the Reed-Solomon is defined on a byte space and here the definition for bit/byte and byte/bit conversion is missing (MSB first / LSB first).

Suggested Remedy**Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

add in 8.3.3.1.5.2.1 "The bit/byte conversion shall be MSB first"

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0346**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **100** Starting Line # **43** Section **8.3.4.5.5.1.2**
Either there is a need for interleaving, or there isn't. If there is really a good reason to keep this optional, then please explain how PHY layer interoperability is ensured with this option.

Suggested Remedy

Make the interleaver either mandatory, or delete it.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Replace first two sentences with: "Interleaving is optional on the downlink, but shall not be used in broadcast burst profiles. When an interleaver is used, the interleaver address algorithm shall be specified by the burst profile within a DCD message."

Brian E. is tasked to bring in an interleaver algorithm.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done

Pulled wording into structural change which made FEC common for both DL & UL, and pointed out small differences in common section. Interleaver will be brought in as comment for next meeting. -brian

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0347**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **104** Starting Line # **46** Section **8.3.4.5.5.1.3.8**
Pointless incompatibility. If tailbiting is mandatory implemented, it makes no sense to make zero-state termination, which is less complex and doesn't perform better, optional.

Suggested Remedy

[Delete optional zero-state termination](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**[Delete optional zero-state termination](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0348**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial** Starting Page # **107** Starting Line # **1** Section **8.3.4.5.5.3**
The TPC general details are in 8.3.3.1.5.3 and not in 8.3.3.1.5.4

Suggested Remedy

[Replace 8.3.3.1.5.4 with 8.3.3.1.5.3 in line 1, line 2 and line 32](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**[Replace 8.3.3.1.5.4 with 8.3.3.1.5.3 in line 1, line 2 and line 32](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0349**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **107** Starting Line # **29** Section **8.3.4.5.5.3.1**

To my knowledge, there is no capability exchange for all these interleaver options. A single well-performing interleaver (preferably one that isn't riddled with IPR claims) or simply no interleaver should hence be selected.

Suggested Remedy

Select one of the interleaver options and specify entirely.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Replace clause 8.3.4.5.5.3.1 with:

"Data bits are written row-by-row into the coding array and read row-by-row out of the coding array (Figure 160) for transmission."

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0350**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial**Starting Page # **107**Starting Line # **32**Section **8.3.4.5.5.3.1**

Add a reference to figure 160 for clarity

Suggested Remedy

Change:

"...and read out of the encoded array for transmission..." to

"...and read out of the encoded array (Figure 160) for transmission....."

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0351**

Comment submitted by: Moritz

Harteneck

2001/12/28

Comment Type **Technical, Non-binding**Starting Page # **107**Starting Line # **37**Section **8.3.4.5.5.3.1**

Type 2 for interleaving of a turbo product code is defined here, however it is not clear to me what to do in case of shortened turbo codes where the matrix might not be square but the first row shorter.

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0352**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial** Starting Page # **107** Starting Line # **42** Section **8.3.4.5.5.3.1**

Grammer - "provides" refer to "methods"

Suggested Remedy

Change "provides" to "provide"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0353**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type **Editorial** Starting Page # **107** Starting Line # **46** Section **8.3.4.5.5.3.2**

The constellation mapping is said to be Gray coded, like the ones in 8.3.3.1.5.4. If this is the case, what is the motivation for having a different mapping that that of 8.3.3.1.5.4?

Suggested Remedy

If no clear motivation exists, delete figure 178 and refer back to figure 161. State clearly that optional TPC is only defined for 16 and 64 QAM if that's the intent.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

TPC is meant for all modulations

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0354**Comment submitted by: **Moshe**

Ran

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **108** Starting Line # **29** Section **8.3.4.5.5.3.2**

Pragmatic turbo coded modulation section is given in the text as an example. In order to have it as part of standard a clear description should be given. Exact mapping with 16, 64, 256 QAM MUST be specified. The detail level should be like the description of prargmatic appraoch with convolutional code.

Suggested Remedy

Edit the paragraph for pragmatcal approach again in a unified form. Indicate the two cases - inner codes based on rate 1/2 convolutional code, and TPC.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Replace clause 8.3.4.5.5.3.2 with "TPC shall use pragmatic modulations defined in figure 176 and figure 177."

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0355**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type [Technical, Satisfied \(was](#) Starting Page # **108** Starting Line # **30** Section **8.3.4.5.5.3.2**
An optional modulation mapping inside an optional coding mode?

Suggested Remedy[Select either constellation mapping as mandatory for the optional TPC, and delete the other.](#)**Proposed Resolution Recommendation: Recommendation by****Reason for Recommendation****Resolution of Group Decision of Group: [Accepted-Duplicate](#)****Reason for Group's Decision/Resolution**[see comment 354](#)**Group's Notes****Group's Action Items****Editor's Notes Editor's Actions** [l\) none needed](#)**Editor's Questions and Concerns****Editor's Action Items**Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0356**

Comment submitted by: Anader

Benyamin-Seeyar

2002/01/04

Comment Type [Editorial](#) Starting Page # **108** Starting Line # **35** Section **8.3.4.5.5.3.2**
[Superscript and Subscripts are not properly applied.](#)

Suggested Remedy[Apply Superscript and Subscripts required on many equations given on pages 108 and 109.](#)**Proposed Resolution Recommendation: Recommendation by****Reason for Recommendation****Resolution of Group Decision of Group: [Accepted-Duplicate](#)****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes Editor's Actions** [k\) done](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0357**Comment submitted by: [Moshe](#)[Ran](#)[2002/01/04](#)Comment Type [Editorial](#)Starting Page # **108**Starting Line # **35**Section **8.3.4.5**[typo \(63,56\)2](#)

Suggested Remedy

[\(63,56\)²](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0358**Comment submitted by: [Moshe](#)[Ran](#)[2002/01/04](#)Comment Type [Editorial](#)Starting Page # **108**Starting Line # **37**Section **8.3.4.5.2**[typos - 079\(log₂16=3.16...](#)

Suggested Remedy

[079*log₂16](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0359**

Comment submitted by: **Moshe**

Ran

2002/01/04

Comment Type **Editorial**

Starting Page # **108**

Starting Line # **40**

Section **8.3.4.5.2**

typo (39,32)²

Suggested Remedy

(39,32)²

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/04

Comment # **0360**

Comment submitted by: Lars

Lindh

Comment Type **Technical, Non-binding**Starting Page # **109**Starting Line # **57**Section **8.3.4.5.6**

The transmitted waveform must be defined

Suggested Remedy

Insert paragraph 8.3.4.5.7 "Transmitted waveform"

Define the transmitted waveform as

$$s(t) = I(t)\cos(2\pi f_c t) - Q(t)\sin(2\pi f_c t)$$

where I(t) and Q(t) are the the filtered baseband signals of the I and Q symbols and f_c is the carrier frequency.**Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

create clause common to up and downlink, include modulation and the proposed waveform text in this.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done

Restructured, adding transmit processing section, which included this as part of transmit processing steps.

The added clause with this info. -brian

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0361**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **109** Starting Line # **60** Section **8.3.4.6.1**
 redundant with 8.3.3.3 and too verbose

Suggested Remedy

Delete 8.3.4.6.1 through 8.3.4.6.3 and delete the first paragrah of 8.3.4.6.4.

Also resolve the conflict on whether 256 QAM is optional or not. (it is in 8.3.4.6.2, but not in 8.3.3.3)

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Include first sentence on line 63 of page 109. Delete rest of 8.3.4.6.1.

Make 256-QAM optional in Table 175

Eliminate current text in 8.3.4.6.2 and replace with
 "Modulation schemes for uplink transmissions are specified in Table 175."

Eliminate all text in 8.3.4.6.3 except for:

"Uplink transmit processing is almost identical in concept to downlink transmit processing, described in clause 8.3.4.5.3, except that byte interleaving shall not be performed on uplink transmissions."

Delete second sentence of 8.3.4.6.4. Replace "using" with "uses" in first sentence the second paragraph.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done

made 256-QAM option in table 175, deleted UL transmit processing entirely (no interleaving mentioned under FEC)

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0362**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **110** Starting Line # **55** Section **8.3.4.6.5**

Somehow, relying solely on ARQ seems a risky business to me. The overhead of the minimum coding rate isn't that large anyway.

Suggested Remedy

Specify the necessary UCD parameter for "no coding" in section 11.1.1.2 or delete this option.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group:** **Withdrawn****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0363**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type [Technical, Non-binding](#) Starting Page # [111](#) Starting Line # [14](#) Section [8.3.4.7.1](#)
This clause ought to be tighter integrated with 6.2.7.2.

Suggested Remedy[8.3.4.7.1 Framing formats and PHY type parameter encoding](#)

The 2-11 GHz SC PHY must support at least one of the framed formats as defined in 6.2.7.2 and 6.2.7.3. In FDD mode, the downlink framed format may be either bursty or continuous. The main difference between the two is that in the continuous case, the BS transmits the carrier or all-zero dummy data if no data or framing elements are being sent, whereas in the burst case, the BS transmitter is turned off between burst transmits.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

[see comment 375](#)

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [|\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0364**Comment submitted by: **Anader****Benyamin-Seeyar**

2002/01/04

Comment Type **Editorial**Starting Page # **111**Starting Line # **23**Section **8.3.4.7.1**

The word "Must " should be replaced with "Shall".

Suggested Remedy

Replace the word "Must " with "Shall" on many places on lines 23 to 25.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0365**Comment submitted by: **Moritz****Harteneck**

2001/12/28

Comment Type **Technical, Non-binding**Starting Page # **112**Starting Line # **13**Section **8.3.4.7.2.1**

Here the time reference from the MAP elements to the payload groups in the data stream is given and it is noted that they refer to some 'MAC-prescribed time in the future'. I would say that they describe the payload elements in the next frame.

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0366**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type **Editorial**

Starting Page # **112**

Starting Line # **13**

Section **8.3.4.7.2.1**

consolidation of map relevance text

Suggested Remedy

Move second paragraph to top of 6.2.7.6

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

relocate first two paragraphs of section 8.3.4.7.2.1 to top of 6.2.7.6

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0367**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type **Editorial**Starting Page # **112**Starting Line # **26**Section **8.3.4.7.2.2**

Reduce the verbosity of this section.

Suggested Remedy

Replace clause with:

8.3.4.7.2.2 Adaptive Modulation

User data payloads within a burst shall be sequenced in decreasing order of modulation robustness (e.g., first QPSK, then 16-QAM, then 64-QAM).

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Replace clause with:

8.3.4.7.2.2 Adaptive Modulation

User data payloads within a burst shall be sequenced in decreasing order of modulation robustness (e.g., first QPSK, then 16-QAM, then 64-QAM).

Transitions between modulation types can be scheduled by the DL-MAP on any symbol boundary. FEC blocks shall be terminated at every such transition.

Delete clause 8.3.4.7.4.4.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0368**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial**Starting Page # **112**Starting Line # **49**Section **8.3.4.7.2.2.1**

Figure 183 doesn't illustrate so well the sequencing of adaptive modulation.

Suggested Remedy

Either:

Improve figure 183 (add markers for the adaptive modulation limits)

Or:

Delete ",as illustrated in Figure 183 for the Continuous Framed transmission format"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution**

see 375

Group's Notes**Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0369**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **113** Starting Line # **35** Section **8.3.4.7.3.1.1**

It says H and I are system parameters, however H+I is strictly defined by table 176. mU+E should not be left entirely open, since it creates interoperability issues. I did not find numbers anywhere for them. The large amount of UW's supported (see table 181) is probably already going to give enough interoperability headaches.

Suggested Remedy

Delete from line 39 "and are " till the end of the paragraph and add "The duration of the sum of **H** and **I** shall be limited to frame duration values as defined in Table 176."

Further add a table defining a very limited set of **m** and **E** .

Delete 8.3.4.7.3.1.2. It adds absolutely nothing new, unless you simply want to replace its entire contents with "The frame preamble allows for synchronization, (re)acquisition and channel estimation."

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

[see comment 375](#)

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0370**Comment submitted by: **Avraham****Freedman**

2002/01/03

Comment Type **Editorial**Starting Page # **114**Starting Line # **31**Section **8.3.4.7.3.1.1**

The reference for Pilot Words is to section 8.3.4.7.4.2.2, which belongs to the Framed burst transmission. Maybe a better reference would be 8.3.4.7.3.2 (a few lines down the page)

Suggested Remedy

Change "8.3.4.7.4.2.2" to "8.3.4.7.3.2"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

[see comment 375](#)

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0371**

Comment submitted by: Nico

van Waes

2002/01/04

Comment **Type** **Technical, Non-binding** **Starting Page #** **115** **Starting Line #** **3** **Section** **8.3.4.7.3.2.1**

I wouldn't call **N** a system parameter since it suggests this information needs to be available to the SSs as well before system initialization. Given that the pilot word is known to the SS, it is trivial to learn N by listening to the DL channel.

Suggested Remedy

Replace the first two paragraphs with:

"The use of Pilot Words is optional. When used, this clause must be adhered to.

As depicted in Figure 182, pilot words must occur with regular spacing of N symbols after the Frame preamble in every frame throughout the whole frame (regardless of whether any data remains to be send in that frame).

If the final Pilot Word would extend beyond the frame boundary, the overlapping portion of the Pilot Word is not transmitted. "

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group:** **Superseded****Reason for Group's Decision/Resolution**[see comment 375](#)**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0372**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Technical, Non-binding** Starting Page # **116** Starting Line # **9** Section **8.3.4.7.3.2.1.2**

As described in the section the pilot words serve as an ending to one interval and, at the same time, a cyclic prefix for the next one. Shouldn't the pilot words be in this case twice as long as the maximum delay spread of the channel?

Secondly, the pilot words are to be at least as long as the maximum delay spread of the channel, but on the other hand, shorter than the preamble. Couldn't there be a contradiction?

Suggested Remedy[Clarify](#)**Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: **Superseded******Reason for Group's Decision/Resolution**[see comment 375](#)**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) [none needed](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0373**

Comment submitted by: Brian

Eidson

2002/01/05

Comment	Type	Technical, Non-binding	Starting Page #	117	Starting Line #	9	Section	8.3.4.7.3.2
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A default frame profile for downlink broadcast may need to be specified; otherwise a receiver on setup will not know how it might first want to attempt to decode the frame control messages, which contain system messages, MAPs, etc.

Suggested Remedy

Add section 8.3.4.7.3.5 Default Burst Profile for Framed Continuous Downlink Broadcast Messages

Text:

For a framed continuous downlink, the following frame (burst) profile should be considered the default setting. Note that the BS can migrate away from the default using the DCD encodings described in clauses 11.1.2.1 and 11.1.2.2, but if this is done, SSS newly added to the system may need access to this amended information.

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Superseded
---------------------	--------------------------------------

Reason for Group's Decision/Resolution

[see comment 375](#)

Group's Notes**Group's Action Items**

Editor's Notes	Editor's Actions) none needed
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Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0374**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type **Editorial**
typos

Starting Page # **118**

Starting Line # **22**

Section **8.3.4.7.4.1**

Suggested Remedy

Remove ":" from captions of figures 185 and 188

Proposed Resolution Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0375**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type **Editorial**Starting Page # **118**Starting Line # **28**Section **8.3.4.7.4.1.1**

There's an extreme sense of deja vu when reading the continuous and burst format descriptions of preamble and pilot. Both can be specified as generic, with specific values for their components unique to each format added in the tables I suggested in previous comments.

Suggested Remedy

Specify the preamble and Pilot Word as generic for the SC PHY (The "Ramp Up" can easily be set to NULL for the continuous format.)

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

The continuous format is actually a sub-class of the TDM burst format. We can re-write it as such.

Brian E. to rewrite 8.3.4 (and subsections) such that the following description of the SC PHY is achieved:

DL burst TDM (continuous can be interpreted as one form of burst TDM)

UL TDMA

Duplexing: FDD or TDD

Standard Burst profile (Broadcast/system messages, UL contention messages)

Unique Word (UW) length: 64 symbols.

Preamble: 3 UW + 4 syms

Concat RS+rate + CC w tail biting

No byte interleaving

No pilot words

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done

Effort comprehensive; immense amounts of redundancy eliminated by consolidating continuous and burst modes.

Changes too comprehensive to detail here. -brian

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0376**Comment submitted by: [Scott](#)[Marin](#)[2002/01/04](#)Comment Type [Technical, Satisfied \(was](#) Starting Page # [119](#) Starting Line # [34](#) Section [8.3.4.7.4.1.1.2](#)[All TBDs should be resolved before sending the draft standard for IEEE ballot. The current draft has many TBDs.](#)

Suggested Remedy

[resolve all TBDs](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

[see comment 379](#)

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)[Eliminated all except interleaver TBD---which will be resolved by my comment at next meeting. -brian](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/04

Comment # **0377**Comment submitted by: **Brian****Eidson**

Comment	Type Editorial	Starting Page # 119	Starting Line # 40	Section
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Sections 8.3.4.7.4.1.1.3 through 8.3.4.7.4.1.1.6 actually should have been labeled 8.3.4.7.4.1.2, 8.3.4.7.4.1.3, and 8.3.4.7.1.3.1, 8.3.4.7.1.4 since the first two sections and the last section are logically parallel with section 8.3.4.7.4.1.1, the next-to-last section logically belongs under the section that precedes it.

Suggested Remedy

8.3.4.7.4.1.1.3 --> 8.3.4.7.4.1.2

8.3.4.7.4.1.1.4 --> 8.3.4.7.4.1.3

8.3.4.7.4.1.1.5 --> 8.3.4.7.4.1.3.1

8.3.4.7.4.1.1.6 --> 8.3.4.7.4.1.4

Proposed Resolution	Recommendation:	Recommendation by
----------------------------	------------------------	--------------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Accepted
----------------------------	------------------------------------

8.3.4.7.4.1.1.3 --> 8.3.4.7.4.1.2

8.3.4.7.4.1.1.4 --> 8.3.4.7.4.1.3

8.3.4.7.4.1.1.5 --> 8.3.4.7.4.1.3.1

8.3.4.7.4.1.1.6 --> 8.3.4.7.4.1.4

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes	Editor's Actions k) done
-----------------------	---------------------------------

Actually, most of these sections eliminated by other responding to other comments---and the rest was eliminated in the consolidate to merge continuous and burst modes. -brian

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0378**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type **Editorial**Starting Page # **120**Starting Line # **1**Section **8.3.4.7.4.1.1.6****Redundant text****Suggested Remedy****Delete this clause. Instead move clause 8.2.4.2.1 and 8.2.4.2.2 to the definitions in chapter 3, so they don't need to be redefined for all PHY specs.****Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted****Delete this clause. Instead move clause 8.2.4.2.1 and 8.2.4.2.2 to the definitions in chapter 3, so they don't need to be redefined for all PHY specs.****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Nico, did you copy these clauses? -Brian****Done now. /Nico****Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0379**

Comment submitted by: Brian

Eidson

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **121** Starting Line # **9** Section **8.3.4.7.4.3**

A burst profile for downlink broadcast bursts needs to be specified; otherwise a receiver on setup will not know how to decode the downlink broadcast messages, which contain system messages, MAPs, etc.

Suggested Remedy

Add section 8.3.4.4.3.1 Standard Burst Profile for Downlink Broadcast Messages

Text:

For broadcast messages (i.e., messages intended for all users) on the downlink, the following standard burst profile shall be used. (Note I will reformat this table identical to those in section 11.1.2.1 and 11.1.2.2)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

Add section 8.3.4.4.3.1 Standard Burst Profile for Downlink Broadcast Messages

Text:

For broadcast messages (i.e., messages intended for all users) on the downlink, the following standard burst profile shall be used. (Note I will reformat this table identical to those in section 11.1.2.1 and 11.1.2.2)

Preamble parameters:

Number of Unique Words (mU): 3

number of prefix symbols preceding Unique Words (E): 4

number of symbols in ramp-up (R): 4

Reason for Group's Decision/Resolution

see comment 375

Group's Notes**Group's Action Items**

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0380**

Comment submitted by: Brian

Eidson

2002/01/04

Comment Type Technical, Satisfied (was Starting Page # 121 Starting Line # 9 Section 8.3.4.7.4.3
 A section and reference citing the TLVs of Chapter 11 is needed so that burst profiles for non-broadcast messages may be specified.

Suggested Remedy

Add section

8.3.4.4.3.2 Burst Profiles for Other Messages

Text to be included:

Burst profiles for messages other than broadcast messages

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Add section

8.3.4.4.3.2 Burst Profiles for Other Messages

Text to be included:

Burst profiles for messages other than broadcast messages are adaptive, and are specified by the UCD message encodings of clause 11.1.1 or DCD message encodings of clause 11.1.2

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0381**

Comment submitted by: Carl

Eklund

2002/01/04

Comment Type **Technical, Satisfied (was**Starting Page # **121**Starting Line # **31**Section **8.3.4.7.4.3**

The mode of operation shown in figure188 leads to horrible granularity problems on the MAC layer. Also the benefits of the scheme compared to the other method are not suffiecient to warrant this as an option.

Suggested Remedy

Delete p.121 line 31 - p.122 l. 4 and the useless end of the sentence after the semicolon on line p.122 line 6.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Delete p.121 line 31 - p.122 l. 4 and the useless end of the sentence after the semicolon on line p.122 line 6.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done

pulled this into rewrite of section 8.3.4 to merge continuous and burst -Brian

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0382**

Comment submitted by: Bob

Nelson

2002/01/03

Comment Type **Technical, Satisfied (was** Starting Page # **122** Starting Line # **34** Section **8.3.4.8**

SC downlink map IE format implies that specific subscribers may be addressed in the downlink and that bursts may be arranged randomly in the downlink frame. This conflicts with the PHY description which requires that bursts appear in decreasing order of robustness

Also, the following suggested remedy completes merging of map formats and correcting continuous framed mode for the SC PHY suggested by an earlier comment.

Suggested Remedy

Insert the following new section *8.3.4.8.1 PHY Specific Frame Map Definitions*, renumber succeeding sections appropriately

8.3.4.8.1 PHY-Specific Frame Map Definitions

8.3.4.8.1.1 Downlink Information

8.3.4.8.1.1.1 PHY Specific Data

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Someone from the MAC may want to check if this was integrated properly into the document. It was merged with some things dredged from chapter 6 to chapter 8 at the Austin meeting.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0383**

Comment submitted by: Tom

Kolze

2002/01/03

Comment Type **Technical, Satisfied (was TBDs on page 124**

Starting Page # **122**

Starting Line # **35**

Section **8.3.4.8.1**

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

No TBD's on page 122.

We have fully satisfied the comment, so we should mark it "Accepted".

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0384**Comment submitted by: **Bob****Nelson**

2002/01/03

Comment Type **Technical, Non-binding** Starting Page # **122** Starting Line # **57** Section **8.3.4.8.1.1****Least and Most** robustness modifiers are transposed

Suggested Remedy

Replace

The MAP is then followed by payloads addressed to various users, which can be sequenced in modulation types from **least** robust (e.g., QPSK) to **most** robust (e.g., 64-QAM).

With

The MAP is then followed by payloads addressed to various users, which can be sequenced in modulation types from **most** robust (e.g., QPSK) to **least** robust (e.g., 64-QAM).

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done****Pulled this into rewrite of 8.3.4 to merge continuous and burst modes. -brian**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0385**

Comment submitted by: **Moritz**

Harteneck

2001/12/28

Comment Type **Editorial**

Starting Page # **122**

Starting Line # **61**

Section **8.3.4.8.1.1**

It should be 'looses' instead of 'loses'.

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Loses is correct

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0386**Comment submitted by: [Yigal](#)[Leiba](#)[2002/01/02](#)Comment Type [Editorial](#)Starting Page # **123**Starting Line # **35**Section **8.3.4.8.1.1**[The figure is just an example](#)

Suggested Remedy

[Change figure 189 description to read "An example of downlink duplex of FDD with a continuous downlink"](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**[See also comment 375](#)[Revise title to "An example of continuous-downlink FDD framing"](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0387**Comment submitted by: [Bob](#)[Nelson](#)[2002/01/03](#)Comment Type [Editorial](#)Starting Page # **124**Starting Line # **37**Section **8.3.4.8.1.1.1**[Section is incorrectly titled](#)

Suggested Remedy

[Rename](#)[8.3.4.8.1.1.1 Continuous FDD Channel Descriptor and MAP Message Field Definitions](#)[as](#)[8.3.4.8.1.1.1 Continuous FDD Channel Descriptor Field Definitions](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

[see comment 375](#)

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [1\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0388**Comment submitted by: **Bob****Nelson**

2002/01/03

Comment Type **Technical, Satisfied (was** Starting Page # **124** Starting Line # **48** Section **8.3.4.8.1.1.1**
 Need to replace TBD place holders

Suggested Remedy

Insert the following in place of TBD

BS Transmit Power
 Burst FDD/TDD Frame Duration
 PHY Type
 Power Adjustment Rule

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Insert the following in place of TBD

BS Transmit Power
 Burst FDD/TDD Frame Duration
 PHY Type
 Power Adjustment Rule
 Roll-off factor

Reason for Group's Decision/Resolution

see comment 375

Group's Notes**Group's Action Items****Editor's Notes****Editor's Actions** k) done

Moved this to burst FDD, since burst and continuous were merged. Add Guard Interval, which was not included in Bob's list, but was specified as channel descriptor elsewhere. Tried to make result consistent with terminology used in some of Bob's later comments.

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0389**

Comment submitted by: Bob

Nelson

2002/01/03

Comment Type **Technical, Satisfied (was** Starting Page # **124** Starting Line # **53** Section **8.3.4.8.1.1.2**
 Need to replace TBD place holders

Suggested Remedy

Insert the following in place of TBD

Each DCD message burst descriptor shall include the following TLV encodings:

Modulation Type
 FEC Code Type
 RS information bytes (K)

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

note to editor: entries need to be updated
 Insert the following in place of TBD

Each DCD message burst descriptor shall include the following TLV encodings:

Modulation Type
 FEC Code Type
 RS information bytes (K)
 RS Parity Bytes (R)
 BCC code type
 BTC Row code type
 BTC Column code type

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done

Took introductory sentence; grabbed data from comment 664, since this is the new TLV data -brian
 Used:

Each DCD message burst descriptor shall include the following TLV encodings:

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0390**Comment submitted by: **Bob****Nelson**

2002/01/03

Comment Type **Technical, Satisfied (was**
Need to replace TBD place holdersStarting Page # **124**Starting Line # **62**Section **8.3.4.8.1.1.1.3**

Suggested Remedy

Insert the following in place of TBD

Each UCD message shall include the following TLV encodings:

Symbol Rate
Frequency
SS Transition Gap

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

note to editor: entries need to be updated

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Entries updated SSTG removed because doesn't make sense for FDD. -brian

Used:

Each Uplink Channel Descriptor (UCD) message channel descriptor shall include the following TLV encodings:

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0391**

Comment submitted by: Bob

Nelson

2002/01/03

Comment Type **Technical, Satisfied (was** Starting Page # **124** Starting Line # **62** Section **8.3.4.8.1.1.1.3**
 Section for required uplink burst descriptor encodings is missing.

Suggested Remedy

Insert the following in after the body of section 8.3.4.8.1.1.1.3

8.3.4.8.1.1.1.4 Burst Descriptor Parameters within the UCD

Each UCD message burst descriptor shall include the following TLV encodings:

Modulation Type

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

note to editor: entries need to be updated

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Used:

Each UCD message burst descriptor shall include the following TLV encodings:

Modulation and FEC Type

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0392**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type **Editorial**Starting Page # **125**Starting Line # **36**Section **8.3.4.8.1.1.2**

The figure is just an example

Suggested Remedy

Change figure 191 description to read "An example of burst FDD downlink frame"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

change to:An example of burst-downlink FDD framing

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0393**

Comment submitted by: Tom

Kolze

2002/01/04

Comment Type **Technical, Satisfied (was**Starting Page # **125**Starting Line # **54**Section **8.3.4.8.2**

TBDs on page 127 and 128

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

We have fully satisfied the comment, so we should mark it "Accepted".

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions l) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0394**

Comment submitted by: Bob

Nelson

2002/01/03

Comment	Type	Technical, Non-binding	Starting Page #	126	Starting Line #	11	Section	8.3.4.8.2
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The remainder of the SC PHY section's discussion describes TDM operation for the downlink

Suggested Remedy

Alter the paragraph starting on page 126 line 9 as shown below:

Note that Figure 192 illustrates a single TDM burst per downlink duplex frame. This case was chosen for illustrative simplicity; in general, several TDM ~~(or TDMA)~~ bursts may occupy the downlink duplex sub-frame, with the first burst in the downlink duplex sub-frame containing the MAC Frame Control messages, including the MAP information. Contiguous downlink bursts ~~data multiplexed within a TDM burst~~ should be sequenced according to decreasing burst profile robustness (e.g., QPSK, 16-QAM, 64-QAM, etc.); ~~however, data in~~

Proposed Resolution	Recommendation:	Recommendation by
----------------------------	------------------------	--------------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Accepted
----------------------------	---

Alter the paragraph starting on page 126 line 9 as shown below:

Note that Figure 192 illustrates a single TDM burst per downlink duplex frame. This case was chosen for illustrative simplicity; in general, several TDM ~~(or TDMA)~~ bursts may occupy the downlink duplex sub-frame, with the first burst in the downlink duplex sub-frame containing the MAC Frame Control messages, including the MAP information. Contiguous downlink bursts ~~data multiplexed within a TDM burst~~ should be sequenced according to decreasing burst profile robustness (e.g., QPSK, 16-QAM, 64-QAM, etc.); ~~however, data in separate bursts need not be so sequenced (even if they are in the same sub-frame).~~

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes	Editor's Actions) none needed
-----------------------	--

After continuous and burst merge editing, this section was modified to the point that it was not applicable.

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0395**Comment submitted by: **Bob****Nelson**

2002/01/03

Comment Type **Editorial**Starting Page # **127**Starting Line # **1**Section **8.3.4.8.2.1**

Map information was moved to another location in the document by an earlier comment. As a result, this section is incorrectly titled. and contains a place holder section that is no longer required

Suggested Remedy

Rename

8.3.4.8.2.1 TDD Channel Descriptor and MAP Message Field Definitions

as

8.3.4.8.2.1 TDD Channel Descriptor Field Definitions

Delete 8.3.4.8.2.1.1 DL-MAP Information Elements

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted***Rename*

8.3.4.8.2.1 TDD Channel Descriptor and MAP Message Field Definitions

as

8.3.4.8.2.1 TDD Channel Descriptor Field Definitions

Delete 8.3.4.8.2.1.1 DL-MAP Information Elements
and 8.3.4.8.2.1.3 UL-MAP Information Elements

Renummer the remaining subsections appropriately

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0396**

Comment submitted by: Bob

Nelson

2002/01/03

Comment Type **Technical, Satisfied (was**Starting Page # **127**Starting Line # **6**Section **8.3.4.8.2.1**

Need to replace TBD place holders

Suggested Remedy

Insert the following in place of TBD

BS Transmit Power

Burst FDD/TDD Frame Duration

PHY Type

Power Adjustment Rule

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Insert the following in place of TBD

BS Transmit Power

Burst FDD/TDD Frame Duration

PHY Type

Power Adjustment Rule

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Used:**

Each Downlink Channel Descriptor (DCD) message channel descriptor shall include the following TLV encodings:

BS Transmit Power

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0397**Comment submitted by: **Bob****Nelson**

2002/01/03

Comment Type **Technical, Satisfied (was**Starting Page # **127**Starting Line # **19**Section **8.3.4.8.2.1.2.1**

Need to replace TBD place holders

Suggested Remedy

Insert the following in place of TBD

Each DCD message burst descriptor shall include the following TLV encodings:

Modulation Type
 FEC Code Type
 RS information bytes (K)

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Insert the following in place of TBD

Each DCD message burst descriptor shall include the following TLV encodings:

Modulation Type
 FEC Code Type
 RS information bytes (K)
 RS Parity Bytes (R)
 BCC code type
 BTC Row code type
 BTC Column code type
 BTC Interleaving type

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done

Used:
 Each DCD message burst descriptor shall include the following TLV encodings:
 Modulation and FEC Type

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0398**

Comment submitted by: Bob

Nelson

2002/01/03

Comment Type **Technical, Satisfied (was** Starting Page # **128** Starting Line # **40** Section **8.3.4.8.2.1.4**
 Need to replace TBD place holders

Suggested Remedy

Insert the following in place of TBD

Each UCD message shall include the following TLV encodings:

Symbol Rate
 Frequency
 SS Transition Gap

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Insert the following in place of TBD

Each DCD message burst descriptor shall include the following TLV encodings:

Modulation Type
 FEC Code Type
 RS information bytes (K)
 RS Parity Bytes (R)
 BCC code type
 BTC Row code type
 BTC Column code type
 BTC Interleaving type

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done

Used:

Each Uplink Channel Descriptor (UCD) message channel descriptor shall include the following TLV encodings:

SS Transition Gap

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/03

Comment # **0399**

Comment submitted by: Bob

Nelson

Comment Type **Technical, Satisfied (was**Starting Page # **128**Starting Line # **42**Section **8.3.4.8.2.1.4**

Section for required uplink burst descriptor encodings is missing.

Suggested Remedy

Insert the following in after the body of section 8.3.4.8.2.1.4

8.3.4.8.2.1.5 Burst Descriptor Parameters within the UCD

Each UCD message burst descriptor shall include the following TLV encodings:

Modulation Type

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Insert the following in after the body of section 8.3.4.8.2.1.4

8.3.4.8.2.1.5 Burst Descriptor Parameters within the UCD

Each UCD message burst descriptor shall include the following TLV encodings:

Modulation Type

Preamble Length

FEC Code Type

RS Information Bytes (K)

RS Parity Bytes (R)

BCC Code Type

BTC Row Code Type

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) doneUsed:
Each UCD message burst descriptor shall include the following TLV encodings:

Modulation and FEC Type

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0400**Comment submitted by: [Avraham](#)[Freedman](#)

2002/01/03

Comment	Type Editorial	Starting Page # 129	Starting Line # 47	Section 8.3.4.8.3.1
---------	--------------------------------	----------------------------	---------------------------	----------------------------

The last sentence lost its preamble

Suggested Remedy

[Add "Figure 194" at the beginning of the last sentence.](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**[Add "Figure 194" at the beginning of the last sentence.](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [1\) none needed](#)[Once radical continuous --> burst subclass editing finished, this part was eliminated.](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0401**Comment submitted by: [Moritz](#)[Harteneck](#)

2001/12/28

Comment	Type Editorial	Starting Page # 129	Starting Line # 47	Section 8.3.4.8.3.1
---------	--------------------------------	----------------------------	---------------------------	----------------------------

[Here the reference to a figure is missing in the last sentece of the paragraph.](#)

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [1\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0402**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial**

Starting Page # **130**

Starting Line # **34**

Section **8.3.4.9.1**

Typo

Suggested Remedy

Change "an" to "a" in "...should have an symbol magnitude profile...."

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Much of this material was actually eliminated as being informative. -brian

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0403**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **131** Starting Line # **4** Section **8.3.4.9.1**

The granularity of UW lengths supported seems a bit too much to be useful. Since Frank-Zadoff is mandatory, it seems most convenient to only have only the Frank-Zadoff sequences

There is no mechanism other than exhaustive search or tedious pre-configuration that allows an SS to learn the sequence being used. There is no way for a BS to use one of the current optional sequences, and have a mandatory sequence only SS be interoperable. Hence all sequences should be mandatory traceable by every SS to maintain interoperability.

A svstem without preambles or pilots (using UW length 0) seems rather hard to determining the start of a frame.

Suggested Remedy

Delete Chu sequences. Delete 0 length UW. Make all other sequences mandatory, with 64 the default.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Modified**

64 mandatory and default, 256 mandatory, rest remains optional, delete length 0

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0404**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Technical, Non-binding** Starting Page # **133** Starting Line # **5** Section **8.3.4.10.1**
 Eq. 6 should have +H1(ejw)

Suggested Remedy
 Re -check and correct

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

Replace "-H1(ejw)" with "+H1(ejw)"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0405**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Technical, Non-binding** Starting Page # **133** Starting Line # **15** Section **8.3.4.10.1**
 R1 should not be conjugated in eq. (8). Eq. 8 should be:
 $C1(e^{j\omega}) = -H1R0^* + H0^*R1$

Suggested Remedy
 Change $R1^*$ to $R1$

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**Change $R1^*$ to $R1$

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0406**

Comment submitted by: Anader

Benyamin-Seeyar

2002/01/04

Comment Type **Editorial**Starting Page # **133**Starting Line # **32**Section **8.3.4.10.1**

There are two places that a letter "S" is missing from an equation.

Suggested Remedy

Add an "S" to two places with $S_{\text{Pilot}}(e^{jw})$ element in the given equations on lines 33 and 35.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0407**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial**Starting Page # **133**Starting Line # **33**Section **8.3.4.10.1**An "S" is missing in the last sentence in the expression "S(sub pilot) is known".
It is also missing in line 35, the next paragraph.

Suggested Remedy

change "(sub) pilot" to "S (sub pilot)"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0408**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment	Type	Editorial	Starting Page #	133	Starting Line #	38	Section	8.3.4.10.1
---------	------	-----------	-----------------	-----	-----------------	----	---------	------------

Eq. (11) and (12) are wrong
 in Eq. (11) the conjugate should be on Spilot and not on R1
 In eq (12) only Spilot should be conjugated and not R0 nor R1

Suggested Remedy
 recheck and correct

Proposed Resolution	Recommendation:	Recommendation by
----------------------------	------------------------	--------------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Accepted-Modified
----------------------------	--

replace with:
 Adding equations 5 & 6 together yields
 $S^*(R0 + R1) = 2 | S |^2 H0$ (eq 11)
 Subtracting equation 5 from equation 6 yields
 $S^*(R1 - R0) = 2 | S |^2 H1$

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes	Editor's Actions k) done
-----------------------	---------------------------------

Had to modify wording slightly to integrate this more seamlessly into the text. Slightly reworded paragraphs at end of Alamouti section using words and terminology like 'burst profile' to better match terminology used in previous SC sections. -brian

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0409**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial**Starting Page # **133**Starting Line # **49**Section **8.3.4.10.1**

The reference 8.3.4.8.2.1 is titled "TDD Channel Descriptor and MAP Message Field Definitions" and does not describe the unique words and their properties

Suggested Remedy

Change "8.3.4.8.2.1" to "8.3.4.9"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change "8.3.4.8.2.1" to "8.3.4.9"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions l) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0410**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial**Starting Page # **134**Starting Line # **27**Section **8.3.4.10.1**

"an specific" should be "a specific"

Suggested Remedy

Change "an" to "a"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change "an" to "a"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0411**Comment submitted by: **Avraham****Freedman**

2002/01/03

Comment Type **Editorial**Starting Page # **135**Starting Line # **2**Section **83.4.10.1**

"a Alamouti..." should be "an Alamouti..."

Suggested Remedy

Change "a" to "an"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change "a" to "an"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

I think I did this earlier -brian

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0412**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Technical, Non-binding** Starting Page # **135** Starting Line # **31** Section **8.3.4.10.2**

With all due respect this clause has no place in the standard, as it does not specify anything, but rather refers to future development, which is nice, but not yet specified.

The same applies to 8.3.4.11

Suggested Remedy

Delete the clauses 8.3.4.10.2 and 8.3.4.11 (enter a small remark at the end of 8.2.4.10.1, if necessary)

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Delete the clauses 8.3.4.10.2 and 8.3.4.11

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/03

Comment # **0413**

Comment submitted by: Avraham

Freedman

Comment Type **Technical, Non-binding**Starting Page # **137**Starting Line # **16**Section **8.3.4.12**

1. The roll-off factor gama is denoted as "alpha" in 8.3.4.5.6. For consistency it should be kept like that.
2. The values for the roll-off factor in 8.3.4.5.6 are 0.15, 0.18 and 0.25

Suggested Remedy

1. Change "gama" to "alpha"
2. Add the value 0.15 to fourth column.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

move 8.3.4.12 and 8.3.5.1.5 to link budget annex and rename annex to "B.3 Performance characteristics"
 change gamma to alpha.
 move BWefficiency from table 188-191 and incorporate in annex.
 remove roll-off 0.25 from table 183.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done

Made alpha and 0.25 changes and moved the clause to appendix B.3. Also replaced Anader's link budget with another, but he did not provide Framemaker-native tables, so I had to format his tables as figures for the time being. Reformattina what he had took a considerable amount

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0414**

Comment submitted by: Anader

Benyamin-Seeyar

2002/01/04

Comment Type **Editorial**Starting Page # **137**Starting Line # **38**Section **8.3.4.12**

Last element in Table 183, has an error in the "Symbol rate equation".

Suggested Remedy

Replace the " $R=(1+\lambda) \cdot W$ " in the last column and last row with " $R=W/(1+\lambda)$ ".

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0415**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Technical, Non-binding**Starting Page # **137**Starting Line # **38**Section **8.3.4.12**Isn't the relation between bandwidth W and symbol rate $R=W/(1+\gamma)$, as can be seen in the denominator of the equation for E_b and E_c in lines 30-40?

Suggested Remedy

Recheck and then correct.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0416**Comment submitted by: [Avraham](#)[Freedman](#)

2002/01/03

Comment Type [Editorial](#)Starting Page # **138**Starting Line # **4**Section **8.3.4.12**

1. In figure 185 and 180 the preamble length is denoted "H", and here it is A.

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0417**Comment submitted by: [Avraham](#)[Freedman](#)

2002/01/03

Comment Type [Editorial](#)Starting Page # **138**Starting Line # **4**Section **8.3.4.12**The log₂ is not clear as written

Suggested Remedy

Turn the "2" into a subscript

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0418**Comment submitted by: [Avraham](#)[Freedman](#)[2002/01/03](#)

Comment Type [Editorial](#) Starting Page # **138** Starting Line # **4** Section **8.3.4.12**

[The equations should be enumerated](#)

Suggested Remedy

[Enumerate the equations](#)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0419**Comment submitted by: [Anader](#)[Benyamin-Seeyar](#)[2002/01/04](#)

Comment Type [Editorial](#) Starting Page # **138** Starting Line # **7** Section **8.3.4.12**

[Witnin whole page should apply Subscript on "log2" in all equations.](#)

Suggested Remedy

[Replace "log2 " with "log₂" in all equations within the page.](#)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: [4b](#)

Comment Date

Comment # [0420](#)Comment submitted by: [Avraham](#)[Freedman](#)[2002/01/03](#)Comment Type [Technical, Non-binding](#) Starting Page # [138](#) Starting Line # [30](#) Section [8.3.4.12](#)[Shouldn't the "R" be canceled out in the nominator and denominator of the equations for Eb and Ec?](#)

Suggested Remedy

[Remove the R in the equations for Eb and Ec](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: [Accepted](#)[Remove the R in the equations for Eb and Ec](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: [4b](#)

Comment Date

Comment # [0421](#)Comment submitted by: [Avraham](#)[Freedman](#)[2002/01/03](#)Comment Type [Editorial](#) Starting Page # [138](#) Starting Line # [100](#) Section [8.3.4.12](#)[The expression for the burst throughput appears twice.](#)

Suggested Remedy

[Delete one of the expressions.](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: [Accepted](#)[Delete one of the expressions.](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0422**

Comment submitted by: Tom

Kolze

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **141** Starting Line # **1** Section **8.3.4.13**
Dozens of TBDs in the several pages of this section and its subsection.

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

replace "Spec TBD" on page 126, line 25, section 8.3.4.3.1.8 with:
"The spurious emissions shall be in compliance with appropriate regulatory requirements for the specific band of operation."

Reason for Group's Decision/Resolution

all indicated TBDs are resolved

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0423**

Comment submitted by: Scott

Marin

2002/01/04

Comment Type **Editorial**Starting Page # **141**Starting Line # **34**Section **8.3.4.13.1.2**

several acroynms aren't defined. e.g. DSB.

Suggested Remedy

add "DBS -- double side band" to the acronym list. Search for and add all undefined acroynms to that acronym list.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

delete DSB on page 141, line 34 and replace DSB on line 23 with "double sideband" or delete it altogether.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Spelled out double sideband in both instances. -brian

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0424**

Comment submitted by: Malik

Audeh

2002/01/04

Comment Type **Technical, Non-binding**Starting Page # **143**Starting Line # **25**Section **8.3.4.13.1.10**

The values of receive sensitivity threshold for channel bandwidth = 7 MHz are not consistent. it should probably be -72.4, -.78.4, -84.4.

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

specify table as equation instead.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions h) defer to next round

Didn't have time: Will have to submit this as an editorial comment for the next meeting. /Brian

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0425**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Technical, Non-binding** Starting Page # **144** Starting Line # **12** Section **8.3.4.13.1.12**

The receiver power measurement is discussed in detail in 8.3.3.1.7, only a reference is needed here to avoid unnecessary duplication and possible contradicting specifications

Suggested Remedy

Change the sentence to say:

"The BS and SS should be able to determine channel quality as described in 8.3.3.1.7"

Or delete the section all together.

Proposed Resolution Recommendation: Recommendation by**Reason for Recommendation****Resolution of Group** Decision of Group: **Accepted-Modified**

delete entire clause 8.3.4.13.1.12

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes** Editor's Actions k) done

deleted -brian

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0426**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Technical, Non-binding** Starting Page # **144** Starting Line # **15** Section **8.3.4.13.2**

The clause is important and should be included, however it should not mention numbers. It is also more appropriate to put it in a more general clause, like the introduction (as 8.3.1.3) or a concluding section (as 8.3.6).

Suggested Remedy

[Move the section to 8.3.1.3](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**[Delete 8.3.4.13.2.](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)[deleted -brian](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0427**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **144** Starting Line # **15** Section **8.3.4.13.2**

This text is not within the scope of the standard, and adds nothing useful.

Suggested Remedy

[Delete section 8.3.4.13.2](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [l\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0428**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Technical, Non-binding**Starting Page # **144**Starting Line # **20**Section **8.3.4.13.2.1**

The clause should not specify any numerical values, as they could be interpreted as installation instructions. It should also mention frequency re-use.

Suggested Remedy

Change 2nd sentence in 8.3.4.13.2.1 to:

"In a standard cell deployment, antenna heights are assumed to be roughly above the roof tops (e.g. BS antennas will be 100 ft. above ground level in a typical urban environment, while SS about 20 feet about ground level), although indoor and under the eaves deployments are also conceivable, with higher BS density. "

Add:

"In those environment it is expected that a frequency re-use will be applied in order to provide the required service within the allocated spectrum

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0429**

Comment submitted by: Paul

Struhsaker

2002/01/03

Comment Type **Technical, Non-binding**

Starting Page # **144**

Starting Line # **24**

Section **8.3.4.13.2**

Antenna height should be a range

also Line25

Suggested Remedy

Change to 100 to 150 feet

change line 25 to 10 to 20 feet

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Superseded

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0430**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Technical, Non-binding**Starting Page # **144**Starting Line # **33**Section **8.3.4.13.2.2**

The clause should not specify any numerical values.

Suggested Remedy

In the second sentence (line 33) change

"...BS antenna heights of 300 feet..."

to:

"...BS antenna heights of, e.g.300 feet above ground level..."

In line 36 delete ">21dB"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0431**

Comment submitted by: **Scott**

Marin

2002/01/04

Comment Type **Technical, Non-binding**

Starting Page # **144**

Starting Line # **144**

Section **8.3.4.13.2**

define "cell"

Suggested Remedy

add definition "A cell is the coverage area of a system."

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0432**

Comment submitted by: David

Husson

2002/01/04

Comment	Type	Technical, Non-binding	Starting Page #	146	Starting Line #	Section	8.3.5
---------	------	------------------------	-----------------	-----	-----------------	---------	-------

The required and optional modes are inconsistent between the Licensed and License-exempt frequency bands.

Suggested Remedy

The required and optional modes (and consequently the associated FFT sizes) should be made consistent between the Licensed and License-exempt frequency bands. By this we recommend that OFDM with FFT size 256 should be mandatory, OFDMA with FFT size 2K should be mandatory and all others should be optional. This applies to both the uplink and downlink.

The reasoning behind this is that system vendors would be able to build a single chip-set that works in both frequency bands and deploy systems simply by changing transceivers.

Proposed Resolution	Recommendation:	Recommendation by
----------------------------	------------------------	--------------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Accepted-Modified
----------------------------	--

Motion: a single mandatory 256 FFT OFDM for licensed and license-exempt band
vote: 21 in favor, 4 opposed -> accepted

Motion: delete 512 OFDM, delete 4K mode B_L and 2K C_L for licensed bands -> vote: 27 in favor, 2 opposed

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes	Editor's Actions k) done
-----------------------	---------------------------------

I have cut out Table 215, the bottom half of Table 216, and all references to them, and moved the cut-out tables to mode OFDMA2 where the 4K FFT is still used. Someone is going to have to figure out what part(s) of those tables are applicable. Note: the references numbers 215 and 216 come from the "D1" pdf. The table numbers are different now. There may be a few other isolated clauses in the remainder of the document which

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: [4b](#)

Comment Date

Comment # [0433](#)Comment submitted by: [Shawn](#)[Taylor](#)[2002/01/04](#)Comment Type [Editorial](#)Starting Page # [146](#)Starting Line # [20](#)Section [8.3.5.1](#)[Not sure what this paragraph is trying to say.](#)

Suggested Remedy

[Remove.](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: [Accepted](#)[Remove.](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: [4b](#)

Comment Date

Comment # [0434](#)Comment submitted by: [Avraham](#)[Freedman](#)[2002/01/03](#)Comment Type [Editorial](#)Starting Page # [146](#)Starting Line # [53](#)Section [8.3.5.2](#)[Suggest to add a clarification note, as described below](#)

Suggested Remedy

[Add:](#)[This section describes elements common to the licensed and unlicensed bands PHY layers.](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: [Accepted](#)[Add:](#)[This section describes elements common to the licensed and unlicensed bands PHY layers.](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0435**Comment submitted by: **Anader****Benyamin-Seeyar**

2002/01/04

Comment Type **Editorial**Starting Page # **147**Starting Line # **11**Section **8.3.5.1.1**

Unfinished sentence!

Suggested Remedy

Complete the incomplete sentence "After the FFT, the time domain complex samples are transmitted at rate **to be specified?**"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **l) none needed**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0436**Comment submitted by: **Avraham****Freedman**

2002/01/03

Comment Type **Editorial**Starting Page # **147**Starting Line # **11**Section **8.3.5.1.1**

The sentence starting with "After the FFT....." is not complete

Suggested Remedy

Change the sentence to :

After the FFT, the time domain complex samples are transmitted at rate **F_s**.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: [4b](#)

Comment Date

Comment # [0437](#)Comment submitted by: [Ronald](#)[Murias](#)[2002/01/04](#)

Comment	Type Technical, Non-binding	Starting Page # 147	Starting Line # 11	Section
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"are transmitted at rate." should include the rate.

Suggested Remedy

[Add "Fs"](#)

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for Recommendation

Resolution of Group Decision of Group: [Accepted](#)[Add "Fs"](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: [4b](#)

Comment Date

Comment # [0438](#)Comment submitted by: [Ronald](#)[Murias](#)[2002/01/04](#)

Comment	Type Editorial	Starting Page # 147	Starting Line # 59	Section
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"among others" is incorrect

Suggested Remedy

[change to "among other things"](#)

Proposed Resolution	Recommendation:	Recommendation by
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Reason for Recommendation

Resolution of Group Decision of Group: [Accepted](#)[change to "among other things"](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: [4b](#)

Comment Date

Comment # [0439](#)Comment submitted by: [Ronald](#)[Murias](#)[2002/01/04](#)

Comment	Type Editorial	Starting Page # 148	Starting Line # 6	Section
---------	--------------------------------	-------------------------------------	-----------------------------------	---------

"made up from carriers, the amount of" is incorrect

Suggested Remedy

change to "made up of carriers, the number of"

Proposed Resolution	Recommendation:	Recommendation by
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Reason for Recommendation

Resolution of Group Decision of Group: [Accepted](#)

change to "made up of carriers, the number of"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: [4b](#)

Comment Date

Comment # [0440](#)Comment submitted by: [Ronald](#)[Murias](#)[2002/01/04](#)

Comment	Type Editorial	Starting Page # 148	Starting Line # 11	Section
---------	--------------------------------	-------------------------------------	------------------------------------	---------

"for different" is incorrect

Suggested Remedy

change to "for various"

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for Recommendation

Resolution of Group Decision of Group: [Accepted](#)

change to "for various"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0441**Comment submitted by: **Ronald****Murias**

2002/01/04

Comment	Type Editorial	Starting Page # 149	Starting Line # 2	Section
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Text from "which creates a very modular approach." down to line 15 appears to be marketing information rather than technical information.

Suggested Remedy

Remove sentence segment above and lines 6..15.

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Accepted
---------------------	------------------------------------

Text from "which creates a very modular approach." down to line 15 appears to be marketing information rather than technical information. Remove sentence segment above and lines 6..15.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes	Editor's Actions k) done
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Editor's Questions and Concerns**Editor's Action Items**Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0442**Comment submitted by: **Shawn****Taylor**

2002/01/04

Comment	Type Editorial	Starting Page # 149	Starting Line # 6	Section 8.3.5.1.3
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Lines 6 through 14 are of a marketing nature.

Suggested Remedy

Remove the lines.

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Accepted-Duplicate
---------------------	--

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes	Editor's Actions l) none needed
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Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0443**Comment submitted by: **Jori****Arrakoski****2002/01/04**Comment Type **Technical, Satisfied (was** Starting Page # **149** Starting Line # **17** Section **8.3.5.1.4**

OFDM suffers from large symbol granularity leading to enormous overhead caused by preambles and such constructions. Once the channel bandwidth becomes small the effective throughput (=what end user will see) especially for bursts carrying a low amount of data is very low. For channel bandwidths below 10 MHz 256-FFT shouldn't be used but 64-FFT instead.

Suggested Remedy

Replace 256-FFT with 64-FFT mode defined in 8.3.5.4 for channel bandwidths below 6 MHz.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Rejected****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items**

presentation to be made on 256-FFT OFDMA at session #18

Editor's Notes**Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0444**Comment submitted by: **Shawn****Taylor**

2002/01/04

Comment Type **Editorial**Starting Page # **149**Starting Line # **21**Section **8.3.5.1.4**

"see clause 8.3.5.4.6" should be "see clause 8.3.5.3.3.5"

Suggested Remedy
change

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**The sampling rate is defined as $F_s = BW \cdot 7/6$ for 256-OFDM (see clause 8.3.5.3.3.5) and $F_s = BW \cdot 8/7$ for 2k-OFDMA (see clause 8.3.5.3.4.3).

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0445**

Comment submitted by: Paul

Struhsaker

2002/01/03

Comment Type **Technical, Satisfied (was**Starting Page # **149**Starting Line # **22**Section **8.3.5.1.4**

64 point OFDMA does not meet SUI channel model requirements for the PAR

They MUST be optional for U-NII band.

Table 191 should also reflect this as an option

Suggested Remedy

as 64 OFDM does not meet Required SUI channel models it is technically deficient and must either be made an option or removed from the OFDM section.

This comment holds for Table 191, remove 64 OFDM or make an option for OFDM

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0446**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial**Starting Page # **149**Starting Line # **27**Section **8.3.5.1.4**

The readability of tables 188-191 should be improved.

Suggested Remedy

Add a note in line 24:

"Note that the values in the tables are given as mixed fractions"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

change tables to use equation format

check 6 51/61 (top left in table 188)

Tg/Tb should be replaced with Tg(μ s)

The fractions that denote cyclic prefix such as 1/32 should be Tb/32.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0447**Comment submitted by: **Shawn****Taylor**

2002/01/04

Comment Type **Editorial**Starting Page # **149**Starting Line # **29**Section **8.3.5.1.4**

The tables on pages 149 through 154 are too complicated and hard to read.

Suggested Remedy

Remove fractional representation and replace with decimal point representation (i.e. 6 51/61 should be replaced by 6.84).

Tg/Tb should be replaced with Tg(μ s).

The fractions that denote cyclic prefix such as 1/32 should be Tb/32.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Duplicate****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

2002/01/04

Comment # **0448**

Comment submitted by: **Ronald**

Murias

Comment Type **Editorial**

Starting Page # **155**

Starting Line # **3**

Section

"bitrates" incorrect

Suggested Remedy
change to "bit rates"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group
change to "bit rates"

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

2002/01/04

Comment # **0449**

Comment submitted by: **Shawn**

Taylor

Comment Type **Editorial**

Starting Page # **155**

Starting Line # **3**

Section **8.3.5.1.5**

Raw bitrate is not defined.

Suggested Remedy

Add following formula:

Number used carriers * Number Bits per carrier

(FFT size + Cyclic prefix) * Fs

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Add sentence:

The raw bite rate is defined as $N_{used} * b_m * c_r / T_s$, where b_m is the number of bits per modulation symbol and c_r is the coding rate.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0450**

Comment submitted by: Lei

Wang

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **155** Starting Line # **57** Section

How about Rx/Rx transition gap for both TDD and FDD? i.e., the gap between receiving two consecutive UL tx from different SS's?

Suggested Remedy

Change the sentence "Further, in each frame," to:

"Further, in each frame, the TX/RX transition gap (TTG), Rx/Tx transition gap (RTG), and Rx/Rx transition gap (RRG) need to be inserted between the downlink and uplink, or at the end of each frame, or between two uplink bursts, respectively, to allow the BS to turn around..."

Also, change Figure 203 to show the Rx/Rx transition gap.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0451**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type **Technical, Non-binding** Starting Page # **155** Starting Line # **58** Section **8.3.5.2.1**

The sentence "The cell radius is dependent on the time left open for initial system access. This time should be at least equal to the maximum tolerable round trip delay plus the number of OFDM symbols necessary to transmit the ranging burst." is true for TDD, FDD and H-FDD systems, not just for TDD

Suggested Remedy

Move the sentence to the end of the section, and change it to read "For all system types (TDD, FDD and H-FDD), the cell radius is dependent on the time left open for initial system access. This time should be at least equal to the maximum tolerable round trip delay plus the number of OFDM symbols necessary to transmit the ranging burst."

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Move the sentence to the end of the section, and change it to read "For all system types (TDD, FDD and H-FDD), the cell radius is dependent on the time left open for initial system access. This time should be at least equal to the maximum tolerable round trip delay plus the number of OFDM symbols necessary to transmit the ranging burst."

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done

removed H-FDD, since the OFDM/OFDMA PHYs don't support H-FDD due to the DL scrambling being initialized on a per frame basis.

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0452**Comment submitted by: **Ronald****Murias**

2002/01/04

Comment	Type Technical, Non-binding	Starting Page # 155	Starting Line # 59	Section
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"consists of one or more..." does not take into consideration the two-OFDM symbol preamble

Suggested Remedy

change to "consists of two or more"

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

change to "consists of two or more"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0453**Comment submitted by: **Ronald****Murias**

2002/01/04

Comment	Type Technical, Non-binding	Starting Page # 156	Starting Line # 14	Section
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Diagram should show preamble

Suggested Remedy

edit diagram to include preamble

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Modified**

change figure to figure 203 in C802.16a-02/13

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0454**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial**Starting Page # **156**Starting Line # **24**Section **8.3.5.2.2**

As this clause describes an optional feature, I suggest to move it to the end of section 8.3.5.2

Suggested Remedy

Change:

8.3.5.2.3. to 8.3.5.2.2 (with all sub-clauses)

8.3.5.2.4. to 8.3.5.2.3 (with all sub-clauses)

8.3.5.2.5. to 8.3.5.2.4 (with all sub-clauses)

8.3.5.2.6. to 8.3.5.2.5 (with all sub-clauses)

8.3.5.2.2. to 8.3.5.2.6 (with all sub-clauses)

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Change:

8.3.5.2.3. to 8.3.5.2.2 (with all sub-clauses)

8.3.5.2.4. to 8.3.5.2.3 (with all sub-clauses)

8.3.5.2.5. to 8.3.5.2.4 (with all sub-clauses)

8.3.5.2.6. to 8.3.5.2.5 (with all sub-clauses)

8.3.5.2.2. to 8.3.5.2.6 (with all sub-clauses)

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0455**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Technical, Non-binding** Starting Page # **156** Starting Line # **45** Section **8.3.5.2.2**

It would be most beneficial to add a reference for the "Stacked Carrier Spread Spectrum", which is not a very well known technique. It is also recommended to give a reference to the part in the standard where it is specified.

Suggested Remedy

[Add a reference](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**[Delete lines 44-45](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0456**

Comment submitted by: **Anader**

Benyamin-Seeyar

2002/01/04

Comment Type **Editorial**

Starting Page # **156**

Starting Line # **47**

Section **8.3.5.2.2**

For consistency within the document, the words "Narrow Band" and "Broad Band " systems should be replaced with "Narrowband and Broadband" systems.

Suggested Remedy

Within Lines 47 to 59, replace the repeated words "Narrow Band" and "Broad Band" with "Narrowband" and "Broadband" for consistency within the document,.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

change to narrowband, broadband and baseband respectively

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0457**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Technical, Non-binding** Starting Page # **156** Starting Line # **47** Section **8.3.5.2.2**

The two last paragraphs of the clause are very unclear. Do they refer only to Stacked Carrier Spread Spectrum"? Do they refer only to OFDMA? Are they necessary for any specific part of the standard?

Suggested Remedy

Delete the two last paragrpahs.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Delete the two last paragraphs.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions l) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0458**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial** Starting Page # **156** Starting Line # **48** Section **8.3.5.2.2**

Shouldn't the word "adjunct" in the sentence "...defining the Sub-Channel carriers to be adjunct" be "adjacent"?
The same comment applies to line 51 in the sentence:"(including the one were carriers of a sub-Channel are allocated adjunct).

Suggested Remedy

recheck and change "adjunct" to adjacent"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

change "adjunct" to adjacent"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0459**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial**Starting Page # **156**Starting Line # **50**Section **8.3.5.2.2**

The "were" in the sentence : "(including the one were carriers of a sub-Channel are allocated adjunct)" should be probably "where"

Suggested Remedy

Change "were" to "where"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change "were" to "where"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0460**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial**Starting Page # **156**Starting Line # **57**Section **8.3.5.2.2**

The "were" in the sentence "Another method could comprise the use of non-matched receivers were processing could be done in the Base Band" should probably be "where"

Suggested Remedy

Change "were" to "where"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

This is another incidence of "where"-"were" interchange than that of comment 459

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

noted that group decision should've read Accepted.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0461**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial**Starting Page # **157**Starting Line # **37**Section **8.3.5.2.2.2**

The 1 TX mode is not well defined. A reference to the "splitting" of pilots and preambles is needed

Suggested Remedy

Change the paragraph to read:

"Both antennas transmit in the same time, and they share the same Local Oscillator. Thus, the received signal has exactly the same auto-correlation properties as for a single antenna. So, time and frequency coarse and fine estimation can be performed in the same way as for a single antenna. The scheme requires MISO channel estimation, which is allowed by splitting some preambles and pilots between the 2 Tx antennas, as described in section 8.3.5.2.2.3"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Change the paragraph to read:

"Both antennas transmit in the same time, and they share the same Local Oscillator. Thus, the received signal has exactly the same auto-correlation properties as for a single antenna. So, time and frequency coarse and fine estimation can be performed in the same way as for a single antenna. The scheme requires MISO channel estimation, which is allowed by splitting some preambles and pilots between the 2 Tx antennas, as described in section 8.3.5.2.2.3"

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0462**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial**Starting Page # **157**Starting Line # **44**Section **8.3.5.2.2.3**

The paranthesis in the beginning of the paragraph are not needed. The term "using twice the MISO channel is not clear

Suggested Remedy

Change 1st paragraph to:

"The basic scheme [B43] transmits 2 complex symbols s0 and s1, using the MISO channel (two Tx, one Rx) twice with channel values h0 (for antenna 0) and h1 (for antenna 1)..

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Change 1st paragraph to:

"The basic scheme [B43] transmits 2 complex symbols s0 and s1, using the MISO channel (two Tx, one Rx) twice with channel values h0 (for antenna 0) and h1 (for antenna 1)..

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0463**Comment submitted by: [Avraham](#)[Freedman](#)

2002/01/03

Comment Type [Editorial](#)Starting Page # **157**Starting Line # **58**Section **8.3.5.3.2.2.2**

Mode C_E mentioned here is a licensed exempt mode, while this clause is the specific "licensed part" . Should it be mode C_L?

Suggested Remedy

[recheck](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**[Add "C_L" \(with proper name\)](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0464**Comment submitted by: [Avraham](#)[Freedman](#)

2002/01/03

Comment Type [Editorial](#)Starting Page # **158**Starting Line # **1**Section **8.3.5.2.2.3**

The meaning of "Moulo L of the transmission is not clear in this stage.

Suggested Remedy

[Delete](#)[" that means that the modulo L of the transmission is held the same for the duration of two symbols".](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**[replace with "and L is constant for the duration of two symbols \(see clause 8.3.5.3.4.3.1 for definition of L\)"](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0465**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial**Starting Page # **158**Starting Line # **38**Section **8.3.5.2.2.4**

Add a reference number to the formula

Suggested Remedy

Change the end of the sentence to read:

"....according to equations (17) and (18) in clause 8.3.5.2.2.3."

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Change the end of the sentence to read:

"....according to equations (17) and (18) in clause 8.3.5.2.2.3."

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0466**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Technical, Non-binding** Starting Page # **158** Starting Line # **42** Section **8.3.5.2.3**

It seems that all the sections 8.3.5.2.3-8.3.5.2.6 are to be completed (TBD's, ????, editorial notes, missing text)

Suggested Remedy

Complete the section

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

no specific changes suggested

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0467**

Comment submitted by: Tom

Kolze

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **158** Starting Line # **50** Section **8.3.5.2.3.2**

There is a TBD that must be eliminated.

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

We have fully satisfied the comment, so we should mark it "Accepted".

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0468**

Comment submitted by: Tom

Kolze

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **158** Starting Line # **50** Section **8.3.5.2.3.2**

The statement that all equipment must support all defined test modes is unsettling in this tiny paragraph.

Much more precision is needed for such a statement. As an example, it must be clear that this applies to some specific linearity-related test. If it is desired to be a more broadly applicable principal and requirement, it must appear in a much higher paragraph, and be explicit as to its intent.

Suggested Remedy

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

We have fully satisfied the comment, so we should mark it "Accepted".

Group's Notes**Group's Action Items**

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns**Editor's Action Items**Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0469**

Comment submitted by: Yossi

Segal

2002/01/06

Comment Type **Technical, Non-binding** Starting Page # **158** Starting Line # **52** Section **8.3.5.2.3.2**

remove section, the proposed EVM measurement is defined in 8.3.5.2.3.4

Suggested Remedy

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

remove section

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0470**Comment submitted by: **Ronald****Murias**

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **158** Starting Line # **54** Section

Clarify "TBD"

Suggested Remedy

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions **l) none needed**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0471**Comment submitted by: **Shawn****Taylor**

2002/01/04

Comment Type **Editorial** Starting Page # **158** Starting Line # **55** Section **8.3.5.2.3.2**

TBD should be replaced with appropriate number.

Suggested Remedy

None at this time.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions **l) none needed**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0472**

Comment submitted by: Tom

Kolze

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **159** Starting Line # **23** Section **835234**

The referencing of a test technique to a "clause" in a submission to 802.11a is unacceptable in this case. The details of this "clause" should be stated explicitly in the 802.16 standard in its own right.

There is no reasonable justification for referencing the mere submission in another working group, in this instance.

Suggested Remedy**Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted****Reason for Group's Decision/Resolution**

We have fully satisfied the comment, so we should mark it "Accepted".

Group's Notes**Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0473**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Technical, Non-binding** Starting Page # **159** Starting Line # **29** Section **8.3.5.2.3.4**

Reference [B44] cannot be found on 802.11 website. I suggest to make the quoted clause an annex to this standard.

Suggested Remedy

Make [B44], clause 17.3.9.6.3. an annex to this document.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Replace entire line with clause 17.3.9.6.3 and 17.3.9.7 from [B50].

Add [B50] as normative reference. Make sure it adds the standards version and date.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done

incorporated the text, so no normative reference is needed.

Editor's Questions and Concerns**Editor's Action Items**Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0474**

Comment submitted by: Ronald

Murias

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **159** Starting Line # **34** Section

The sentence does not make sense. I am unable to write a remedy as I'm not clear on what is intended here.

Suggested Remedy**Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Delete sentence

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0475**

Comment submitted by: David

Husson

2002/01/04

Comment	Type Editorial	Starting Page # 160	Starting Line #	Section
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Table 194 needs to be filled in

Suggested Remedy

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for Recommendation

Resolution of Group Decision of Group: **Rejected-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0476**

Comment submitted by: Tom

Kolze

2002/01/04

Comment	Type Technical, Binding	Starting Page # 160	Starting Line # 1	Section 8.3.5.3.4
---------	--------------------------------	----------------------------	--------------------------	--------------------------

Dozens of TBDs, question marks (?), and blank entries over three pages. These must be eliminated.

Suggested Remedy

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Modified**

Delete section 8.3.5.2.7.5.

Reason for Group's Decision/Resolution

no specific changes suggested

TBDs left after ballot 4a resolution are in Table 204 and Table 205 (D2)

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/04

Comment # **0477**Comment submitted by: **Gordon****Antonello**Comment Type **Technical, Satisfied (was**Starting Page # **160**Starting Line # **6**Section **8.3.5.2.4**

Receiver sensitivi specifications should follow regulatory body criteria by using BER.

Suggested Remedy

Change sentence beginning on line 6 from:

"The packet error rate (PER) shall be less than TBD (%) at the power levels shown below . . "

to:

"The bit error rate (BER) shall be less than 10^{-6} at the power levels shown below . . "

Table 194 needs to be expanded to include all relevant channel plans:

For details see contribution.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: **Rejected******Reason for Group's Decision/Resolution**

updated contribution expected at next session

Group's Notes**Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0478**Comment submitted by: [Ronald](#)[Murias](#)[2002/01/04](#)Comment Type [Technical, Non-binding](#) Starting Page # **160** Starting Line # **6** Section[Clarify "TBD"](#)

Suggested Remedy

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Rejected-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [1\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0479**Comment submitted by: [Ronald](#)[Murias](#)[2002/01/04](#)Comment Type [Technical, Non-binding](#) Starting Page # **160** Starting Line # **22** Section[Fill in table.](#)

Suggested Remedy

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Rejected-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [1\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

2002/01/04

Comment # **0480**

Comment submitted by: **Ronald**

Murias

Comment Type **Technical, Non-binding**

Starting Page # **160**

Starting Line # **36**

Section

Clarify TBD

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Rejected-Duplicate

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0481**

Comment submitted by: Gordon

Antonello

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **160** Starting Line # **50** Section **8.3.5.2.4.2**
 Change sentence on line 50

Suggested Remedy

Change sentence beginning on line 50 from:

" For alternate channel testing the test method is identical except the interfering channel will be any channel other than the adjacent channel."

to:

" For non-adjacent channel testing the test method is identical except the interfering channel will be any channel other than the adjacent channel or the co-channel."

Change Table 195 - Adjacent and Non-Adjacent Channel Rejection

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Change sentence beginning on line 50 from:

" For alternate channel testing the test method is identical except the interfering channel will be any channel other than the adjacent channel."

to:

" For non-adjacent channel testing the test method is identical except the interfering channel will be any channel other than the adjacent channel or the co-channel."

Change:

Table 195 - Adjacent and Non-Adjacent Channel C/I

Modulation/Coding	Adjacent Channel C/I (dB)	Non-adjacent channel C/I (dB)
-------------------	------------------------------	----------------------------------

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0482**

Comment submitted by: David

Husson

2002/01/04

Comment	Type Editorial	Starting Page # 161	Starting Line #	Section
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Table 195 is not filled in completely and the values that are present are followed by question marks

Suggested Remedy

Fill in the table completely with real values.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Superseded

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0483**

Comment submitted by: Gordon

Antonello

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **161** Starting Line # **20** Section **8.3.5.2.4.3**

In network deployments a value of -20 dBm for maximum input input signal level is quite high and to keep receiver cost down to a reasonable level a lower value is recommended.

Suggested Remedy

Change line 20 from:

"The receiver shall be capable of receiving a maximum on-channel signal of -20 dBm, . . ."

to:

"The receiver shall be capable of receiving a maximum on-channel signal of -35 dBm, . . ."

Proposed Resolution Recommendation: Recommendation by**Reason for Recommendation****Resolution of Group Decision of Group: Accepted-Modified**

"The receiver shall be capable of receiving a maximum on-channel signal of -30 dBm, . . . "
vote: 9 in favor, 3 against

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0484**

Comment submitted by: Gordon

Antonello

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **161** Starting Line # **30** Section **8.3.5.2.4.4**
change required to follow change in 8.3.5.2.4.3

Suggested Remedy

Change line 30 from:

"The receiver shall have a minimum Input Intercept Point (IIP3) of 0 dBm."

to:

"The receiver shall have a minimum 3rd order Input Intercept Point (IIP3) of -15 dBm."

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

"The receiver shall have a minimum 3rd order Input Intercept Point (IIP3) of -10 dBm."

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0485**

Comment submitted by: Ronald

Murias

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **161** Starting Line # **32** Section
Clarify this sentence. I am unable to do so as I'm not clear on what the intended meaning is.

Suggested Remedy**Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified****Delete sentence.****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0486**Comment submitted by: **Ronald****Murias**

2002/01/04

Comment	Type Editorial	Starting Page # 161	Starting Line # 59	Section
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"synchronization with" incorrect

Suggested Remedy

change to "synchronization within"

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

change to "synchronization within"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0487**Comment submitted by: **David****Husson**

2002/01/04

Comment	Type Editorial	Starting Page # 162	Starting Line #	Section 8.3.5.2.5.3
---------	-----------------------	----------------------------	-----------------	----------------------------

Phase Noise Section is empty.

Suggested Remedy

Fill it in or remove it.

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for Recommendation

Resolution of Group Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions **l) none needed**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0488**

Comment submitted by: David

Husson

2002/01/04

Comment Type **Editorial** Starting Page # **162** Starting Line # Section **8.3.5.2.6.3**

This section is empty

Suggested Remedy

Fill it in or remove it

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions l) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0489**

Comment submitted by: Scott

Marin

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **162** Starting Line # **40** Section **8.3.5.2.6.3**

several clauses have no text. Before IEEE Balloting, all clauses should have text.

Suggested Remedy

Add text for each clause.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

delete clause 8.3.5.2.6.3

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0490**

Comment submitted by: Gordon

Antonello

2002/01/04

Comment Type Technical, Satisfied (was Starting Page # 162 Starting Line # 41 Section 8.3.5.2.6.3
Section on Diagnostic Features does not have any text. Add text to describe these features.

Suggested Remedy

Add the following text to section 8.3.5.2.6.3:

"Diagnostic capabilities of a compliant system shall support the isolation of faults down to the Field Replaceable Module (FRM) level from a maintenance terminal access point within the network. Faults shall be reported to an Element Management System and/or Network Management System within a reasonable time frame and displayed such that maintenance personnel may respond with appropriate action."

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0491**

Comment submitted by: Tom

Kolze

2002/01/04

Comment Type **Technical, Binding**Starting Page # **163**Starting Line # **6**Section **8.3.5.3.1**

Too many disparate "standards." Pick one, either AL or BL, or develop an inclusion strategy (if possible) for SS and BS that justifies for the industry and the consumer the multiplicity of standards here, rather than simply giving the appearance that 802.16 could not adhere to the IEEE "one problem, one solution" mandate.

Suggested Remedy**Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: **Rejected******Reason for Group's Decision/Resolution**

4a: The standard has been reduced to define four major PHY configurations and a common MAC.

Group's Notes**Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0492**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **163** Starting Line # **6** Section **8.3.5.3.1**

Specifying optional FFT modes causes principal interoperability problems. The only reason to do so would be if significant technical gain would be achieved.

For the 512 mode, no such gain is appearant, since the raw throughput and spectral shape improve only marginally. The granularity loss on the other hand increases sharply.

For the 4K mode, no gain is appearant as well, though no significant disadvantage, apart from the interoperability loss, is evident either. In narrow channels (equal or less than 3.5 MHz), system delay might be a minor issue.

Suggested Remedy

Delete 512 and 4096 FFT optional modes (consistent with the BRAN liaison statement). Make mode A_E applicable for licensed bands of 3.5 MHz and less.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0493**Comment submitted by: **Lei****Wang**

2002/01/04

Comment	Type	Starting Page #	Starting Line #	Section
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Technical, Non-binding

163

6

The TDMA is not specific to OFDM. Actually, the OFDMA uses the TDMA too.

Suggested Remedy

1. change "256 FFT with TDMA" to "256 FFT with OFDM"; and
2. change "512 FFT with TDMA" to "512 FFT with OFDM".

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

change "256 FFT with TDMA" to "256 FFT with OFDM";

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0494**Comment submitted by: **Shawn****Taylor**

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **163** Starting Line # **8** Section **8.3.5.3.1**

FFT sizes of 512 and 4096 are defined as optional and needlessly complicate the standard.

Suggested Remedy

These options should be removed to simplify things throughout the document.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

motion: change OFDMA2 to 2K FFT; vote 24-1

512 was deleted, motion deletes 4K FFT from entire draft

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0495**

Comment submitted by: Lei

Wang

2002/01/04

Comment	Type	Starting Page #	Starting Line #	Section
---------	------	-----------------	-----------------	---------

Technical, Non-binding

163

8

The optional mode, CL, should be also mentioned in this introduction section.

Suggested Remedy

append the following sentence to line 8, page 163:

"In addition, an optional mode, CL, is also allowed specifically for advanced antenna array system, which is based on a subchannel structure with 48 data carriers, as specified in Section 8.3.5.3.5."

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group**Decision of Group: **Accepted-Modified**

line 8, page 163 "In addition, an optional mode, C_L, is specified for AAS in section 8.3.5.35. All modes use a structure consisting of multiples of 48 data carriers."

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes**

Editor's Actions k) done

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0496**Comment submitted by: [Lars](#)[Lindh](#)[2002/01/04](#)Comment Type [Technical, Non-binding](#) Starting Page # **163** Starting Line # **10** Section **8.3.5.3.1**[Insert a generic conceptual block diagram for both DL and UL OFDM PHYs. Clearly indicate the bit ordering.](#)

Suggested Remedy

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

[no specific recommendation](#)

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [1\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0497**Comment submitted by: [Avraham](#)[Freedman](#)[2002/01/03](#)Comment Type [Editorial](#) Starting Page # **163** Starting Line # **12** Section **8.3.5.3.2**[Add a clarification note](#)

Suggested Remedy

[Add:](#)
["This section discusses the elements common to all OFDM modes"](#)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**["This section discusses the elements common to all OFDM modes"](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [1\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0498**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial**Starting Page # **163**Starting Line # **31**Section **8.3.5.3.2.1.1**

The sentence is not clear

Suggested Remedy

Change the senentence :

"The seed value must be used to calculate the randomization bewitchery is combined in an XOR with the first bit of data of each burst."

to

"The seed value, which must be used to calculate the randomization output is combined in an XOR operation with the first bit of data of each burst."

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Change the sentence :

"The seed value must be used to calculate the randomization bewitchery is combined in an XOR with the first bit of data of each burst."

to

"The seed value, which must be used to calculate the randomization output is combined in an XOR operation with the first bit of data of each burst."

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0499**

Comment submitted by: Lars

Lindh

2002/01/04

Comment Type Technical, Satisfied (was Starting Page # 211 Starting Line # 55 Section 8.3.5.3.2.1.1

Some packets can in rare cases due to their coded binary patterns be transmitted with a very high peak-to-average power (PAPR). It is possible that the PAPR exceeds the capability of power amplifier. In this case the packet can not be properly received and will some time later be retransmitted. It is extremely important that the retransmitted packet does not have exact the same binary form as the original packet because this will lead to an equally high PAPR. Some functionality in the PHY layer is needed that ensures that retransmitted packets will be transmitted with an alternative binary pattern.

One possibility to ensure this is to include part of the frame counter in the initialization of the scrambler.

Suggested Remedy

The scrambler shall be re-initialized at the beginning of each PHY burst with the sequence:

1 0 0 1 0 1 0 1 0 0 0 c3 c2 c1 c0

where c3 c2 c1 c0 have the values of zero for the DL FCH burst and the value of the four least significant bits of the frame counter for all other DL and UL bursts.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Rejected****Reason for Group's Decision/Resolution**

not needed, no repeated data in the DL, already accounted for in the UL

Group's Notes**Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0500**

Comment submitted by: [Gordon](#)

[Antonello](#)

2002/01/04

Comment Type [Editorial](#)

Starting Page # **163**

Starting Line # **60**

Section **8.3.5.3.2.1.1**

Extra text in sentence.

Suggested Remedy

Change line 60 from:

"The uplink initialization of the randomizer is defined for OFDM is defined in clause . . . "

to:

"The uplink initialization of the randomizer is defined for OFDM in clause . . . "

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: [Superseded](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) [none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0501**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial**Starting Page # **163**Starting Line # **60**Section **8.3.5.3.2.1.1**

The sentence has been probably scrambled

Suggested Remedy

Change

"The uplink initialization of the randomizer is defined for OFDM is defined in clause 8.3.5.3.3.6.1. and for OFDMA in clause 8.3.5.3.3.6.1."

to

"The uplink initialization of the randomizer is defined for OFDM and for OFDMA in clause 8.3.5.3.3.6.1."

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0502**Comment submitted by: [Shawn](#)[Taylor](#)[2002/01/04](#)Comment Type [Editorial](#)
typoStarting Page # **163**Starting Line # **60**Section **8.3.5.3.2.1.1**

Suggested Remedy

replace "is defined for OFDM is defined in clause" with "is defined for OFDM in clause"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0503**Comment submitted by: [Nico](#)[van Waes](#)[2002/01/04](#)Comment Type [Editorial](#)
[Erroneous reference.](#)Starting Page # **163**Starting Line # **61**Section **8.3.5.3.2.1.1**

Suggested Remedy

change 8.3.5.3.3.6.1 to 8.3.5.3.4.4.1

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

change second 8.3.5.3.3.6.1 to 8.3.5.3.4.4.1

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0504**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial** Starting Page # **164** Starting Line # **12** Section **8.3.5.3.2.1.2**

Two clauses are mentioned in the sentence "with specific codes provided in clause 8.3.5.3.3.6.2.2 and 8.3.5.3.4.4.2.2."

Suggested Remedy

Change "clause" to "clauses"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change "clause" to "clauses"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0505**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial** Starting Page # **165** Starting Line # **3** Section **8.3.5.3.2.2**

Several modulation methods are mentioned in the senetence: The modulation used both for the UL and DL data carrier is QPSK, 16QAM and optionally 64QAM"

Suggested Remedy

Change the sentence to:

"The modulations used both for the UL and DL data carriers are QPSK, 16QAM and optionally 64QAM."

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0506**

Comment submitted by: Shawn

Taylor

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **165** Starting Line # **3** Section **8.3.5.3.2.2**

Defined modulations are QPSK, 16 QAM and optionally 64 QAM for licensed band. Unlicensed band also has BPSK. I see no reason why they should be different.

Suggested Remedy

Make the modulations BPSK, QPSK and 16 QAM with 64 QAM optional for both licensed and unlicensed modes.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Make the modulations QPSK and 16 QAM with optional 64 QAM for both licensed and unlicensed modes.
vote: 13 in favor, 2 against

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/04

Comment # **0507**

Comment submitted by: Lars

Lindh

Comment Type **Technical, Non-binding**Starting Page # **165**Starting Line # **12**Section **8.3.5.3.2.2.1**

Paragraph 8.3.5.3.2.2.1 "data Modulation" is a mess. It contains at least the following inaccuracies or errors:

line 16: The complex number z in Figure 161, before mapping ..
z does not exist in Figure 161

line 19: The normalized constellation-mapped data shall be subsequently modulated ..
Where the normalization actually is performed is an implementation issue and must not be dictated by the standard.

Suggested Remedy**Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

delete 3rd sentence in the first paragraph. Delete the word "normalized" on line 19. and delete the second paragraph except for the first sentence.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0508**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type [Editorial](#) Starting Page # [165](#) Starting Line # [24](#) Section [8.3.5.3.2.1.1](#)

The term APC appears here for the first time. It is necessary to detail the abbreviation. As it is the only occurrence of this phrase no need to put in the abbreviation list

Suggested Remedy

Change "APC" to "Automatic Power Control" (APC)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Change "APC" to "Automatic Power Control" (APC)

change page 239, line 41 TPC to APC

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0509**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type [Technical, Non-binding](#) Starting Page # [165](#) Starting Line # [62](#) Section [8.3.5.3.2.2.2](#)

It is not clear if a new value is generated by the PRBS every usable carrier (namely pilot and data carrier) and only the values at pilot carriers are used or is a value generated only for pilot carriers.

Suggested Remedy

Change "usable carrier" to "pilot carrier"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [l\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0510**Comment submitted by: **Ronald****Murias**

2002/01/04

Comment	Type Technical, Non-binding	Starting Page # 166	Starting Line # 6	Section
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The equation's components are not clearly defined.

Suggested Remedy

Define R & T in the equation and describe it.

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Modified**

replace R with "Re" and I with "Im" in eq 19 and 20 (and any places it occurs)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions **k) done**

fixed here and in OFDMA ranging

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0511**Comment submitted by: **Avraham****Freedman**

2002/01/03

Comment	Type Editorial	Starting Page # 166	Starting Line # 10	Section 8.3.5.3.2.2.2
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The sentence should read: "...the pilots shall not be boosted and shall be modulated..."

Suggested Remedy

Chnage "an" to "and"

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

Change "an" to "and"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0512**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type **Technical, Non-binding** Starting Page # **166** Starting Line # **10** Section **8.3.5.3.2.2**

There are no midambles in the PHY

Suggested Remedy

Remove the word 'midambles'

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Remove the word 'midambles'

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0513**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type **Technical, Non-binding** Starting Page # **166** Starting Line # **24** Section **8.3.5.3.2.3**

PHY control and UL mapping, don't have to be transmitted in the most robust coding and modulation

Suggested Remedy

Remove the words:

"which is transmitted in the most robust coding and modulation of the system"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

delete "and UL mapping" on line 24

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0514**Comment submitted by: **Lei****Wang**

2002/01/04

Comment	Type	Starting Page #	Starting Line #	Section
	Technical, Satisfied (was	166	24	

DL MAP also needs to be transmitted in a DL frame.

Suggested Remedy

change "UL mapping" to "UL and DL MAPs".

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Modified**change "UL mapping" to "UL and DL MAPs".
change "US mapping" to "MAPs" in figure 209

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0515**Comment submitted by: **Yigal****Leiba**

2002/01/02

Comment	Type	Starting Page #	Starting Line #	Section
	Technical, Non-binding	166	38	8.3.5.3.2.3

IFigure 209 shows only an example of the DL frame structure

Suggested Remedy

Change the title of figure 209 to read:
"DL Frame Structure example"

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Modified**

delete figure 209

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0516**

Comment submitted by: Lei

Wang

2002/01/04

Comment	Type	Starting Page #	Starting Line #	Section
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Technical, Non-binding

166

42

For the OFDMA, there are two dimensions for the transition between modulations/codings.

Suggested Remedy

change line 42, page 166 to the following:

"in mode BL and CL, the transitions between modulations and coding take place on OFDM symbol boundary in time domain, on subchannel within an OFDM symbol in frequency domain."

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for Recommendation

Resolution of Group	Decision of Group:
---------------------	--------------------

Accepted

change line 42, page 166 to the following:

"in mode BL and CL, the transitions between modulations and coding take place on OFDM symbol boundary in time domain, on subchannel within an OFDM symbol in frequency domain."

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes	Editor's Actions
----------------	------------------

k) done

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/04

Comment # **0517**Comment submitted by: **Ronald****Murias**Comment Type **Technical, Non-binding**Starting Page # **166**Starting Line # **48**

Section

Clarify TBD

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **l) none needed**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/03

Comment # **0518**Comment submitted by: **Avraham****Freedman**Comment Type **Editorial**Starting Page # **166**Starting Line # **60**Section **8.3.5.3.2.4.1****Grammar**

Suggested Remedy

Change**"...continue to operating..." to "...continue to operate..."**

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted****Change****"...continue to operating..." to "...continue to operate..."**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0519**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type [Technical, Non-binding](#) Starting Page # **167** Starting Line # **10** Section **8.3.5.3.2.4.1.2**
 Table 198 contains a "frame duration code" and not a synchronization time stamp. Is that the right table?

Suggested Remedy

[Re-check](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

[see 522](#)

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0520**

Comment submitted by: Ronald

Murias

2002/01/04

Comment Type [Technical, Non-binding](#) Starting Page # **167** Starting Line # **10** Section
 Define tolerance for the 1pps clock and 10 MHz frequency references.

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0521**

Comment submitted by: Lei

Wang

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **167** Starting Line # **11** Section

For both OFDM and OFDMA, the DL-MAP PHY Sync. field is not a time stamp, it consists of frame number and frame duration.

Suggested Remedy

remove all the time stamp related descriptions in Section 8.3.5.3.2.4.1.2.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

delete "The OFDM/OFDMA" till end of clause
change clause title to "Frame timing reference"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0522**

Comment submitted by: Lei

Wang

2002/01/04

Comment Type **Editorial** Starting Page # **167** Starting Line # **11** Section

wrong table reference.

Suggested Remedy

change "Table 149 for OFDMA" to "Table 147 for OFDMA".

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

change "Table 149 for OFDMA" to "Table 147 for OFDMA".

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions l) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0523**

Comment submitted by: Shawn

Taylor

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **167** Starting Line # **25** Section **8.3.5.3.2.4.1.3**

This section contradicts section 8.3.5.2.5.1 on page 161.

Suggested Remedy

ppm and RF accuracy numbers should be made consistent.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

change page 161, line 56 to 2%

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0524**

Comment submitted by: Lei

Wang

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **167** Starting Line # **30** Section

The ranging process is defined for a SS to synchronize with its BS. Except for the Ranging, there is no other place specifying how a SS extract his clock from the DL, in the current document for OFDM and OFDMA,

Suggested Remedy

remove "and extract his clock from it".

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Withdrawn**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions l) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0525**

Comment submitted by: Lei

Wang

2002/01/04

Comment	Type	Technical, Satisfied (was	Starting Page #	167	Starting Line #	55	Section
---------	------	---------------------------	-----------------	-----	-----------------	----	---------

Needs a better description for the OFDM frame structure.

Suggested Remedy

replace the text in section 8.3.5.3.3.1 Frame Structure with the text as suggested in the Contribution ??? (A separate contribution will be submitted.)

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Accepted-Modified
---------------------	---

replace 8.3.5.3.3.1 Frame structure with text from C802.16-02/16.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes	Editor's Actions	k) done
----------------	------------------	---------

Editor's Questions and Concerns**Editor's Action Items**Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0526**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment	Type	Editorial	Starting Page #	167	Starting Line #	57	Section	8.3.5.3.3.1
---------	------	-----------	-----------------	-----	-----------------	----	---------	-------------

The term FCH appears here for the ifrst time. Suggest to add an explantion although it is fully explained on the next page.

Suggested Remedy

Change "FCH burst (see 8.3.5.3.3.3)" to "FCH burst (Feame Control Header, see 8.3.5.3.3.3)

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Superceded
---------------------	--------------------------------------

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes	Editor's Actions	l) none needed
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Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0527**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type **Editorial**Starting Page # **167**Starting Line # **62**Section **8.3.5.3.3.1**

The term 'PHY PDU' may be confusing, as PDU is generally understood as a MAC entity

Suggested Remedy

Replace occurrences 'PHY PDU' in this section by 'PHY transmission burst'

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Replace occurrences 'PHY PDU' in this section by 'PHY transmission burst'

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0528**

Comment submitted by: Ronald

Murias

2002/01/04

Comment Type **Technical, Non-binding**Starting Page # **168**Starting Line # **7**

Section

Preamble missing from diagram.

Suggested Remedy

Show preamble in the diagram.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **l) none needed**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0529**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Technical, Non-binding** Starting Page # **168** Starting Line # **40** Section **8.3.5.3.3.1**

There is no reference or description for figure 212. A suggested text is enclosed

Suggested Remedy

Add after "The PHY -PDU" always starts from a preamble"

",as shown in Figure 212, and contains several PHY bursts, each startting with a FCH and followed by MAC messages and padding."

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superceded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0530**

Comment submitted by: Lars

Lindh

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **169** Starting Line # **26** Section **8.3.5.3.3.1**

Why must a burst be padded by 0xFF? Why cannot simply the unused subcarriers be transmitted with zero power and thus reduce the overall power in the symbol ? We cannot short a symbol in time but we can reduce the power and in this way generate less interference.

Suggested Remedy

The burst shall not be padded with 0xFF and unused carriers shall be transmitted with zero power.
Alternatively the padding could be made optional on a burst basis by using the DCD/UCD burst profiles.

Proposed Resolution Recommendation: Recommendation by**Reason for Recommendation****Resolution of Group Decision of Group: **Rejected******Reason for Group's Decision/Resolution**

would give problems with FEC and scrambler

Group's Notes**Group's Action Items****Editor's Notes Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0531**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Technical, Non-binding** Starting Page # **169** Starting Line # **34** Section **8.3.3.5.3.2**

This clause is part of the A_L mode description, but still refers to clause 8.3.5.4.4.2, which is part of the B_L mode description.

Suggested Remedy

Delete: "and 8.3.5.4.4.2"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions l) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0532**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type **Technical, Satisfied (was** Starting Page # **169** Starting Line # **34** Section **8.3.5.3.3.2**

According to figure 212, a 'burst' is part of at a TDM PHY transmission. As such, there is need for a preamble before this burst. The preamble before the entire TDM PHY burst is mandated in page 168, line 39.

Suggested Remedy

Remove the words 'A burst MAY start from a preamble'

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

delete clause 8.3.5.3.3.2

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0533**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial**Starting Page # **169**Starting Line # **35**Section **8.3.5.3.3.2**

Shouldn't the sentence read "...the defintion of the corresponding waveform"?

Suggested Remedy

Change "correspondent" to "corresponding"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0534**

Comment submitted by: Carl

Eklund

2002/01/04

Comment Type **Technical, Satisfied (was**Starting Page # **169**Starting Line # **39**Section **8.3.5.3.3.3**

It is not specified which FFT size to use for the FCH burst. This should be well known

Suggested Remedy

Define an appropriate FFT size to use for the DL-Frame prefix

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

the FFT is 256

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0535**

Comment submitted by: Lars

Lindh

2002/01/04

Comment Type **Technical, Binding**Starting Page # **211**Starting Line # **40**Section **8.3.5.3.3.3**

The intention of using a DL Frame prefix is not declared in the text and is not evident by itself. One purpose could be to get some information for the next burst a little earlier. Even this is questionable because almost the same kind of operations must be performed. The following kind of execution times for the different decoding phases can be foreseen:

FFT	256*8 cc	FFT-256 case
CC innercode	192*4 cc	192 symbols processed 4 times because of back-tracking and tail-biting
RS outercode	3*t + K cc	dependent on t=4 plus a constant usually a relative small number

Suggested Remedy

Delete the DL Frame Prefix from the FCH burst as it does not much speed up the process of knowing the modulation/coding and length of the next burst.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Rejected**

vote 7 against, 6 in favor

Reason for Group's Decision/Resolution

Rate_ID is an essential parameter for decoding the DL-MAP, if the Rate_ID is not fixed (see D2, page 155, line 63).

Group's Notes**Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0536**

Comment submitted by: Vladimir

Yanover

2002/01/04

Comment Type **Editorial**

Starting Page # **169**

Starting Line # **40**

Section **8.3.5.3.3.3**

editorial

Suggested Remedy

Replace

"A special PHY burst format (FCH or Frame Control Header) is used for DL Frame prefix to enable initial synchronization and acquisition of DL and UL channels parameters. Such a burst always has a preamble and"

with

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Replace

"A special PHY burst format (FCH or Frame Control Header) is used for DL Frame prefix to enable initial synchronization and acquisition of DL and UL channels parameters. Such a burst always has a preamble and"

with

"A special PHY burst format (FCH) is used to enable initial acquisition of DL and UL channels parameters. Such a burst always has a preamble and"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0537**

Comment submitted by: Vladimir

Yanover

2002/01/04

Comment Type **Technical, Non-binding**

Starting Page # **169**

Starting Line # **47**

Section **8.3.5.3.3.3**

The FCH burst transmitted at the specified rate can contain nothing over the DL Frame prefix

Suggested Remedy

Delete "MAP,UCD,DCD (optional)" part from Fig. 213

Delete the sentence below:

"The FCH Burst may contain DL-MAP, UL-MAP, DL-UL-MAP, UCD and DCD messages.

Delete the sentence

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0538**Comment submitted by: **Shawn****Taylor****2002/01/04**Comment Type **Technical, Satisfied (was**Starting Page # **169**Starting Line # **55**

Section

FCH burst is sent using QPSK. This is not desirable if the data is being sent using BPSK as could currently be the case for unlicensed operation.

Suggested Remedy

Send the FCH burst using BPSK.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0539**

Comment submitted by: Lars

Lindh

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **169** Starting Line # **56** Section **8.3.5.3.3.3**

The concept of well-known modulation/coding is not sufficient to define a transmitted symbol.

Suggested Remedy

Use the concept of well-known burst profile which includes the modulation/coding as well as the length of the cyclic prefix

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Use the concept of well-known burst profile which includes the modulation/coding as well as the length of the cyclic prefix

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done

changed Rate_ID table to include CP.

Editor's Questions and Concerns

Delete 64-QAM from Rate_ID, since it doesn't fit into 4 bits anymore. Another option would be to change Rate_ID to 5 bits and burst duration to 11 bits to fit this. 12 bits by far exceeds the allowed frame durations anyway.

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0540**Comment submitted by: **Gordon****Antonello**

2002/01/04

Comment Type **Editorial** Starting Page # **169** Starting Line # **63** Section **8.3.5.3.3.3**

Incorrect character

Suggested Remedy

Change line 63 from

"Figure 214vdescribes the structure of DL Frame Prefix:."

To

"Figure 214 describes the structure of the Down Link Frame Prefix:."

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0541**Comment submitted by: **Avraham****Freedman**

2002/01/03

Comment Type **Editorial** Starting Page # **169** Starting Line # **63** Section **8.3.5.3.3.3**

A redundant "v" in "Figure 214vdescribes"

Suggested Remedy

Remove the "v"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/04

Comment # **0542**Comment submitted by: **Lei****Wang**Comment Type **Editorial**
typo.Starting Page # **169**Starting Line # **63**

Section

Suggested Remedy

change "Figure 214vdescribes" to "Figure 214 describes".

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/04

Comment # **0543**Comment submitted by: **Ronald****Murias**Comment Type **Technical, Non-binding**
table missing componentsStarting Page # **170**Starting Line # **26**

Section

Suggested Remedy

Fill in table.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

add this table to table 205 and 206

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **e) editor disagrees**

Though this was my own suggestion, the addition of the CPs to this table makes combining the tables difficult. Did however delete the RS code column to reduce redundancy.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0544**Comment submitted by: **Gordon****Antonello**

2002/01/04

Comment	Type Editorial	Starting Page # 171	Starting Line # 53	Section 8.3.5.3.3.4.2
---------	-----------------------	----------------------------	---------------------------	------------------------------

Incorrect text.

Suggested Remedy

Change line 53 from:

"Indicates the start time in units of symbol duration, elative to the . . . "

to:

"Indicates the start time in mini-slots, relative to the . . ."

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions l) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0545**Comment submitted by: **Avraham****Freedman**

2002/01/03

Comment	Type Editorial	Starting Page # 171	Starting Line # 53	Section 8.3.5.3.3.4.2
---------	-----------------------	----------------------------	---------------------------	------------------------------

Typo

Suggested Remedy

Change "elative" to "relative"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0546**

Comment submitted by: Vladimir

Yanover

2002/01/04

Comment Type **Editorial**
EditorialStarting Page # **171**Starting Line # **54**Section **8.3.5.3.3.4.1**Suggested Remedy
replace"where the DL-MAP message is transmitted"
with
" the UL-MAP message is transmitted."

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0547**

Comment submitted by: David

Husson

2002/01/04

Comment Type **Technical, Non-binding**Starting Page # **172**

Starting Line #

Section

In Table 201, the values 0 - 16 will not fit into 4 bits.

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **l) none needed**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0548**

Comment submitted by: **Itzik**

Kitroser

2002/01/04

Comment Type **Technical, Non-binding**

Starting Page # **172**

Starting Line # **2**

Section **8.3.5.3.3.4.4**

Invalid value for the field.

Suggested Remedy

Remove DIUC value # 16

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0549**

Comment submitted by: Lei

Wang

2002/01/04

Comment Type **Technical, Satisfied (was**
DIUC=16 is not valid.Starting Page # **172**Starting Line # **46**Section **Table 201****Suggested Remedy**

1. change DIUC=0 from reserved to broadcast.
2. remove the entry of DIUC=16.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

remove the entry of DIUC=16.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0550**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type **Technical, Satisfied (was**Starting Page # **172**Starting Line # **60**Section **8.3.5.3.3.4.4**

With the four bits allocated to DIUC, only the numbers 0-15 can be represented

Suggested Remedy

Move entry number 16 (Broadcast) to entry number 0 in table 201

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Rejected-Duplicate****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0551**

Comment submitted by: Lei

Wang

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **173** Starting Line # **6** Section **Table 202**
should we define an UIUC for the contention slot for initial registration and an UIUC for bw request ?

Suggested Remedy

change the usage of UIUC=0 to "contention interval".

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

UIUC = 0 "Reserved"

UIUC = 1 "bandwidth region"

UIUC = 2 "initial ranging"

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0552**

Comment submitted by: Vladimir

Yanover

2002/01/04

Comment Type **Technical, Non-binding**Starting Page # **173**Starting Line # **8**Section **8.3.5.3.4.5**

There is a need for Initial Maintenance, Reservation Requests regions.

Suggested Remedy

In the table 202:

replace "rC" with "Initial Maintenance"

Add a line for UIUC = 1 : REQ region

Change range of UIUCs 1-12 to 2-12 for "Burst Profiles"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0553**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type **Editorial** Starting Page # **173** Starting Line # **11** Section **8.3.5.3.3.4.5**
Typo

Suggested Remedy

Change the text for entry number 0 in table 202 to 'Reserved'

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0554**

Comment submitted by: Joseph

Hakim

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **173** Starting Line # **59** Section **8.3.5.3.3.5**

256 subcarriers as mandatory in the 1.5MHz ETSI channels (and other narrow channelizations) results in a subcarrier spacing of 6.836KHz. This narrow subcarrier spacing will make frequency acquisition more difficult and will require tighter phase noise performance for the system.

Suggested Remedy

The standard should allow more flexibility in choosing number of subcarriers in narrower channels (eg 64 subcarriers) as an option.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0555**

Comment submitted by: Jerome

Krinock

2002/01/05

Comment Type **Editorial**

Starting Page # **173**

Starting Line # **63**

Section **8.3.5.3.3.5**

I'm not quite sure how the subcarriers are indexed.

Suggested Remedy

Add text or a figure showing:

28 subcarriers, -128 through -101 are lower guard

100 subcarriers, -100 through -1 are data or pilot

1 subcarrier, 0 is the DC, not used

100 subcarriers, 1 through 100 are data or pilot

27 subcarriers, 101 through 127 are upper guard

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

add -128 through -101 and 101 through 127 in table

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0556**

Comment submitted by: Ronald

Murias

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **174** Starting Line # **40** Section

Diagram is confusing. Doesn't the LSB of the slot offset coincide with the LSB of the vector?

Suggested Remedy

Reverse the numerical order of the bit definitions so that bit 0 of the slot offset coincides with LSB.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0557**

Comment submitted by: Shawn

Taylor

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **175** Starting Line # **7** Section

The best overall coding rate is 3/4. This is too much overhead. Lower rates should be available.

Suggested Remedy

Rates up to 15/16 should be available. The how needs to be discussed.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Rejected**

a rate around .9 should be added for 16-QAM

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0558**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type **Technical, Satisfied (was**
Harmonize interleaversStarting Page # **175**Starting Line # **54**Section **8.3.5.3.3.6.3**

Suggested Remedy

Replace clause with 8.3.5.4.4.5.4

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Modified**
replace 8.3.5.2.2.3 with 8.3.5.5.4.3

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0559**

Comment submitted by: Ronald

Murias

2002/01/04

Comment Type **Technical, Non-binding**
'X' not defined in text.Starting Page # **177**Starting Line # **60**

Section

Suggested Remedy

Define 'X' in text.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **l) none needed**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0560**

Comment submitted by: Lei

Wang

2002/01/04

Comment	Type	Technical, Satisfied (was	Starting Page #	177	Starting Line #	6	Section
---------	------	---------------------------	-----------------	-----	-----------------	---	---------

There are two types of ranging:

- . initial ranging: happens only for new SS, uses contention slot.
- . maintainace ranging: periodical ranging message exchange between BS and SS, use regular UL burst.

Only the initial ranging needs a PHY support with a long preamble, while the regular ranging is a pure MAC job.

Suggested Remedy

1. remove Figure 217.
2. replace the paragraph on line 6, page 177, by the following text:

There are two types of ranging processes, initial ranging and regular ranging. The initial ranging is used by a new SS to join the system. It uses the initial ranging contention-based interval, which requires a long preamble. The regular ranging uses the regular UL burst. It is a pure MAC activity.

Proposed Resolution	Recommendation:	Recommendation by
----------------------------	------------------------	--------------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Accepted-Modified
----------------------------	---

1. remove Figure 217.
2. replace the paragraph on line 6, page 177, by the following text:

There are two types of ranging processes, initial ranging and maintenance ranging. The initial ranging is used by a new SS to join the system. It uses the initial ranging contention-based interval, which requires a long preamble. The maintenance ranging uses the regular UL burst.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes	Editor's Actions k) done
-----------------------	---------------------------------

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0561**

Comment submitted by: Jerome

Krinock

2002/01/05

Comment Type [Technical, Satisfied \(was](#) Starting Page # [177](#) Starting Line # [36](#) Section [8.3.5.3.3.7.2](#)

This "slotted ALOHA" bandwidth requesting method is not very efficient for OFDM.

Suggested Remedy

[see contribution C802.16a-02/12](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

[incorporate text from C802.16a-02/20](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0562**

Comment submitted by: Manoneet

Singh

2002/01/04

Comment Type [Technical, Satisfied \(was](#) Starting Page # [177](#) Starting Line # [36](#) Section [8.3.5.3.3.7.2](#)

Section is not clear enough to form the basis for an unambiguous implementation.
Method alluded to in current description has significant technical short-comings as well.

Suggested Remedy

[See contributions by Krinock et al. on this subject \(from Denver, Austin and Levy meetings\)](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [l\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0563**Comment submitted by: **Avraham****Freedman**

2002/01/03

Comment Type **Technical, Non-binding** Starting Page # **177** Starting Line # **49** Section **8.3.5.3.3.7.3**
The clause is empty

Suggested Remedy

Add text or delete the clause

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

delete the clause

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0564**Comment submitted by: **David****Husson**

2002/01/04

Comment Type **Editorial** Starting Page # **177** Starting Line # **50** Section **8.3.5.3.3.7.3**
Power control is empty

Suggested Remedy

Fill it in or remove it

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0565**

Comment submitted by: Lei

Wang

2002/01/04

Comment	Type	Technical, Satisfied (was	Starting Page #	177	Starting Line #	52	Section
---------	------	---------------------------	-----------------	-----	-----------------	----	---------

two subsections for "Frame Structure":

8.3.5.3.3.1

8.3.5.3.3.8

Suggested Remedy

combine these two "Frame Structure" sub-sections, use the text as suggested in the contribution ??? (A separate contribution will be submitted.)

Proposed Resolution	Recommendation:	Recommendation by
----------------------------	------------------------	--------------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Accepted-Modified
----------------------------	--

delete clause 8.3.5.3.3.8

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes	Editor's Actions k) done
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Editor's Questions and Concerns**Editor's Action Items**Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0566**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment	Type	Technical, Satisfied (was	Starting Page #	177	Starting Line #	58	Section	8.3.5.3.3.8.1
---------	------	---------------------------	-----------------	-----	-----------------	----	---------	---------------

There isn't a 'short' and 'long' uplink preamble in the context of a normal uplink transmission, and there is no need to repeat the preamble.

Suggested Remedy

Remove the words "while the short preamble is repeated every X data symbols transmission."

Proposed Resolution	Recommendation:	Recommendation by
----------------------------	------------------------	--------------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Accepted
----------------------------	---

Remove the words "while the short preamble is repeated every X data symbols transmission."

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes	Editor's Actions l) none needed
-----------------------	--

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0567**Comment submitted by: [Ronald](#)[Murias](#)[2002/01/04](#)

Comment	Type Technical, Satisfied (was	Starting Page # 178	Starting Line # 5	Section
---------	--	-------------------------------------	-----------------------------------	---------

[Preamble defined does not correspond to the current scheme recommended by the preamble ad hoc group.](#)

Suggested Remedy

[Modify preamble definition to match preamble ad hoc group recommendations.](#)

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Superceded
---------------------	--------------------------------------

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes	Editor's Actions) none needed
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Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0568**Comment submitted by: [Yigal](#)[Leiba](#)[2002/01/02](#)

Comment	Type Editorial	Starting Page # 178	Starting Line # 20	Section 8.3.5.3.3.8.2
---------	--------------------------------	-------------------------------------	------------------------------------	---------------------------------------

[There is nothing 'two-dimensional' about the transmission mapping shown in figure 219](#)

Suggested Remedy

[Remove the words 'two-dimensional'](#)

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Superceded
---------------------	--------------------------------------

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes	Editor's Actions) none needed
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Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0569**

Comment submitted by: Shawn

Taylor

2002/01/04

Comment Type **Editorial** Starting Page # **178** Starting Line # **20** Section

"every color represents a"

General comment: We shouldn't use color as a descriptor in our document. It loses something in a black and white print out.

Suggested Remedy

Remove color references. Make figures descriptive without the use of color.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0570**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Technical, Non-binding** Starting Page # **178** Starting Line # **42** Section **8.3.5.3.3.9**

Does this preamble apply also to the 512 mode? If so, we have to make a note of it. If not, it is necessary to define it. What are the samples used for the preamble?

Suggested Remedy

Add:

In the 512 carrier mode, the preamble will consist of 4 times 128 samples preceded by a cyclic prefix

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0571**

Comment submitted by: Amir

Sarajedini

2002/01/04

Comment Type **Technical, Non-binding**Starting Page # **178**Starting Line # **43**Section **8.3.5.3.3.9**

licensed bands do not contain downlink preambles.

Suggested Remedy

Insert at: Page 178, Line 43

Section 8.3.5.3.3.9 Preamble Structure

For OFDM Licensed bands, the TDD and FDD downlink preamble structure should be

CP+4*64+CP+2*128

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0572**

Comment submitted by: Shawn

Taylor

2002/01/04

Comment	Type	Starting Page #	Starting Line #	Section
---------	------	-----------------	-----------------	---------

Technical, Satisfied (was

178

44

The OFDM preambles should be defined as below.

Suggested RemedyThe preamble for the Downlink frame would be $CP+(4*64)+CP+(2*128)$.The preamble for the network entry bursts (registration) would also be $CP+(4*64)+CP+(2*128)$.All other preambles would be $CP+(2*128)$.

This would be a common preamble design for both licensed and unlicensed operation.

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for Recommendation

Resolution of Group	Decision of Group:
---------------------	--------------------

Accepted-Modified

The preamble for the network entry bursts (registration) would also be $CP+(4*64)+CP+(2*128)$

This would be a common preamble design for both licensed and unlicensed operation.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes	Editor's Actions
----------------	------------------

k) done

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0573**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **178** Starting Line # **55** Section **8.3.5.3.3.9**

The overhead of one additional symbol per frame, as well as the relatively rare case of system entry, is negligible compared to the assured robustness the extra symbol provides. Making any piece of the preamble optional makes no sense whatsoever.

Suggested Remedy

Insert:

The first preamble in the downlink frame, as well the network entry preamble, consists of a CP followed by 4 times 64 samples followed by a CP and 2 times 128 samples. If the downlink uses multiple bursts, the preambles on subsequent bursts shall be short.

 | CP | 64 | 64 | 64 | 64 | CP | 128 | 128 |

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: [4b](#)

Comment Date

Comment # [0574](#)Comment submitted by: [Avraham](#)[Freedman](#)[2002/01/03](#)Comment Type [Technical, Non-binding](#)Starting Page # [178](#)Starting Line # [59](#)Section [8.3.5.3.3.10](#)

The terms "short preamble" and "long preamble" are not defined to this point. It seems that this clause is not synchronized with 8.3.5.2.2

Suggested Remedy

Either delete this section or expand it. Explain what is the meaning of a short and long preambles, and elaborate on the pilot insertion mentioned in 8.3.5.2.2

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group:** [Accepted-Modified](#)[reference back to preambles on same page to clarify](#)**Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** [k\) done](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0575**

Comment submitted by: Yossi

Segal

2002/01/06

Comment Type **Technical, Non-binding**Starting Page # **178**Starting Line # **59**Section **8.3.5.3.3.10**

change paragraph to:

Transmission of preamble when using the OFDM STC mode shall start with transmitting the 4*64 preamble from both antennas (antenna 0 using even carriers starting from carrier 0, and antenna 1 using even carriers starting from carrier 2), which could be used for coarse synchronization. This will be followed by transmission of the 2*128 preamble from both (antenna 0 using even carriers, and antenna 1 odd carriers), this allows fine synchronization and MISO channel estimation.

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0576**Comment submitted by: **Apurva****Mody**

2002/01/05

Comment Type **Technical, Non-binding** Starting Page # **178** Starting Line # **62** Section **8.3.5.3.3.10**

The preamble for Alamouti (STC) scheme must be similar to the data mode that is

Antenna 1 - [s1 -s1*]

Antenna 2 - [s1 s1*]

in order to simplify the implementation of the system.

Suggested Remedy**Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: **Superceded******Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/04

Comment # **0577**Comment submitted by: **Shawn**

Taylor

Comment Type **Technical, Satisfied (was** Starting Page # **178** Starting Line # **62** Section

Alamouti may be optional but the preamble used with alamouti should be fixed. Two options are currently shown.

Suggested Remedy

Pick one.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Replace current Alamouti preamble text with:

The following is the alamouti preamble

 $(CP+4X64)+(CP+2X128)+(CP+2X128)$

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0578**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial**Starting Page # **181**Starting Line # **33**Section **8.3.5.3.4.1.1**

The term "Region" needs further clarification

Suggested Remedy

Add:

"(of sub-channels and OFDM symbols)"
after the word "Region"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

A grouping of contiguous subchannels in contiguous OFDMA symbols, such as the 4x3 rectangle shown in Fig. 221, is defined as a *data region*.

Change all subsequent instances of "region" in this context to be "data region".

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0579**Comment submitted by: **Avraham****Freedman**

2002/01/03

Comment Type **Editorial**Starting Page # **181**Starting Line # **40**Section **8.3.5.3.4.1.2**

Clause 6.2.7.10.1.2 does not exist

Suggested Remedy

delete "(see 6.2.7.10.1.2)"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**Change (see 6.2.7.10.1.2)
to (see 8.3.5.3.4.1.1)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

I changed the reference as resolved by the group. However, I feel that this is silly since the 6-decimal point reference is in fact the very preceding clause. I think the original suggested remedy, to simply delete the reference, was much better, and shall submit a comment next time to this effect.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0580**

Comment submitted by: Vladimir

Yanover

2002/01/04

Comment Type **Technical, Non-binding**Starting Page # **181**Starting Line # **44**Section **8.3.5.3.4.1.2**

The suggested remedy would allow decrease THREE TIMES a buffer size needed for data accumulation at the modem before transfer to the FEC unit thus simplifying implementation of 802.16 compliant devices.

There were no information published in 802.16 that would explain any advantage for having here 3 instead of 1.

Suggested Remedy

Change

"Each FEC block spans one OFDMA sub-channel in the sub-channel axis and three OFDMA symbols in the time axis "

to

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0581**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial**

Starting Page # **181**

Starting Line # **45**

Section **8.3.5.3.4.1.2**

Figure 153 does not show that a FEC block takes 3 OFDM symbol.

Suggested Remedy

Correct the figure number

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Change (see figure 153)

to

(see figure 222)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0582**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type **Editorial** Starting Page # **182** Starting Line # **4** Section **8.3.5.3.4.1.2**

Figure 222 did not convert well from Word format to Frame-Maker format

Suggested Remedy

Re-insert figure 222 from document IEEE 802.16.abc-01/49r0. (If the conversion problem persists, the figure can be provided in Frame-MAker format).

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Modified**

change figure to C80216a-02/13, figure 222

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns**Editor's Action Items**Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0583**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial** Starting Page # **182** Starting Line # **36** Section **8.3.5.3.4.1.2**

In fig. 122, shouldn't the "y-axis" be OFDMA subchannel Index and not "subcarrier index ?

Suggested Remedy

Change "sub carriers" to "Sub-channels".

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes Editor's Actions e) editor disagrees

The new figure provided in the resolution of comment 582 does not correct the error noted in comment 583. Therefore, this comment is not superceded. I therefore implemented this comment 583 as an editorial change to the new Figure 218.

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0584**

Comment submitted by: Lars

Lindh

2002/01/04

Comment Type Technical, Satisfied (was Starting Page # 211 Starting Line # 45 Section 8.3.5.3.4.2)

Two ways of transmitting the frame control information are proposed. In the PHY section there is no explanation of how the receiver knows which one is intended but by reading table 147 in the MAC section one can try to guess what is actually suggested.

The DL_MAP_prefix is inserted before the DL_MAP in order define the position of the map and modulation/coding used for the DL_MAP message. Because the DL_MAP_prefix comes in the same sub channel as the DL_MAP it will also itself use that same coding and modulation. The DL_MAP_prefix will also, at least partly, use the same FEC block.

Suggested Remedy

There shall be only one possibility to transmit the frame control information with a well-known modulation/coding method.

The proposal is to delete option 2 in 8.3.5.3.4.2 and to always send the control information with the well-known modulation/coding method QPSK(32,24,4). Also delete the DL_MAP_prefix from the control portion as it will not be needed.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

change Figure 223 - OFDMA DL MAP and UL MAP location example

change Figure 224 - OFDMA DL MAP and UL MAP location example

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes**

Editor's Actions k) done

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0585**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment	Type	Technical, Non-binding	Starting Page #	183	Starting Line #	7	Section	8.3.5.3.4.2
---------	------	------------------------	-----------------	-----	-----------------	---	---------	-------------

In figures 223-224, the "y-axis" should be "sub channels"
The meaning of the {m₁, c₁, p₁} threesome should be explained.
In Figure 224, the fact that the MAP power is boosted is not emphasized

Suggested Remedy

Change "Frequency" to "Sub-channels" in Figures 223 and 224
Add at the titles of the figures: "{m_i, c_i, p_i}" represents the modulation, code and power of PHY burst i"
Add a white rectangle to the burst profile legend with "{m_{map},c_{map},p_{map}} (p_{map}>p_i)"

Proposed Resolution	Recommendation:	Recommendation by
----------------------------	------------------------	--------------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Accepted-Modified
----------------------------	---

Add sentence: Each fill-pattern in Figure 223 and Figure 224 represents a different burst profile.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes	Editor's Actions k) done
-----------------------	---------------------------------

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: 802.16a/D2 [D1<770]

Ballot Number: 4b

Comment Date

Comment # 0586

Comment submitted by: Itzik

Kitroser

2002/01/04

Comment Type Technical, Non-binding

Starting Page # 183

Starting Line # 60

Section 8.3.5.3.4.2

Decouple PHY information from the MAC information.

Suggested Remedy

Replace the text "The frame control information is transmitted at the beginning of each frame.The first burst of the frame control information shall always contain the DL-MAP_prefix field of the DL-MAP."

With

"The frame control information is transmitted at the beginning of each frame. The first FEC block of the DL frame shall contain information about the frame control information and beginning of the DL MAP.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

Replace the text "The frame control information is transmitted at the beginning of each frame.The first burst of the frame control information shall always contain the DL-MAP_prefix field of the DL-MAP."

With

"The frame control information is transmitted at the beginning of each frame. The first FEC block of the DL frame shall contain information about the frame control information and beginning of the DL MAP.

The following figure describes the structure of the first FEC block:

+-----+
| DL Frame Prefix | Beainning of DL MAP Messae |

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0587**

Comment submitted by: Itzik

Kitroser

2002/01/04

Comment Type **Technical, Non-binding**

Starting Page # **184**

Starting Line # **1**

Section **8.3.5.3.4.2.1**

Following the previous comment (removing section 6.2.2.3.2.2), the Synchronization fields should be defined in the PHY specific section.

Suggested Remedy

Add the following section header "8.3.5.3.4.2.1 MAP messages fields and IEs"

Add the following section:

"
8.3.5.3.4.2.1.1 Synchronization Field

The PHY Synchronization Field of the DL-MAP message is structured as follows.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0588**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial** Starting Page # **184** Starting Line # **3** Section **8.3.5.3.4.2.1**
typo

Suggested Remedy

Delete the "the" at the end of the line (in "...the Table 208...")

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Delete the "the" at the end of the line (in "...the Table 208...")

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0589**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type **Editorial** Starting Page # **184** Starting Line # **14** Section **8.3.5.3.4.2.1**
Typo

Suggested Remedy

Change 'DUIC' to 'DIUC'

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change 'DUIC' to 'DIUC'

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0590**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type **Technical, Non-binding**Starting Page # **184**Starting Line # **31**Section **8.3.5.3.4.2.1**

Clarification

Suggested Remedy

Change the sentence to read "The offset of the OFDMA symbol in which the burst starts, measured in OFDMA symbols from the start of the MAC frame."

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change the sentence to read "The offset of the OFDMA symbol in which the burst starts, measured in OFDMA symbols from the start of the MAC frame."

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: 802.16a/D2 [D1<770]

Ballot Number: 4b

Comment Date

Comment # 0591

Comment submitted by: Vladimir

Yanover

2002/01/04

Comment Type Editorial

Starting Page # 184

Starting Line # 53

Section 8.3.5.3.4.2.2.1

Editorial

Suggested Remedy

Replace "Burst Descriptor shall be included" with "Burst Profile shall be specified"

Change OFMDA to OFDMA at the Table 209

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Replace "Burst Descriptor shall be included" with "Burst Profile shall be specified"

Change OFMDA to OFDMA at the Table 209

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0592**

Comment submitted by: Vladimir

Yanover

2002/01/04

Comment	Type	Technical, Non-binding	Starting Page #	186	Starting Line #	18	Section	8.3.5.3.4.2.2.2
---------	------	------------------------	-----------------	-----	-----------------	----	---------	-----------------

The goal is to avoid ambiguity in the decoding of the CDMA_UL_MAP_Information_Element:
distinguish UL_MAP_Information_Element() and CDMA_UL_MAP_Information_Element()
that may appear at arbitrary places in UL-MAP

Suggested Remedy

At the table 209, place UIUC immediately after UL_MAP_Information_Element()

At the Table 210, place UIUC = 14 immediately after CDMA_UL_MAP_Information_Element()

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Rejected****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0593**Comment submitted by: **Itzik****Kitroser**

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **186** Starting Line # **20~** Section **8.3.5.3.4.2.2.2**
In some channels, 7 bits for OFDMA symbol offset is not enough, while for the CDMA_UL-MAP allocation element, 6 bits for number of symbols is enough, so it is possible to move the bit between the fields.

Suggested Remedy

Change size of OFDMA Symbol Offset field to 8 bits

Change size of No. OFDMA Symbols field to 6 bits

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Change size of OFDMA Symbol Offset field to 8 bits

Change size of No. OFDMA Symbols field to 6 bits

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0594**Comment submitted by: **Lei****Wang**

2002/01/04

Comment	Type Editorial	Starting Page # 186	Starting Line # 54	Section
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duplicated paragraph: page 185 line45, page 186 line 54.

Suggested Remedy

remove the paragraph on line 55, page 186.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions **l) none needed**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0595**Comment submitted by: **Yigal****Leiba**

2002/01/02

Comment	Type Editorial	Starting Page # 187	Starting Line # 3	Section 8.3.5.3.4.2.
---------	-----------------------	----------------------------	--------------------------	-----------------------------

Typo

Suggested Remedy

Change 'UL-MAP' to 'DL-MAP'

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Modified**Change 'UL-MAP' to 'DL-MAP'
title of Fig. 211 should be changed to DL-MAP also.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0596**

Comment submitted by: Vladimir

Yanover

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **187** Starting Line # **31** Section **8.3.5.3.4.2.4**

There is a need for "usual" Ranging requests or we need explicitly point in the "Ranging" section that OFDMA does not use the "usual" (TG1) sort of ranging requests.

It was never suggested to restrict reservation and Ranging requests to CDMA type.

Suggested Remedy

In the Table 212 replace "Reserved" with "Initial maintenance"

Allocate UIUC=1 to Resevation requests (REQ region)

Delete "Power Control" (Covered by UIUC=15)

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Delete "Power Control" (Covered by UIUC=15)

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done

I changed UIUC=13 from "Power Control" to "Reserved".

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: 802.16a/D2 [D1<770]

Ballot Number: 4b

Comment Date

2002/01/04

Comment # 0597

Comment submitted by: Lei

Wang

Comment Type Technical, Non-binding

Starting Page # 187

Starting Line # 41

Section

two power control UIUCs:
UIUC=13, and
UIUC=15 and extended UIUC=0x00

Suggested Remedy

pick one of them, or explain why need two.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Superseded

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0598**

Comment submitted by: Hui-Ling

Lou

2002/01/05

Comment	Type	Starting Page #	Starting Line #	Section
	Technical, Non-binding	188	13	8.3.5.3.2.1.2.1

Tail-biting convolutional decoders are very complex to implement compared to conventional Viterbi decoders with continuous decoding using a finite path memory or with blockwise decoding with a known terminating state at the decoder. Since the starting and ending states of a tail-biting convolutional code is unknown at the receiver, the optimum maximum likelihood decoding of tail-biting convolutional codes performs Viterbi decoding for all possible 2^k different starting and ending states and the decoded path with the best metric is chosen. Even though typical iterative tail-biting decoders may require much less than 2^k Viterbi decoding attempts, it is still more complex compared to a conventional Viterbi decoder using a finite path memory (typically around 40 decoding stages for the proposed rate-1/2 64-state convolutional code). After a latency of the finite path memory length, the Viterbi decoder can make a decision without iterations, and the symbols corresponding to the decoded bit can be

Suggested Remedy

Allow convolutional encoder at the transmitter to code over the duration of the data packet burst.
Make tail-biting convolutional code an option.

Proposed Resolution	Recommendation:	Recommendation by
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Reason for Recommendation

Resolution of Group	Decision of Group: Rejected
---------------------	------------------------------------

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes	Editor's Actions	1) none needed
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Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/04

Comment # **0599**

Comment submitted by: Shawn

Taylor

Comment Type **Editorial**Starting Page # **190**Starting Line # **7**

Section

The second sentence on this line should read:

The number of subcarriers, Nsubcarriers, is equal to the number of carriers per subchannel. The number of subchannels, Nsubchannels, is equal to the number of channels in the band.

This also applies to line 60 on page 192.

Suggested Remedy**Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

editor to figure out this mess.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done

I rechecked the formulas and text and verified that the text is correct as written, and after re-reading the whole section and the permutation example, I believe the variable names used are appropriate. The wording of the sentence commented on, however, does indeed leave the casual reader the impression that something is mis-stated. I therefore rewrote this sentence so it looks better. There was a similar sentence in the uplink section. I

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0600**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment	Type	Technical, Non-binding	Starting Page #	192	Starting Line #	40	Section	8.3.5.3.4.3.1
---------	------	------------------------	-----------------	-----	-----------------	----	---------	---------------

Why is there ????? in table 215?
Shouldn't the last constant pilot be 3405 (the last Used Pilot)?

Suggested Remedy

Change "3404?????" to "3405}"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

delete ?????

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

This table is now moved to the OFDMA2 section.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0601**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment	Type	Editorial	Starting Page #	195	Starting Line #	33	Section	8.3.5.3.4.3.3
---------	------	-----------	-----------------	-----	-----------------	----	---------	---------------

The "6" should be deleted

Suggested Remedy

Delete the "6" in the line

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Delete the "6" in the line

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0602**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial**Starting Page # **197**Starting Line # **25**Section **8.3.5.3.4.5.1**

As the senetence states several sub-channels are reserved for ranging

Suggested Remedy

Change "as a ranging channel" to "as ranging channels"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Replace the sentence:

The MAC shall reserve several subchannels as a *ranging channel*.

with the following three sentences:

The MAC shall define a single *ranging channel*. This single *ranging channel* is composed of one or more subchannels. The indices of the subchannels which compose the *ranging channel* are specified in the DL-MAP message.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0603**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial** Starting Page # **198** Starting Line # **6** Section **8.3.5.3.4.5.1.2**

A reference to the "six available OFDM symbols" is needed.

Suggested Remedy

[Add a reference](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

[Yossi to provide clarifying text](#)

Editor's Notes

Editor's Actions [h\) defer to next round](#)

I emailed Yossi on Tuesday. He replied that he has not done this yet, and will therefore submit his input to Nico. /Ken Did not receive material from Yossi and forgot to check this before releasing the draft.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0604**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial** Starting Page # **198** Starting Line # **51** Section **8.3.5.3.4.5.1.3**

The word "long" is not necessary

Suggested Remedy

[Delete "long"](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**[Delete "long"](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0605**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type **Technical, Non-binding**

Starting Page # **198**

Starting Line # **52**

Section **8.3.5.3.4.5.1.3**

Clarification of the algorithm for producing the ranging codes

Suggested Remedy

Delete lines 49 to 52 and insert the following text:

"Clocking the PRBS (where each clock produces one output bit) produces the ranging codes. The length of a ranging code is 106 bits. The first ranging code is produced by taking the output of the first to 106th clock of the PRBS (i.e. the first ranging code will start with the following bits: 011110000011111...). The next ranging code is produced by taking the output of the 107th to 121th clock of the PRBS, etc."

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

Add the following paragraph at pg 198 line 53:

For example, if the BS has defined the ranging channel to be the default two subchannels, the first 106-bit code obtained by clocking the PN generator as specified, the first code will be:

011110000011111...

The next ranging code is produced by taking the output of the 107th to 212th clock of the PRBS, etc.."

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0606**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type **Technical, Non-binding** Starting Page # **198** Starting Line # **54** Section **8.3.5.3.4.5.1.3**

The fixed assignment of 16 codes has been corrected by a comment in session #15. The replacement text also clarifies the way in which the codes should be generated

Suggested Remedy

Remove lines 54 to 63, and replace with the following text:

"The number of available codes is 48, numbered 0..47. These codes are divided in three usage groups (initial-ranging, maintenance-ranging and bandwidth-requests). The codes are allocated dynamically to the groups by the BS. The default number of codes for each group is two.

- The first N codes produced are for initial-ranging (i.e. clock the PRBS 0 to 106 x N times).
- The next M codes produced are for maintenance-ranging (i.e. clock the PRBS 106 x (N + 1) to 106 x (N + M) times).
- The next L codes produced are for bandwidth-requests (i.e. clock the PRBS 106 x (N + M + 1) to 106 x (N + M + L) times)."

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Remove lines 54 to 63, and replace with the following text:

"The number of available codes is 48, numbered 0..47. These codes are divided in three usage groups (initial-ranging, maintenance-ranging and bandwidth-requests). The codes are allocated dynamically to the groups by the BS. The default number of codes for each group is two.

- The first N codes produced are for initial-ranging (i.e. for the default case, clock the PRBS 0 to 106 x N times).
- The next M codes produced are for maintenance-ranging (i.e. for the default case, clock the PRBS 106 x (N + 1) to 106 x (N + M) times).
- The next L codes produced are for bandwidth-requests (i.e. for the default case, clock the PRBS 106 x (N + M + 1) to 106 x (N + M + L) times)."

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0607**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Technical, Non-binding** Starting Page # **198** Starting Line # **63** Section **8.3.5.3.4.5.1.3**

It is not clear what the default number of codes is used for. Is that the default per BS, per SS?

Suggested Remedy

Clarify

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions l) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0608**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial** Starting Page # **199** Starting Line # **16** Section **8.3.5.3.4.5.1.4**

The usage of the word "depicts" is not clear

Suggested Remedy

Change "depicts" to "is"

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

Change "depicts" to "is"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0609**Comment submitted by: [Avraham](#)[Freedman](#)

2002/01/03

Comment Type [Technical, Non-binding](#) Starting Page # **199** Starting Line # **19** Section **8.3.5.3.4.5.2**
[No content in this clause](#)

Suggested Remedy
[Add some content](#)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Modified**
[delete clause](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0610**Comment submitted by: [David](#)[Husson](#)

2002/01/04

Comment Type [Editorial](#) Starting Page # **199** Starting Line # **20** Section **8.3.5.3.4.5.2**
[Power control section is empty](#)

Suggested Remedy
[Fill it in or remove it](#)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [l\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0611**Comment submitted by: [Shawn](#)[Taylor](#)[2002/01/04](#)

Comment	Type	Starting Page #	Starting Line #	Section
---------	------	-----------------	-----------------	---------

[Editorial](#)[200](#)[1](#)

[Drawing should have same number of frequency blocks for both basic and extended allocations to avoid ambiguity.](#)

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**[use figure 231 from C80216a-02/13](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)[changed the figure's numbering format from fixed 231 to automatic <n+>](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0612**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Technical, Non-binding** Starting Page # **200** Starting Line # **32** Section **8.3.5.3.5**

The reader (especially readers with no 802.16 background) are left puzzled by that section. Is that all it takes to implement mode CL and enjoy the advantages of AAS? Why can't one use the other modes (AL, BL) for that?

Suggested Remedy

[Elaborate](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

[superseded by 1116](#)

Group's Notes

Group's Action Items

[deferred to AAS adhoc](#)

Editor's Notes

Editor's Actions [h\) defer to next round](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

2002/01/04

Comment # **0613**

Comment submitted by: **Shawn**

Taylor

Comment Type **Editorial**

Starting Page # **200**

Starting Line # **51**

Section

This paragraph is of a marketing nature.

Suggested Remedy

remove the paragraph

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

remove the paragraph

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0614**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial**Starting Page # **203**Starting Line # **7**Section **8.3.5.4.1**

A reference to section 8.3.2 - Targeted frequency bands is in order here

Suggested Remedy

Change

"The PHY specified in this clause is intended for license exempt operation in the 2 to 11 GHz band in general, and the 5 GHz band in specific."

to

The PHY specified in this clause is intended for license exempt operation in the 2 to 11 GHz band in general, and the 5 GHz band in particular (see section 8.3.2)."

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group**Decision of Group: **Accepted**

Change

"The PHY specified in this clause is intended for license exempt operation in the 2 to 11 GHz band in general, and the 5 GHz band in specific."

to

The PHY specified in this clause is intended for license exempt operation in the 2 to 11 GHz band in general, and the 5 GHz band in particular (see section 8.3.2)."

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes**

Editor's Actions l) none needed

This clause will be integrated with the licensed part, this introduction vanishes.

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0615**Comment submitted by: **Gordon****Antonello**

2002/01/04

Comment Type **Editorial**Starting Page # **203**Starting Line # **8**Section **8.3.5.4.1**

spelling/grammer

Suggested Remedy1) Change sentence fragment starting on line 8 page 203
from:

". . . narrow channels) to sparse populated areas . . ."

To:

". . . narrow channels) to sparsely populated areas . . ."

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**1) Change sentence fragment starting on line 8 page 203
from:

". . . narrow channels) to sparse populated areas . . ."

To:

". . . narrow channels) to sparsely populated areas . . ."

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** 1) none needed

This clause will be integrated with the licensed part, this introduction vanishes.

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0616**

Comment submitted by: Yossi

Segal

2002/01/06

Comment Type **Technical, Non-binding** Starting Page # **203** Starting Line # **35** Section **8.3.5.4.1**

Change lines 35 to 37 to read

"In order for a system to comply with this standard, it shall implement either mode AE or mode BE or mode CE . A compliant device shall be capable of facilitating devices using either mode AE or mode BE or mode CE , but need not be capable of facilitating more than one mode in the same configuration."

Suggested Remedy**Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Rejected**

Change lines 35 to 37 to read

"In order for a system to comply with this standard, it shall implement either WirelessHUMAN-OFDM or WirelessHUMAN-OFDMA ."
vote: 17 in favor, 10 against -> fails

Reason for Group's Decision/Resolution

(Note: WirelessHUMAN-OFDMA is 2K OFDMA (former C_E), WirelessHUMAN-OFDM is 256 FFT)

Group's Notes**Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: [4b](#)

Comment Date

Comment # [0617](#)Comment submitted by: [Avraham](#)[Freedman](#)

2002/01/03

Comment Type [Technical, Non-binding](#) Starting Page # [203](#) Starting Line # [36](#) Section [8.3.5.4.1](#)

The sentence "A compliant device shall be capable of facilitating devices using either mode A_E or mode B_E , but need not be capable of facilitating both modes in the same configuration" is unclear. What is the meaning of "facilitating" in that context? Is the meaning that the device mode is determined during initial installation? Through a provisioning process? During initialization?

Suggested Remedy

[Clarify](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: [Superseded](#)

Reason for Group's Decision/Resolution

[superseded by decision to remove FFT-64](#)

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [1\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: [4b](#)

Comment Date

Comment # [0618](#)Comment submitted by: [Avraham](#)[Freedman](#)

2002/01/03

Comment Type [Technical, Non-binding](#) Starting Page # [203](#) Starting Line # [43](#) Section [8.3.5.4.4.2](#)

The factor is still to be discussed

Suggested Remedy

[Discuss and add the factor](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: [Superseded](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [1\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0619**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type **Editorial**Starting Page # **203**Starting Line # **43**Section **8.3.5.4.2**

There is nothing PHY-specific in this section except the sentebce saying that it should be used for unlicensed frequency band

Suggested Remedy

Move the entire DFS section to the MAC portion of the document

Proposed Resolution**Recommendation:****Recommendation by**

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

integrate 8.3.5.4.2 into 6.2.11.3

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0620**

Comment submitted by: Gordon

Antonello

2002/01/04

Comment Type **Technical, Satisfied (was**Starting Page # **203**Starting Line # **48**Section **8.3.5.4.1**

Network topologies other than Point -to-Point, Point-to-Multi-Point , and Mesh may be used in the deployment of broadband wireless systems.

Suggested Remedy

Add reference to Any-Point-to-Multi-Point at lines 48-50 on page 203.

" The process requires monitoring by the SS an assignment of channels by the upper processing layers of the BS. (Comment: in Mesh or Any-Point-to-Multi-Point and Directional Antenna Systems the DFS shall assign the best quality channels.)"

Proposed Resolution**Recommendation:****Recommendation by**

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

delete bracketed piece from text

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0621**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Technical, Non-binding** Starting Page # **204** Starting Line # **1** Section **8.3.5.4.2.1**

Shouldn't there be a loop in Figure 233, after selecting another channel and then again - primary user detection?

Suggested Remedy

Add an arrow between the "Select other channel" to "Channel number"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Add an arrow between the "Select other channel" to "Channel number"

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0622**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial** Starting Page # **204** Starting Line # **29** Section **8.3.5.4.2.2**

It is not clear which architectures are referred to.

Suggested RemedyAdd, after the word "architectures"
(see appendix B.2)**Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Delete up to "each"

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0623**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type **Technical, Non-binding**Starting Page # **204**Starting Line # **29**Section **8.3.5.4.2.2**

The term 'directive antenna system architecture' is not clear

Suggested Remedy

[Clarify](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**[replace "directive antenna system" with "AAS"](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [l\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0624**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial**Starting Page # **204**Starting Line # **45**Section **8.3.5.4.2.4**[What is the ref 1 mentioned here?](#)

Suggested Remedy

[Provide the correct reference](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**[delete this sentence](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0625**Comment submitted by: **Avraham****Freedman**

2002/01/03

Comment Type **Editorial**Starting Page # **204**Starting Line # **61**Section **8.3.5.4.2.4****What is PMD?****Suggested Remedy****Add the full text for PMD and an abbreviation in the abbreviation list****Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified****replace PMD with "power measurement device"****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** **k) done****Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0626**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial**Starting Page # **205**Starting Line # **3**Section **8.3.5.4.3**

The term DRFM appears only in the section 6.2.2.3 (MAC management formats) and now it turns out it "forms the basis to co-existence". It doesn't have even an abbreviation to explain what it is to those that are not particularly MAC enthusiasts.

Suggested Remedy

Add

DRFM (Dynamic Radio Frequency Management), to be specified hereunder,"

Add an abbreviation in the abbreviation list (section 4)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0627**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial**Starting Page # **205**Starting Line # **39**Section **8.3.5.4.3.2**

There is no clause 2.11.2. Actually there is no clause describing Scanning and Synhronization

Suggested Remedy

Refer to the right clause

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0628**

Comment submitted by: Tal

Kaitz

2002/01/04

Comment Type **Technical, Satisfied (was**Starting Page # **205**Starting Line # **45**Section **8.3.5.4.4**

There is no defition of uplink preamble.

Suggested Remedy

Add a uplink preamble definition.

The preamble waveform is an OFDM symbol generated with the same FFT size. It is BPSK modulated with a known/fixed pattern. The preamble may be used for fine carrier off-set recovery, symbol timing recovery and equalization.

For 64 point FFT mode, the preamble is generated by using the S_{-32...31} sequence, given below, and cyclically extending the symbol so that the overall length is 2 times the nominal length of a data symbol.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

delete clause 8.3.5.4.4.2

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)

Ballot Number: **4b**

Comment Date

[2002/01/04](#)

Comment # **0629**

Comment submitted by: [Ronald](#)

[Murias](#)

Comment Type [Technical, Non-binding](#)

Starting Page # [205](#)

Starting Line # [50](#)

Section

Fractions of Ts are used here, but in 8.3.5.1.4 the CP is referenced to Tb.

Suggested Remedy

[Change Ts to Tb](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

[Change Ts to Tb](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0630**

Comment submitted by: Gordon

Antonello

2002/01/04

Comment Type Technical, Satisfied (was Starting Page # 205 Starting Line # 57 Section 8.3.5.4.4.1
Network topologies other than Point -to-Point, Point-to-Multi-Point , and Mesh may be used in the deployment of broadband wireless systems.

Suggested Remedy

1) Paragraph starting at line 57 on page 205 to be changed to read:

"In addition to the PMP frame structure in clause 8.3.5.2.1, an optional frame structure (see figure 234) is defined to facilitate Mesh and Any-Point-to-Multi-Point networks."

2) Caption at starting at line 9 on page 206 to be changed to read:

"Figure 234 - Mesh and Any-Point-to-Multi-Point Frame Structure (optional)"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group:** **Withdrawn****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0631**

Comment submitted by: Tom

Kolze

2002/01/04

Comment Type **Technical, Satisfied (was TBDs and question marks must be eliminated**

Starting Page # **206**

Starting Line # **16**

Section **8.3.5.4.4.2**

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Reason for Group's Decision/Resolution

4a: The text referred to has been entirely deleted, effectively also removing all TBD's

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0632**

Comment submitted by: Amir

Sarajedini

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **206** Starting Line # **21** Section **8.3.5.4.4.2**
 new unlicensed band preambles have been proposed in the preamble ad hoc group (see <C802.16a-02/05>)

Suggested Remedy

Delete lines 21-65 on page 206 and delete lines 1-46 on page 207 and replace with the following. Insert the following text under section "8.3.5.4.4.2 Downlink Preambles", Page 206, Line 20

For OFDM unlicensed bands, the TDD downlink preamble should have the following structure

$$CP+4*64+CP+2*128$$

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

[2002/01/04](#)Comment # **0633**Comment submitted by: [Ronald](#)[Murias](#)

Comment	Type	Technical, Satisfied (was	Starting Page #	206	Starting Line #	42	Section
---------	------	---	-----------------	---------------------	-----------------	--------------------	---------

[Preamble defined does not correspond to the current scheme recommended by the preamble ad hoc group.](#)

Suggested Remedy

[Modify preamble definition to match preamble ad hoc group recommendations.](#)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [|\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

[2002/01/03](#)Comment # **0634**Comment submitted by: [Avraham](#)[Freedman](#)

Comment	Type	Technical, Non-binding	Starting Page #	207	Starting Line #	12	Section	8.3.5.4.4.2
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[Missing values in table 221](#)

Suggested Remedy

[Fill in the values](#)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [|\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0635**

Comment submitted by: Tal

Kaitz

2002/01/04

Comment Type **Technical, Satisfied (was**

Starting Page # **207**

Starting Line # **19**

Section **8.3.5.4.4.2**

There is no waveform defintion for downlink preamble for 256 mode

Suggested Remedy

describe the waveform for 256 FFT mode.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0636**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type **Technical, Satisfied (was**
 Usage of PMP defined preambles for mesh mode.

Starting Page # **209**Starting Line # **19**Section **8.3.5.4.4.2****Suggested Remedy**

Replace entire clause with:

8.3.5.4.4.2 Preambles in mesh mode

In mesh mode, the same preambles as defined for the PMP mode in 8.3.5.3.3.9 shall be used.

In mesh mode, bursts sent in the control slots shall start with the long preamble.

In the data slots, the bursts shall by default start with the long preamble as defined in 8.3.5.3.3.9, but neighbors may negotiate to use the short

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group**Decision of Group: **Accepted**

Replace entire clause with:

8.3.5.4.4.2 Preambles in mesh mode

In mesh mode, the same preambles as defined for the PMP mode in 8.3.5.3.3.9 shall be used.

In mesh mode, bursts sent in the control slots shall start with the long preamble.

In the data slots, the bursts shall by default start with the long preamble as defined in 8.3.5.3.3.9, but neighbors may negotiate to use the short preamble by setting the preamble flag in the Neighbor Link Info field (see clause 6.2.2.3.34.3)

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

mesh tutorial in joint session at session #18

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0637**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **209** Starting Line # **30** Section **8.3.5.4.4.3.1**
 Consultation from RA UK (ir2006 v1.0) specifies channels with Fc being 5740+n x 20 MHz and not centrally 5750+ n x 20 MHz as depicted here.
 Pending verification, this should be corrected.

Suggested Remedy

Correct channel allocations for CEPT band C if needed.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0638**

Comment submitted by: Tom

Kolze

2002/01/04

Comment Type **Technical, Binding** Starting Page # **209** Starting Line # **35** Section **8.3.5.4.3.3.4.2**
 TBDs in this section must be eliminated

Suggested Remedy**Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Rejected****Reason for Group's Decision/Resolution**

4a: TBDs are not yet resolved

Group's Notes**Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0639**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type [Technical, Non-binding](#) Starting Page # **209** Starting Line # **40** Section **8.3.5.4.4.3.2**[The spectral mask should apply regardless of the maximum allowed power level](#)**Suggested Remedy**[Change the sentence "The 0 dBr level is the maximum power allowed by the relevant regulatory body." to read "The 0 dBr level is the maximum power level measured in the transmitted spectrum."](#)**Proposed Resolution Recommendation: Recommendation by****Reason for Recommendation****Resolution of Group Decision of Group: [Rejected](#)****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes Editor's Actions** [1\) none needed](#)**Editor's Questions and Concerns****Editor's Action Items**Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0640**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type [Technical, Non-binding](#) Starting Page # **210** Starting Line # **39** Section **8.3.5.4.4.3.2**[Missing TBD's in table 223](#)**Suggested Remedy**[Fill in the missing values in Table 223](#)**Proposed Resolution Recommendation: Recommendation by****Reason for Recommendation****Resolution of Group Decision of Group: [Rejected](#)****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes Editor's Actions** [1\) none needed](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0641**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type [Technical, Non-binding](#) Starting Page # [211](#) Starting Line # [3](#) Section [8.3.5.4.4.4.1](#)

It makes no sense to require systems not to degrade more than TBD dB in the presence of systems like radars. Closeby radars will simply overload the LNA, resulting in total system performance collapse (see for example annex B.2). In these cases, only dynamic channel selection will help.

Suggested Remedy

[Delete clause 8.3.5.4.4.4.1](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**[Delete clause 8.3.5.4.4.4.1](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0642**

Comment submitted by: Tom

Kolze

2002/01/04

Comment Type [Technical, Satisfied \(was](#) Starting Page # [211](#) Starting Line # [7](#) Section [8.3.5.4.4.4.1](#)

[TBD must be eliminated](#)

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Reason for Group's Decision/Resolution

[4a: section deleted entirely, TBDs hence also resolved](#)

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [l\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0643**Comment submitted by: [Avraham](#)[Freedman](#)[2002/01/03](#)Comment Type [Technical, Non-binding](#)Starting Page # **211**Starting Line # **14**Section **8.3.5.4.4.1**[Missing values and entries in table 224](#)

Suggested Remedy

[Fill in the missing values in Table 224](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [|\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0644**Comment submitted by: [Ronald](#)[Murias](#)[2002/01/04](#)Comment Type [Technical, Non-binding](#)Starting Page # **211**Starting Line # **18**

Section

[Table incomplete](#)

Suggested Remedy

[complete table](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [|\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0645**

Comment submitted by: Jori

Arrakoski

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **211** Starting Line # **39** Section **8.3.5.4.4.5.1.1**

BPSK 3/4 very seldomly performs better than the QPSK rate 1/2 coding proposed. Having a lower data throughput it tends to be mode never used.

Suggested Remedy

Remove BPSK rate 3/4 as a mandatory coding scheme.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions l) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0646**

Comment submitted by: Lars

Lindh

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **211** Starting Line # **50** Section **8.3.5.4.4.5.3**

Turbo convolutional coding possesses some very unwanted characteristics like a high error floor and has therefore been considered unsuitable for BWA by sofar all standard organizations.

Suggested Remedy

Delete Turbo Convolutional Coding as an option for OFDM PHY for license-exempt bands

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0647**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type [Technical, Non-binding](#) Starting Page # **211** Starting Line # **50** Section **8.3.5.4.4.5.3**

[Harmonize coding](#)

Suggested Remedy

[Delete clause](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [|\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0648**

Comment submitted by: Shawn

Taylor

2002/01/04

Comment Type [Technical, Satisfied \(was](#) Starting Page # **213** Starting Line # **1** Section

[There is a different interleaver defined for licensed and unlicensed modes. Is this necessary?](#)

Suggested Remedy

[Pick one interleaver for both licensed and unlicensed mode.](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [|\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0649**

Comment submitted by: Yigal

Leiba

2002/01/02

Comment Type **Technical, Non-binding** Starting Page # **214** Starting Line # **18** Section **8.3.5.4.4.6.1**

The text does not provide much information, is partly inaccurate, and is not specific for unlicensed frequency bands

Suggested Remedy

Move section 8.3.5.4.4.6.1 to the MAC portion or remove it entirely

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

delete 8.3.5.4.4.6.1

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0650**

Comment submitted by: Jori

Arrakoski

2002/01/04

Comment Type **Technical, Satisfied (was** Starting Page # **215** Starting Line # **33** Section **8.3.5.4.6.2.1.1**

Concatenated Reed Salomon and Convolutional Coding doesn't gain anything for BPSK compared to convolutional only.

Suggested Remedy

For BPSK 1/2 and 3/4 coding, replace the concatenated RS and CC with CC only as defined for 802.11a.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions l) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/04

Comment # **0651**Comment submitted by: **Ronald****Murias**Comment Type **Technical, Non-binding**Starting Page # **215**Starting Line # **34**

Section

Table incomplete

Suggested Remedy

Complete table.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/02

Comment # **0652**Comment submitted by: **Yigal****Leiba**Comment Type **Technical, Satisfied (was**Starting Page # **216**Starting Line # **4**Section **8.3.5.4.7.1.1**

The efficiency of BPSK is low, and producing a concatenated code that works with it is hard. There is also no good reason to create a difference between licensed and license-exempt bands here.

Suggested Remedy

Remove section 8.3.5.4.7.1.1.1, and add a sentence under section 8.3.5.4.7.1.1 that reads:
"The FEC scheme is defined in table 217."

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0653**Comment submitted by: **Anader****Benyamin-Seeyar**

2002/01/04

Comment Type **Editorial**Starting Page # **217**Starting Line # **1**Section **8.3.5.4.7.1.1**

There are two blank pages 217 and 218 that should be deleted.

Suggested Remedy

Delete two blank pages 217 and 218.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0654**Comment submitted by: **Brian****Eidson**

2002/01/04

Comment Type **Editorial**Starting Page # **219**Starting Line # **12**Section **11.1.1.1**

Modify SC rolloff factor from Table 229 to eliminate 0.35 rolloff entry, since accepted rolloff factors are 0.25 (mandatory), and 0.15 and 0.18 for 802.16a.

Suggested Remedy

See above.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **l) none needed**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0655**

Comment submitted by: Paul

Struhsaker

2002/01/03

Comment Type Technical, Satisfied (was

Starting Page # 219

Starting Line # 12

Section 11.1.1.1

Table 122 of original TG1 802.16 is not fully rendered here

For the SC PHY 802.16a

Table 122 must have a modification for alpha = 0.18 per the PHY

Suggested Remedy

Properly place als the UCD information for SC and additional OFDM parmater in the standard from TG1 standard

modification of Table 122 Section 11.1.1.1 is

Name = Roll-off factor type =8 Length = 1 Value = 0 = 0.15, 1=0.25, 2= 0.35, 3=0.18

Note only 0,1, and 3 are valid for 802.16a

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0656**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type **Technical, Non-binding**

Starting Page # **219**

Starting Line # **19**

Section **11.1.1.1**

Some modifications to the UCD and DCD tables are needed.

Section 8.3.4.5.6 specifies an optional roll-off factor of 0.18, which is added. The FFT sizes are put only in the channel encodings (1 FFT size per channel), while the cyclic prefixes are in the burst descriptors (different SS may need different cyclic prefixes due to different channel conditions). Frame duration codes are added for 2-11 GHz. Modulation/coding completed.

New column is added to channel encoding tables to indicate the Scope (PHY applicability) to reduce the messy layout.

Suggested Remedy

11.1.1.1 UCD Channel Encodings

Change entire clause to

Replace Table 122 with:

Name	Type (1 Byte)	Length	Value(Variable Length)	Scope
Uplink_Burst_Profile	1		May appear more than once, described below. The length is	All PHYs

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

give editors discretion to update tables above

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0657**Comment submitted by: **Itzik****Kitroser****2002/01/04**Comment Type **Technical, Non-binding**Starting Page # **219**Starting Line # **35**Section **11.1.1.1**

Extra repetition of similar text in multiple fields.

Suggested Remedy

In tables 229, 230 233 move the text:

"Note: This encoding is applicable only when using OFDMA PHYs" to a foot note

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** **k) done****Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0658**

Comment submitted by: Brian

Eidson

2002/01/04

Comment Type **Technical, Satisfied (was**

Starting Page # **219**

Starting Line # **61**

Section **11.1.1.2**

Current text for SC's UCD parameters refers to Table 123 of the 802.16/D5 document. The specifications in Table 123 are somewhat different from the sub-11 GHz requirements, and additional parameters are also required.

Suggested Remedy

Form a new table, in section 11.1.2, preceding Table 230, which provides the UCD burst profile for SC.

Entries:

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Withdrawn**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/04

Comment # **0659**

Comment submitted by: Brian

Eidson

Comment	Type	Technical, Satisfied (was	Starting Page #	219	Starting Line #	61	Section
---------	------	---------------------------	-----------------	-----	-----------------	----	---------

Current text in clause 11.1.1.2 refers SC UCD burst profile descriptions to Table 123 of 802.16/D5 document. All burst profile parameter settings (and options) for the 802.16a SC PHY are different from those in 802.16. Therefore, this D5 reference needs to be removed, and a table for the UCD burst profile for SC should be added. (OFDM has already incorporated a table in clause 11.1.1.2)

Suggested Remedy

Remove reference to Table 123 in D5 document; add words

The UCD encodings for SC PHYs are provided in Table XXX.

Add a table preceding Table 230 entitled "UCD Burst Profile encoding (SC)"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0660**

Comment submitted by: Paul

Struhsaker

2002/01/03

Comment Type **Editorial**Starting Page # **219**Starting Line # **61**Section **11.1.1.2**

the SC UCD Burst profiles from TG1 standard are missing .. Table 123

Suggested Remedy

Please place Table 123 here for completeness

the following change to the FEC paramater

name= FEC CodeType Type = 2 Length = 1

add the following

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done

made type 6 and 7 non-applicable to SC2, no point in conveying a fixed value

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0661**

Comment submitted by: **Moritz**

Harteneck

2001/12/28

Comment Type **Editorial**

Starting Page # **220**

Starting Line # **23**

Section **11.1.1.2**

The FEC types 8 to 11 are defined as being 'TCP'. I think it should be 'TPC'.

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0662**

Comment submitted by: Brian

Eidson

2002/01/05

Comment Type **Technical, Satisfied (was** Starting Page # **220** Starting Line # **35** Section **11.1.2.1**

The PHY type specification of Table 124 of 802.16/D5 does not describe that there are two PHY types: Framed Continuous Downlink, and Framed Burst Downlink. An addendum (table) on DCD channel encodings needs to be added to section 11.1.2.1 of 802.16 to give the codings for these two PHY types. Also, one might also want to include some feature to distinguish the OFDM modes from one another.

Suggested Remedy

Add DCD channel encodings table (addendum) reference to section 11.1.2.1 that specifies PHY Type. Table entry should be identical to PHY Type description found in 802.16/D5, with the exception that the code

PHY Type = 0 Framed Burst Downlink in TDD mode (SC)
 PHY Type = 1 Framed Burst Downlink in FDD mode (SC)
 PHY Type = 2 Framed Continuous Downlink in FDD mode (SC)

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0663**

Comment submitted by: Brian

Eidson

2002/01/05

Comment Type **Technical, Satisfied (was** Starting Page # **220** Starting Line # **35** Section **11.1.2.1**

The TTG (TX/RX Transition Guard) interval (for TDD systems) should be specified as a DCD Channel Encoding (but seems to have been omitted from 802.16/D5).

This entry probabneeds to be added to the amended table for DCD Channel Encoding found in clause 11.1.2.1.

Suggested Remedy

Add entry. Specify result in symbols for SC, and/(or) samples for OFDM.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0664**

Comment submitted by: Brian

Eidson

2002/01/04

Comment	Type	Technical, Satisfied (was	Starting Page #	220	Starting Line #	40	Section	11.1.2.2
---------	------	---------------------------	-----------------	-----	-----------------	----	---------	----------

Current text in clause 11.1.1.2 refers SC DCD burst profile descriptions to Table 125 of 802.16/D5 document. Except for (probably) the DUIC entry and exit threshold settings, burst profile parameter settings (and options) for the 802.16a SC PHY are different from those in 802.16. Therefore, this D5 reference needs to be removed, and a table for the DCD burst profile for SC should be added. (OFDM has already incorporated a table in clause 11.1.2.2)

Suggested Remedy

Remove reference to Table 125 in D5 document; add words

The DCD encodings for SC PHYs are provided in Table XXX.

Add a table preceding Table 230 entitled
"DCD Burst Profile encoding (SC)"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0665**

Comment submitted by: Paul

Struhsaker

2002/01/03

Comment Type **Technical, Satisfied (was**
Table 125 is not available

Starting Page # **220**

Starting Line # **41**

Section **11.1.2.2**

The following changes and additions are required

Suggested Remedy

Insert values from table 125 for completeness

the following change to the FEC paramater

name= FEC CodeType Type = 2 Length = 1

add the following

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Superceded

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

made type 3 and 4 non-applicable to SC2, no point in conveying a fixed value

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0666**Comment submitted by: [Moritz](#)[Harteneck](#)

2001/12/28

Comment Type [Technical, Non-binding](#) Starting Page # [221](#) Starting Line # [9](#) Section [11.1.2.2](#)

The 'FFT Size Code' are defined as consellations and not as FFT sizes as in Table 230.

Suggested Remedy

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [l\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0667**Comment submitted by: [Yigal](#)[Leiba](#)

2002/01/02

Comment Type [Editorial](#) Starting Page # [221](#) Starting Line # [9](#) Section [11.1.2.2](#)

The TLV name and value fields don't match (Didn't we delete it altogether?)

Suggested Remedy

[Copy correct values from table 230](#)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [l\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0668**Comment submitted by: [Kenneth](#)[Stanwood](#)

2001/12/19

Comment Type [Technical, Non-binding](#) Starting Page # [221](#) Starting Line # [9](#) Section [11.1.2.2](#)[The FFT Code Size and the FEC type have the same value for the type field.](#)

Suggested Remedy

[On line 9, in the Type column, change "2" to "1"](#)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**[On line 9, in the Type column, change "2" to "1"](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [l\) none needed](#)[superceeded.](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0669**Comment submitted by: [Moritz](#)[Harteneck](#)

2001/12/28

Comment Type [Editorial](#) Starting Page # [221](#) Starting Line # [23](#) Section [11.1.2.2](#)[The FEC types 8 to 11 are defined as being 'TCP'. I think it should be 'TPC'.](#)

Suggested Remedy

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2001/12/19

Comment # **0670**

Comment submitted by: Kenneth

Stanwood

Comment	Type	Technical, Non-binding	Starting Page #	223	Starting Line #	11	Section	11.1.4
---------	------	------------------------	-----------------	-----	-----------------	----	---------	--------

Changing the unit in the definition of Timing Adjust to "sample duration" eliminates information necessary for the 10-66 GHz case.

Suggested Remedy

On page 223, line 11 change "units of sample duration" to " Units are PHY specific - see section 10.3"

Add a section to replcae the info for 10-66 GHz:

"10.3.1.6 Timing Adjust Units

The timing adjust units shall be 1/4 modulation symbols."

Add similar sections 10.3.2.2 and 10.3.3.2 for the 2-11 GHz OFDMA and SC PHYs, respectively.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0671**Comment submitted by: **Kenneth****Stanwood**

2001/12/19

Comment Type **Editorial**Starting Page # **223**Starting Line # **49**Section **11.1.5**

There is already a section 11.1.5 in D5.

Suggested Remedy

Change 11.1.5 to 11.1.6 on lines 49 and 51.

Change 11.1.6 to 11.1.7 on line 49 and page 224, line 1.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** [k\) done](#)**Editor's Questions and Concerns****Editor's Action Items**Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0672**Comment submitted by: **Kenneth****Stanwood**

2001/12/19

Comment Type **Editorial**Starting Page # **223**Starting Line # **56**Section **11.1.5**

The TLV information is missing.

Suggested Remedy

Supply a TLV table for this information like table 234.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** [k\) done](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0673**Comment submitted by: **Bob****Nelson**

2002/01/03

Comment Type **Technical, Non-binding**Starting Page # **224**Starting Line # **30**Section **11.4**

As currently defined by the base document, a subscriber cannot ascertain the version of the MAC operating on the base station until the registration message dialog has completed when the SS receives a REG-RSP message from the base station. Being able to acquire this information earlier in the initialization process might be useful.

Suggested Remedy

Alter the scope field of the MAC version entry in section *11.4.4 MAC Version Encodings* so that the field may appear in the DCD message as well as the REG-RSP

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: **Accepted******Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** [k\) done](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0674**Comment submitted by: [Bob Nelson](#)

2002/01/03

Comment Type [Technical, Satisfied \(was](#) Starting Page # [224](#) Starting Line # [36](#) Section [11.4.8.18](#)[Units of microseconds for time-related parameters is too restrictive.](#)**Suggested Remedy**[Replace units of \(microseconds\) in tables Table 238, Table 239, and Table 240 to \(10 microseconds\). This allows a range of 10 microseconds to 655.350 milliseconds instead of 1 microsecond to 65.535 milliseconds](#)**Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: [Accepted](#)**[Replace units of \(microseconds\) in tables Table 238, Table 239, and Table 240 to \(10 microseconds\). This allows a range of 10 microseconds to 655.350 milliseconds instead of 1 microsecond to 65.535 milliseconds](#)**Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** [k\) done](#)**Editor's Questions and Concerns****Editor's Action Items**Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0675**Comment submitted by: [Kenneth Stanwood](#)

2001/12/19

Comment Type [Editorial](#) Starting Page # [224](#) Starting Line # [43](#) Section [11.4.8.18.1](#)[missing space.](#)**Suggested Remedy**[Change "ThisTLV" to "This TLV"](#)**Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: [Accepted](#)****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** [k\) done](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0676**Comment submitted by: **Kenneth****Stanwood**

2001/12/19

Comment Type **Technical, Non-binding** Starting Page # **224** Starting Line # **59** Section **11.4.8.18.1**
type values set to "tbd"

Suggested Remedy

Choose unique TLV type values for all ARQ parameters in section 11.4.8.18 that don't conflict with ones already in use (have fun!).

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Choose unique TLV type values for all ARQ parameters in section 11.4.8.18 that don't conflict with ones already in use (have fun!).

rename section 11.1.6 to DRFM TLVs

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done

found 1-10, 14,16,18,24,25,26,32,43, 99-103 in use

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0677**Comment submitted by: **Bob****Nelson**

2002/01/03

Comment Type **Editorial**Starting Page # **227**Starting Line # **9**Section **11.4.8.18.7**

In value field of table 241, add description of each boolean value

Suggested Remedy

Replace current text with:

0 - Order of delivery is not preserved

1 - Order of delivery is preserved

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Replace current text with:

0 - Order of delivery is not preserved

1 - Order of delivery is preserved

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/05

Comment # **0678**Comment submitted by: **Mika****Kasslin**Comment Type **Technical, Non-binding**Starting Page # **227**Starting Line # **18**Section **12**

A new system profile for mesh mode should be provided to describe which are mandatory and which optional features.

Suggested Remedy

Add a new sub-clause for mesh system profile as follows:

12.2 Mesh system profile

The mesh system profile addresses the requirements of a node that is expected to act only on mesh network. Basic functionalities are mandatory for a mesh node as they are for a P-MP node, except those that are stated as optional below. All the clauses referring to optional mesh mode in the standard shall apply to a mesh node as mandatory.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: **Rejected******Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0679**

Comment submitted by: Brian

Eidson

2002/01/04

Comment	Type Editorial	Starting Page # 229	Starting Line # 35	Section 11.1.2.2
---------	-----------------------	----------------------------	---------------------------	-------------------------

The Section heading 11.1.2 seems to be missing, but is necessary to make the sections detailing UCD and DCD encoding descriptions parallel. I see that section 11.1.2.2 does exist, but does not have 11.1.2 preceding it.

Suggested Remedy

Add sections

11.2.1 DCD message encodings

11.2.1.1 DCD channel encodings

using terminology identical to the UCD encodings in 11.1.1 of the 802.16a/D1 document.

Proposed Resolution	Recommendation:	Recommendation by
----------------------------	------------------------	--------------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Accepted
----------------------------	---

Add sections

11.2.1 DCD message encodings

11.2.1.1 DCD channel encodings

using terminology identical to the UCD encodings in 11.1.1 of the 802.16a/D1 document.

Make sure to reference Table 124 of 802.16/D5 in the channel encodings section. Also, the rolloff factor was inadvertently omitted from Table 124 of 802.16/D5 , but should appear in the DCD channel encodings. The rolloff factors for SC (in 802.16a) are 0.25, 0.15 (optional), 0.18 (optional).

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes	Editor's Actions k) done
-----------------------	---------------------------------

Think I captured this /Nico

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0680**Comment submitted by: **Anader****Benyamin-Seeyar**

2002/01/04

Comment Type **Editorial** Starting Page # **230** Starting Line # **25** Section **A. Bibliography**

References [33] and [43] are the same!

Suggested Remedy

Remove Reference [43] and update the document with the new reference number.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0681**Comment submitted by: **Malik****Audeh**

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **239** Starting Line # **1** Section **B.2**

Appendix B.2 is a treatise of nearly 25 pages, consisting of material on satellites, radars, etc. The others are 2-3 pages.

Suggested Remedy

Shorten to a few relevant tables, and perhaps eliminate some of the discussion on radar.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **l) none needed**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0682**

Comment submitted by: Nico

van Waes

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **240** Starting Line # **18** Section **B.2.2**
more realistic implementation for evaluation

Suggested Remedy

page 240, line 18: change "3 dB for WLAN type devices" to "6 dB for OFDM based systems".
table 243: change the gain to 10 dBi, -20 dBi respectively and correct in sentence below table.
page 242, line 30: change max. EIRP to max. peak EIRP
page 242, line 31 and table 244: change 3 to 6 in line 31

Recompute all evaluations based on these values

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Withdrawn**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0683**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial** Starting Page # **241** Starting Line # **45** Section **B.2.2.2.1**
 Typo

Suggested Remedy
 Change "eves" to "eaves"

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions l) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0684**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Technical, Non-binding** Starting Page # **241** Starting Line # **51** Section **B.2.2.2.1**

The statement in the last sentence is, to my opinion , wrong. Mesh SS's, because of their close proximity, may experience much higher elevation angles than PMP SS's. The difference in heght between neighboring buildings could be quite significant.

Suggested Remedy
 Delete last senetence.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

Delete last sentence.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0685**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Technical, Non-binding** Starting Page # **242** Starting Line # **52** Section **B.2.2.2.2**

Assuming that the final Rx Sensitivity and C/I parameters will be eventually entered into the calculation and the appendix will be updated accordingly, there is no need to include this sentence in the appendix.

Suggested Remedy

Delete the sentence (turn it to a temporary note, if necessary)

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

change temporarily to temporary

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0686**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Technical, Non-binding** Starting Page # **242** Starting Line # **52** Section **B.2.2.2.2**

The units for kT0 are dBm/Hz

Suggested Remedy

change "kT_0 (dBm)" to "kT_0 (dBm/Hz)"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0687**Comment submitted by: [Avraham](#)[Freedman](#)[2002/01/03](#)Comment Type [Technical, Non-binding](#) Starting Page # [243](#) Starting Line # [1](#) Section [B.2.2.2.2](#)[The units for kT0 are dBm/Hz](#)

Suggested Remedy

[change "-174 \(dBm\)" to "-174 \(dBm/Hz\)"](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0688**Comment submitted by: [Avraham](#)[Freedman](#)[2002/01/03](#)Comment Type [Technical, Non-binding](#) Starting Page # [243](#) Starting Line # [2](#) Section [B.2.2.2.2](#)[Is the 5dB margin taken from 802.11a relevant to a WirelessHUMAN system?](#)

Suggested Remedy

[Check](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [l\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0689**

Comment submitted by: Anader

Benyamin-Seeyar

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **243** Starting Line # **34** Section **B.2.2.3**

Whole Subsections B.2.2.3 up to the end of B2.4.4 are redundant.

Suggested Remedy

Delete whole Sections B.2.2.3 up to the end of B2.4.4. These information are not useful to this standard document.

These subsections might be of some use for the Coexistence Task Group "IEEE802.16.2a".

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions l) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0690**

Comment submitted by: Jose

Costa

2002/01/02

Comment Type **Technical, Non-binding** Starting Page # **245** Starting Line # **64** Section **B.2.2.3.2**

A reference is made to a group in ITU-R (ITU-R JWP 7-8R), that is Joint Working Party 7-8R. Groups as formed and disbanded on as needed basis; hence this is not a suitable reference for an IEEE standard. A reference to a publication is required.

Suggested Remedy

Add a reference to a specific ITU-R document or publication.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Modified**

Page 245, Line 64: Replace "The following interference criteria are from ITU-R JWP 7-8R:" with "Studies suggest that:"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0691**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial** Starting Page # **247** Starting Line # **43** Section **B.2.2.4**

I believe "cannot generally co-exist.." is preferable than "can generally not co-exist"
The same remark applies to line 47. "...do not generally coincide.." is preferable to "...do generally not coincide.."

Suggested Remedy

Replace "can generally not co-exist" with "cannot generally co-exist.."

Replace "...do generally not coincide.." with ".do not generally coincide.." in line 47.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0692**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Technical, Non-binding** Starting Page # **249** Starting Line # **28** Section **B.2.2.5**

It seems the equation does not take into account the fact that RTTT and HIPERLAN are not in the same band

Suggested Remedy

Explain

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

HIPERLANs" should be replaced by "802.16 WirelessHUMAN mesh system" or whatever nomenclature we end up using.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** l) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0693**

Comment submitted by: Jose

Costa

2002/01/02

Comment	Type	Editorial	Starting Page #	250	Starting Line #	35	Section	B.2.3.1
---------	------	-----------	-----------------	-----	-----------------	----	---------	---------

The term "Broadband Fixed Wireless Access (BFWA)" has not been defined and it introduces an unnecessary complexity. By reversing the order of the qualifiers it is also contrary to the title of the standard, which is "fixed broadband ..." rather than "broadband fixed ...". Furthermore, this is related to the separate comment regarding the definition of FWA in page 19, line 42)

Suggested Remedy

Amend the definition of the acronym in page 250, line 35, (that is change it to "Broadband Wireless Access (BWA)") and do a global change to replace "BFWA" by "BWA". "BFWA" appears in the following places:

p. 250, lines 35, 43, 46, 61 and 62.

p. 251, lines 1, 2 (in 2 places), 7 (table title), and 8 entries in the column with header "System"

Proposed Resolution	Recommendation:	Recommendation by
----------------------------	------------------------	--------------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Accepted
----------------------------	------------------------------------

Page 250, line 35: Change "Broadband Fixed Wireless Access (BFWA)" to "broadband wireless access"
change "BFWA" to "BWA" globally

also: Page 250, line 34: delete "Wireless HUMAN Standard-based systems," {redundant}

also: Page 250, line 35: delete ",802.15," {802.15 has nothing in 5 GHz band}

also: change "Wireless HUMAN" to "WirelessHUMAN" globally {IEEE trademark}

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes	Editor's Actions	k) done
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Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0694**

Comment submitted by: Jose

Costa

2002/01/02

Comment Type **Technical, Non-binding** Starting Page # **250** Starting Line # **45** Section **B.2.3.1**

Regarding "...it has been shown by published results of ITU-R studies...", reference is made to a USA contribution to ITU-R, which does not constitute an ITU-R publication.

Suggested Remedy

A reference to a specific ITU-R publication should be included here. That is, replace "(e.g., USA ITU-R WP7C/24 Contribution)" by a reference to an ITU-R publication. If one does not exist, replace "...it has been shown by published results of ITU-R studies..." by "...it has been shown by USA studies contributed to ITU-R..."

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Page 250, Line 45: change "In particular it has been shown by published results of ITU-R studies that BFWA antenna directivity" to: "In particular, studies have shown that BWA antenna directivity"

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0695**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Editorial**Starting Page # **250**Starting Line # **53**Section **B.2.3.1**

According to the sentence, SAR-4 is probably more interference sensitive than itself.

Suggested Remedy

Change "4" in line 53 to the proper number

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

delete "and SAR-4"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0696**

Comment submitted by: Jose

Costa

2002/01/02

Comment Type **Editorial**Starting Page # **251**Starting Line # **50**Section **B.2.3.1**

Regarding: "...are derived from ITU-R reports", a suitable reference to these ITU-R reports should be added.

Suggested Remedy

Add the ITU-R reference.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

delete sentence

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0697**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Technical, Non-binding** Starting Page # **253** Starting Line # **51** Section **B.2.4.1.2**

The same appendix / report gives equally well-justified reasons to analyze interference to SAR-4 satellites (in B.2.3.1) and to SAR-1 satellites here. For the sake of coherence this contradiction should be resolved.

Suggested Remedy

Perform the interference analysis for SAR-4 satllites for the mesh systems as well.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions l) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0698**

Comment submitted by: Avraham

Freedman

2002/01/03

Comment Type **Technical, Non-binding** Starting Page # **254** Starting Line # **8** Section **B.2.4.1.2**

Interference for PMP systems has been analysed in a previous section. Mesh technology has been accepted into the standard, and there is no need to another marketing pitch in this appendix as well.

Suggested Remedy

Delete the paragraph between lines 8 and 12

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

Delete the paragraph between lines 8 and 12

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0699**Comment submitted by: [Avraham](#)[Freedman](#)

2002/01/03

Comment Type [Editorial](#) Starting Page # [257](#) Starting Line # [8](#) Section [B.2.4.2.2](#)
 typo

Suggested Remedy

Change "therefor" to "therefore"
 also in p. 260 l. 45, p. 261 l. 34,

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: [Accepted](#)**

Change "therefor" to "therefore"
 also in p. 260 l. 45, p. 261 l. 34,

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** [k\) done](#)**Editor's Questions and Concerns****Editor's Action Items**Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0700**Comment submitted by: [Avraham](#)[Freedman](#)

2002/01/03

Comment Type [Technical, Non-binding](#) Starting Page # [266](#) Starting Line # [1](#) Section [B.3](#)

The appendix is not updated. The numbers for the link budgets should be revised according to the parameters specified in the standard

Suggested Remedy

Update the numbers or remove the appendix.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: [Superseded](#)****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** [l\) none needed](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0701**Comment submitted by: **Anader****Benyamin-Seeyar**

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **267** Starting Line # **1** Section **B.3**

Replace two tables 265 and 266 in Section B.3, that have certain redundant information, with only one table with a more applicable Single Carrier link budget data.

Suggested Remedy

Replace Section B.3 with a revised Link budget subsection for a typical Single Carrier mode that is submitted as a separate contribution entitled "C802.16a-02/06r2".

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Replace Section B.3 with a revised Link budget subsection for a typical Single Carrier mode that is submitted as a separate contribution entitled "C802.16a-02/06".

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0702**

Comment submitted by: Ronald

Murias

2002/01/04

Comment Type **Technical, Non-binding** Starting Page # **267** Starting Line # **5** Section

Tables 265 and 266 contain marketing jargon like "normalized price" that basically shows cost comparisons between SC and OFDM. It is my understanding that these types of price or cost comparisons and discussions do not belong in this document.

Suggested Remedy

Remove tables 265 and 266

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Withdrawn**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0703**

Comment submitted by: Moshe

Ran

2002/01/04

Comment Type **Editorial** Starting Page # **268** Starting Line # **44** Section **B.5**

typo - SC-FD and OFDM

Suggested Remedy

should be - SC-FDE and OFDM. For consistency FDE is the proper term to be used every where

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0704**Comment submitted by: **Mike****Paff**

2002/01/07

Comment Type **Editorial**Starting Page # **174**Starting Line # **33**Section **8.3.5.3.3.6.1**

Only 11 bits of the 12 bit slot offset parameter are utilized. There is ambiguity as to which bit is not used.

Suggested Remedy

Add the sentence:

The lower 11 bits of the 12 bit slot offset parameter are used to initialize the randomizer, with bit 0 defined as the MSB of this remaining 11 bit field.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Add the sentence:

The lower 11 bits of the 12 bit slot offset parameter are used to initialize the randomizer, with bit 0 defined as the MSB of this remaining 11 bit field.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done

Updated figure to reflect C80216a-02/15 for OFDMA. Sentence not needed in that case

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0705**

Comment submitted by: Mike

Paff

2002/01/07

Comment Type **Technical, Satisfied (was** Starting Page # **177** Starting Line # **36** Section **8.3.5.3.3.7.2**
OFDM bandwidth request mechanism is not adequately defined

The current approach requires that each bandwidth request utilize a minimum of two symbols. This results in too much upstream bandwidth resource to be allocated for contention. Even with a large portion of the upstream bandwidth allocated for contention, this approach is subject to complete failure (no or very minimal upstream traffic) when the request rate exceeds a modest level.

Suggested Remedy

Implement the approach described in J. Krinnock's contribution "Contention Schemes For OFDM Mode A_L, Rev. 1.0" dated Jan. 4, 2002 <C802.16a-02/12>.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0706**Comment submitted by: [Mike](#)[Paff](#)

2002/01/07

Comment Type [Editorial](#)Starting Page # **195**Starting Line # **40**Section **8.3.5.3.4.4.1**

The changes which were approved at the last meeting were not implemented in this draft.

There is still some ambiguity as to which 7 bits of the 8 bit subchannel offset are used for initialization and which 7 bits of the 12 bit slot offset are used.

Suggested Remedy

1. Include the changes which were voted on at the last meeting.

2. Add the sentences;

The lower 7 bits of the 12 bit slot offset parameter are used to initialize the randomizer.

The lower 7 bits of the 8 bit subchannel offset parameter are used to initialize the randomizer. Bit 0 defines the MSB of these truncated 7 bit fields.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: [Accepted-Modified](#)**[use C80216a-02/15](#)**Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** [k\) done](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0707**Comment submitted by: **Joe****Kwak**

2002/01/18

Comment Type **Editorial**Starting Page # **19**Starting Line # **52**Section **4**

Many acronyms are missing from list. Add CSF, MSH, DSCH, CSCH, DRFM, CRQS and many others.

Suggested Remedy

Editorial task to collect acronyms throughout doc is needed.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Editorial task to collect acronyms throughout doc is needed.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** **k) done****Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0708**Comment submitted by: [Joe](#)[Kwak](#)

2002/01/18

Comment Type [Technical, Non-binding](#) Starting Page # [22](#) Starting Line # [48](#) Section [6.2.2.3.2](#)
 In D5, need to rename and demote scope of existing paragraph to limit it to 10-66 GHZ, as is done for the UL MAP section.

Suggested Remedy

INSERT:

Insert at start of clause:

[6.2.2.3.2.1 10-66 GHz PHY](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [1\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0709**Comment submitted by: [Joe](#)[Kwak](#)

2002/01/18

Comment Type [Technical, Non-binding](#) Starting Page # [23](#) Starting Line # [1](#) Section [6.2.2.3.2](#)
 Fix section numbering based on previous comment #2.

Suggested Remedy

[Change 6.2.2.3.2.1-->6.2.2.3.2.2.](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [1\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0710**Comment submitted by: [Joe](#)[Kwak](#)[2002/01/18](#)

Comment Type [Technical, Non-binding](#) Starting Page # [23](#) Starting Line # [43](#) Section [6.2.2.3.2](#)
Description of LENGTH and padding does not apply to this message.

Suggested Remedy
[Delete lines 43-47.](#)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [|\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0711**Comment submitted by: [Joe](#)[Kwak](#)[2002/01/18](#)

Comment Type [Technical, Non-binding](#) Starting Page # [24](#) Starting Line # [5](#) Section [6.2.2.3.2](#)
[Need defintion of offset or reference to definition.](#)

Suggested Remedy
[add:](#)
[, defined as number of minislots \(?\) from Allocation Start Time.](#)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [|\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0712**Comment submitted by: [Joe](#)[Kwak](#)[2002/01/18](#)

Comment Type [Technical, Non-binding](#) Starting Page # [24](#) Starting Line # [7](#) Section [6.2.2.3.2](#)
[Correct section number based on previous comment #2.](#)

Suggested Remedy

[Change 6.2.2.3.2.2 --> 6.2.2.3.2.3](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [|\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0713**Comment submitted by: [Joe](#)[Kwak](#)[2002/01/18](#)

Comment Type [Editorial](#) Starting Page # [23](#) Starting Line # [10](#) Section [6.2.2.3.2](#)
[Table needs unique name.](#)

Suggested Remedy

[Rename Table 146--DL-MAP message format for SC PHY.](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [|\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: [4b](#)

Comment Date

Comment # [0714](#)Comment submitted by: [Joe](#)[Kwak](#)[2002/01/18](#)Comment Type [Technical, Non-binding](#)Starting Page # [18](#)Starting Line # [47](#)Section [1.2.2](#)[Use of word channels is incorrect.](#)

Suggested Remedy

[Change "channels" to "channel bandwidths".](#)

Proposed Resolution Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: [Accepted](#)[Change "channels" to "channel bandwidths".](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: [4b](#)

Comment Date

Comment # [0715](#)Comment submitted by: [Joe](#)[Kwak](#)[2002/01/18](#)Comment Type [Editorial](#)Starting Page # [25](#)Starting Line # [6](#)Section [6.2.2.3](#)[Table needs unique name.](#)

Suggested Remedy

[Rename OFDMA PHY DL-MAP message format .](#)

Proposed Resolution Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: [Superceded](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [l\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0716**

Comment submitted by: **Joe**

Kwak

2002/01/18

Comment Type **Technical, Non-binding**

Starting Page # **25**

Starting Line # **16**

Section **6.2.2.3**

Wrong parameter listed in table, doesn't agree with below listed definitions.

Suggested Remedy

Change DUIC 8 bits ---> Rate ID 4 bits

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

2002/01/18

Comment # **0717**

Comment submitted by: Joe

Kwak

Comment	Type	Starting Page #	Starting Line #	Section
	Technical, Non-binding	25	46	6.2.2.3

One instance of general problem in this draft spec: We attempt to add new PHY modes which redefine the content of MAC information elements, but we do not rename those elements. As a result, merged spec will have ambiguous IEs defined in different ways in different sections.

Alternative is to merge similar message formats and IE definitions, and carefully list the "conditional" elements which are mode dependant. In this way we define a single DL-MAP message for resultant spec, but with conditional contents dependina on operatind mode. This altenative would areatlv improve the quality of the spec

Suggested Remedy

Expedient remedy proposed here:

Rename IE to DL-MAP-OFDMA_Information_Element. Provide reference to Table 208 in Notes column.

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Rejected
---------------------	------------------------------------

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes	Editor's Actions	l) none needed
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Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0718**Comment submitted by: [Joe](#)[Kwak](#)[2002/01/18](#)Comment Type [Technical, Non-binding](#) Starting Page # [25](#) Starting Line # [60](#) Section [6.2.2.3](#)[Table reference is incorrect.](#)Suggested Remedy
[Should be Table 197.](#)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [|\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0719**Comment submitted by: [Joe](#)[Kwak](#)[2002/01/18](#)Comment Type [Editorial](#) Starting Page # [27](#) Starting Line # [8](#) Section [6.2.2.3](#)[Table name is not unique. This seems to be a generic problem throughout spec.](#)Suggested Remedy
[Rename Table 148--SC PHY UL-MAP message format.](#)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [|\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0720**

Comment submitted by: Joe

Kwak

2002/01/18

Comment Type **Technical, Non-binding** Starting Page # **23** Starting Line # **23** Section **6.2.2.3**

Instance of generic problem: overspecification of message lengths.
 If message contains only 1 variable length field which is placed at the end of the element list,
 no embedded length or "element count" field is needed. The correct length is provided by the generic
 MAC header or subheader. This is true for most of the TLV variable messages
 already defined in D5.

Suggested Remedy

Delete line 28 with element count.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Rejected****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0721**

Comment submitted by: Joe

Kwak

2002/01/18

Comment Type **Technical, Non-binding** Starting Page # **25** Starting Line # **52** Section **6.2.2.3**

Padding needed in 2 bit increments for this message.

Suggested Remedy

Change Nibble ---> Bit(s). Change 4 bits --> 2 bits.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0722**Comment submitted by: [Joe](#)[Kwak](#)[2002/01/18](#)Comment Type **Technical, Non-binding**Starting Page # **27**Starting Line # **20**Section **6.2.2.3**[Element count not needed.](#)

Suggested Remedy

[Delete element count from table.](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [|\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0723**Comment submitted by: [Joe](#)[Kwak](#)[2002/01/18](#)Comment Type **Technical, Non-binding**Starting Page # **25**Starting Line # **42**Section **6.2.2.3**[Element count is not needed.](#)

Suggested Remedy

[Delete element count from table.](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [|\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0724**Comment submitted by: **Joe****Kwak**

2002/01/18

Comment Type **Technical, Non-binding** Starting Page # **27** Starting Line # **22** Section **6.2.2.3**

Allocation Start Time and Acknowledgement Time seem not to be adequately sized. Definition listed below table indicates these are in units of PSs. Sizing should be:

32 bits for minislots/frame

8 bits for PSs/minislot

8 bits for 256 frame count rolling counter from BS initialization.

Total of 48 bits would be needed for each of these.

Suggested Remedy

Change 32 bits ---> 48 bits on lines 22 and 24.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Superseded

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0725**Comment submitted by: [Joe](#)[Kwak](#)

2002/01/18

Comment Type [Technical, Non-binding](#) Starting Page # [27](#) Starting Line # [25](#) Section [6.2.2.3](#)

[Ranging and Request backoff values are defined as required elements in UCD and are bound to UL-MAP message by UCD Count. These backoff values should not be repeated here.](#)

Suggested Remedy

[Delete backoff items from table and delete 4 backoff definitions from list below table.](#)

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: [Superceded](#)****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** [|\) none needed](#)**Editor's Questions and Concerns****Editor's Action Items**Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0726**Comment submitted by: [Joe](#)[Kwak](#)

2002/01/18

Comment Type [Editorial](#) Starting Page # [27](#) Starting Line # [53](#) Section [6.2.2.3](#)

[Names here do not agree with table.](#)

Suggested Remedy

[Change names to \[Allocation_Start_Time\]\(#\) and \[Acknowledgment_Time\]\(#\).](#)

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: [Superceded](#)****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** [|\) none needed](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0727**Comment submitted by: **Joe****Kwak**

2002/01/18

Comment Type **Technical, Non-binding** Starting Page # **28** Starting Line # **19** Section **6.2.2.3**

Offset needs to be defined.

Suggested Remedy

Add: "..., defined from Allocation_Start_Time in minislots."

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

1. Delete definition of MAP information elements below the table 17.
2. Strike description of allocation start time in mini-slots and place these descriptions under the PHY specific sections.
3. New subsection under 10.3.1 entitled: Allocation Start Time
Unit of Allocation Start Time shall be mini-slots from the start of the downlink frame in which UL-MAP message occurred.
4. OFDMA and OFDM Allocation Start Time descriptions should be in additional subsections of 10.3.

Reason for Group's Decision/Resolution

6.2.2.3.4 uplink map message will have PHY dependent information elements. Therefore these map IEs will be described in PHY specific sections.

Group's Notes**Group's Action Items****Editor's Notes****Editor's Actions** k) done

done 1 and 3, don't see what to add in PHYs

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0728**Comment submitted by: **Joe****Kwak**

2002/01/18

Comment Type **Technical, Non-binding**Starting Page # **28**Starting Line # **48**Section **6.2.2.3**

Table reference is incorrect.

Suggested Remedy

Change Table 150 ---> Table 108.

Proposed Resolution Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

this is actually superceded

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0729**Comment submitted by: **Joe****Kwak**

2002/01/18

Comment Type **Editorial**Starting Page # **29**Starting Line # **6**Section **6.2.2.3**

Table name is not unique.

Suggested Remedy

Change name to OFDMA-UL-MAP Message Format.

Proposed Resolution Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0730**Comment submitted by: **Joe****Kwak**

2002/01/18

Comment Type **Technical, Non-binding** Starting Page # **29** Starting Line # **18** Section **6.2.2.3**

Element count not needed.

Suggested Remedy

Delete element count from table.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0731**Comment submitted by: **Joe****Kwak**

2002/01/18

Comment Type **Technical, Non-binding** Starting Page # **29** Starting Line # **24** Section **6.2.2.3**

Need reference to define IE.

Suggested Remedy

Add to Notes column:

"...., as defined in Table 209."

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0732**

Comment submitted by: Joe

Kwak

2002/01/18

Comment Type **Technical, Non-binding** Starting Page # **30** Starting Line # **20** Section **6.2.2.3.6**

Here, for OFDMA, we try to modify the RNG-RSP message with conditional elements. This is different approach than currently used for other messages for SC and OFDMA where new messages are defined. My opinion is that the spec will be improved if we use this approach and attempt to merge into existing messages and IE using conditionals for the added modes. In order to be signalled correctly, the UCD and DCD messages would need to carry new explicit data items defining the exact mode used for this system so that messages could be correctly parsed with embedded conditionals.

Suggested Remedy

Add paragraph:

"When the above 4 parameters are included in the RNG-RSP message, the RNG-RSP message shall not include the Basic CID, Primary Management CID, and the SS MAC Address."

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: **Accepted-Modified******Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items**

Carl will take the correction of text as an action item.

Editor's Notes**Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0733**Comment submitted by: [Joe](#)[Kwak](#)[2002/01/18](#)Comment Type [Editorial](#)Starting Page # **30**Starting Line # **24**Section **6.2.2.3.30**[Section name not consistent with D5 naming.](#)

Suggested Remedy

[Change name to OFDM DL-UL-MAP Message.](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [|\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0734**Comment submitted by: [Joe](#)[Kwak](#)[2002/01/18](#)Comment Type [Editorial](#)Starting Page # **30**Starting Line # **31**Section **6.2.2.3.30**[Correct Table name.](#)

Suggested Remedy

[Change to Table 150--OFDM DL-UL-MAP Message Format.](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [|\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0735**Comment submitted by: **Joe****Kwak**

2002/01/18

Comment Type **Technical, Non-binding** Starting Page # **30** Starting Line # **48** Section **6.2.2.3.30**

DL-MAP element count is needed because there are 2 variable length fields in this message.
But UL-MAP element count is not needed.

Suggested Remedy

Delete UL-MAP element count from table.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0736**Comment submitted by: **Joe****Kwak**

2002/01/18

Comment Type **Technical, Non-binding** Starting Page # **30** Starting Line # **56** Section **6.2.2.3.30**

Elements not sized correctly and not defined.

Suggested Remedy

For DL-MAP IE, change size to 20 bits, reference Table 89 in Notes column for definition.

For UL-MAP IE, change size to 32 bits, reference Table 107 in Notes column for definition.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0737**Comment submitted by: [Joe](#)[Kwak](#)

2002/01/18

Comment Type [Technical, Non-binding](#) Starting Page # **30** Starting Line # **64** Section **6.2.2.3.30**[Message needs padding.](#)

Suggested Remedy

[Add optional 4 bit padding nibble.](#)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [|\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0738**Comment submitted by: [Joe](#)[Kwak](#)

2002/01/18

Comment Type [Technical, Non-binding](#) Starting Page # **31** Starting Line # **1** Section **6.2.2.3.30**[To be consistent with message description formats already used in D5, need to explicitly list the definitions for the IEs in the message. Also the clause references given here don't exist.](#)

Suggested Remedy

[Create list of IE definitions as in all other messages.](#)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [|\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0739**Comment submitted by: [Joe](#)[Kwak](#)

2002/01/18

Comment Type **Editorial**Starting Page # **30**Starting Line # **36**Section **6.2.2.3.30**[Message name is incorrect.](#)

Suggested Remedy

[Change to OFDM-DL-UL-MAP_Message_Format.](#)

Proposed Resolution Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [1\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0740**Comment submitted by: [Joe](#)[Kwak](#)

2002/01/18

Comment Type **Technical, Non-binding**Starting Page # **30**Starting Line # **38**Section **6.2.2.3.30**[Generic MAC header is not part of message. MAC header or subheader precedes message.](#)

Suggested Remedy

[Delete MAC header from table.](#)

Proposed Resolution Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [1\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0741**Comment submitted by: [Joe](#)[Kwak](#)[2002/01/18](#)

Comment Type **Technical, Non-binding** Starting Page # **31** Starting Line # **26** Section **6.2.2.3.31**
[Incorrect size and lacks definition reference.](#)

Suggested Remedy[Replace 16 bits with "variable". In Notes column add "..., as defined in Table 166."](#)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0742**Comment submitted by: [Joe](#)[Kwak](#)[2002/01/18](#)

Comment Type **Technical, Non-binding** Starting Page # **31** Starting Line # **63** Section **6.2.2.3.32.1.1**
[Needs consistent naming and definition reference.](#)

Suggested Remedy[Change to CSF TLV Encoded Information. Add to Notes column: "Defined in 11.1.5."](#)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0743**Comment submitted by: [Joe](#)[Kwak](#)

2002/01/18

Comment Type **Technical, Non-binding** Starting Page # **32** Starting Line # **32** Section **6.2.2.3.32**

Needs consistent naming and definition.
Information in 11.1.5 should define the Channel Estimation Data TLVs.

Suggested Remedy

[Change Channel Estimation Data to CSF TLV Encoded Information. Add to Notes: "Defined in 11.1.5."](#)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0744**Comment submitted by: [Joe](#)[Kwak](#)

2002/01/18

Comment Type **Technical, Non-binding** Starting Page # **32** Starting Line # **37** Section **6.2.2.3.32.1.2**

[Need deefintion of Channel Estimation Age. OR move it out of table and into 11.1.5 with other TLVs.](#)

Suggested Remedy

[Delete lines 37-41 and replace with explicit definition of Channel Estimation Age.](#)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Modified**

Reason for Group's Decision/Resolution

Group's Notes

[Ask John \(CRC\) to create definition and submit as comment.](#)

Group's Action Items

Editor's Notes Editor's Actions [h\) defer to next round](#)

[Sent email to John Sydor. /Ken](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0745**Comment submitted by: [Joe](#)[Kwak](#)[2002/01/18](#)Comment Type [Editorial](#)Starting Page # **32**Starting Line # **43**Section **6.2.2.3.33**[Need consistent section naming.](#)

Suggested Remedy

[Change to Downlink Radio Frequency Management \(DRFM\) Message.](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0746**Comment submitted by: [Joe](#)[Kwak](#)[2002/01/18](#)Comment Type [Technical, Non-binding](#)Starting Page # **32**Starting Line # **57**Section **6.2.2.3.33**[MAC header not here.](#)

Suggested Remedy

[Delete MAC header from table.](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0747**Comment submitted by: **Joe****Kwak**

2002/01/18

Comment Type **Technical, Non-binding** Starting Page # **32** Starting Line # **61** Section **6.2.2.3.33**

Use consistent format and needs definition reference.

Suggested Remedy

Change Syntax to DRFM TLV Encoded Information.

Change Notes to Defined in 11.1.6.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0748**Comment submitted by: **Joe****Kwak**

2002/01/18

Comment Type **Editorial** Starting Page # **33** Starting Line # **3** Section **6.2.2.3.34.1**

Name not consistent with acronym.

Suggested Remedy

Change to Mesh Distributed Scheduling (MSH-DSCH) Message.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Need all references to this message to be made consistent with the defined term.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done

This should be part of Carls fixes.

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: [4b](#)

Comment Date

Comment # [0749](#)Comment submitted by: [Joe](#)[Kwak](#)[2002/01/18](#)Comment Type [Technical, Non-binding](#)Starting Page # [33](#)Starting Line # [11](#)Section [6.2.2.3.34.1](#)["collision-free manner" is not defined.](#)

Suggested Remedy

[Provide definition or provide example, or delete.](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: [Accepted-Modified](#)[1. Delete sentence L11 "Each stations..."](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

[Mika Kasslin will provide and example for the usage of this message in the appropriate 6.2.7 section.](#)

Editor's Notes

Editor's Actions [k\) done](#)[simply deleted "collission-free manner"](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0750**Comment submitted by: [Joe](#)[Kwak](#)

2002/01/18

Comment	Type	Technical, Non-binding	Starting Page #	33	Starting Line #	16	Section	6.2.2.3.34.1
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MAC frame seems to be introduced here for the first time. In other places, a frame is a PHY construct. This needs to be corrected or defined. Some PHYs have frames, some do not. If Mesh mode needs frames, then it is not compatible with all PHY modes. This should probably be stated someplace. The scope of Mesh and Advanced Antenna Systems also seem not to be global and need further clarification somewhere in the spec.

NOTE: comment applies to several other places in this mesh section where MAC frame is used.

Suggested Remedy

Define MAC frame or modify to indicate PHY frame, when available.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

1. Change the term MAC to PHY on line 17, P33, and L60, P36.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** [k\) done](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0751**Comment submitted by: [Joe](#)[Kwak](#)[2002/01/18](#)Comment Type [Technical, Non-binding](#)Starting Page # **33**Starting Line # **35**Section **6.2.2.3.34.1**[MAC header should not be in message.](#)

Suggested Remedy

[Delete MAC header from table.](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0752**Comment submitted by: [Joe](#)[Kwak](#)[2002/01/18](#)Comment Type [Editorial](#)Starting Page # **33**Starting Line # **43**Section **6.2.2.3.34.1**[Element count name inconsistency.](#)

Suggested Remedy

[Change No Requests to No_Requests, as used in the for statement below.](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0753**Comment submitted by: **Joe****Kwak**

2002/01/18

Comment Type **Technical, Non-binding** Starting Page # **33** Starting Line # **43** Section **6.2.2.3.34.1****No_Grants** as an element counter is not needed. Can delete from message and then set **No_Requests** to 8 bit size.

Suggested Remedy

Delete **No_Grants** from table. Change size of **No_Requests** to 8 bits.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0754**Comment submitted by: [Joe](#)[Kwak](#)

2002/01/18

Comment	Type	Starting Page #	Starting Line #	Section
	Technical, Non-binding	33	52	6.2.2.3.34.1

Seems to be misuse of "direction" concept. In 6.2.14 of D5, the notion of direction is used with service flow parameters between to nodes to setablish an SFID and a CID. To setup a connection a direction is needed to establish the data source node (transmit) and the data sink node (receive) for the unidirectional connection. Once a connection is established, the direction is static and is no longer needed. The connection implies a direction. Bandwidth request/grants are made based on "bytes needed" at the data source node end of a connection, when the source node is not the scheduler. In Mesh mode the same notions should apply. The SS transmits requests to neighbors for all connections for which the SS is the data source node. i.e. the direction for reauests is implicitlv from the reauestor to the arantor. Likewise

Suggested Remedy

Delete direction from table and increase Channel size from 3 to 4 bits.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: **Accepted-Modified******Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items**

[Mika Kasslin](#) action item to either describe the usage of this bit or find another use for the bit.

Editor's Notes**Editor's Actions** [k\) done](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0755**Comment submitted by: **Joe****Kwak**

2002/01/18

Comment Type **Technical, Non-binding** Starting Page # **34** Starting Line # **13** Section **6.2.2.3.34.1**

Direction is not needed. Direction in grant is implicit.

Suggested Remedy

Delete direction from table and increas Channel size from 3 to 4 bits.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0756**Comment submitted by: **Joe****Kwak**

2002/01/18

Comment Type **Technical, Non-binding** Starting Page # **34** Starting Line # **28** Section **3.2.2.3.34.1**

Parameter list needs explicit definition or reference to definition elsewhere.

Suggested Remedy

Delete Direction from list. Provide complete definition for each parameter in list or referenc procedure or spec clause where definition is found.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0757**Comment submitted by: [Joe](#)[Kwak](#)[2002/01/18](#)Comment Type [Editorial](#)Starting Page # **35**Starting Line # **25**Section **6.2.2.3.34.2**[Table to be moved to position before parameter list , as done for all other messages.](#)

Suggested Remedy

[Move table to page 34 line 62.](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0758**Comment submitted by: [Joe](#)[Kwak](#)[2002/01/18](#)Comment Type [Technical, Non-binding](#)Starting Page # **35**Starting Line # **32**Section **6.2.2.3.34.2**[MAC header never included in message.](#)

Suggested Remedy

[Delete Mac header.](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [l\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0759**Comment submitted by: [Joe](#)[Kwak](#)[2002/01/18](#)

Comment Type [Technical, Non-binding](#) Starting Page # **35** Starting Line # **37** Section **3.2.2.3.34.2**
NumAssignments not needed.

Suggested Remedy

[Delete NumAssignments from table and from list of parameters.](#)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [l\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0760**Comment submitted by: [Joe](#)[Kwak](#)[2002/01/18](#)

Comment Type [Technical, Non-binding](#) Starting Page # **35** Starting Line # **18** Section **6.2.2.3.34.2**
[Sentence is confused.](#)

Suggested Remedy

[Change to "The ASSIGNMENTS in the list are ordered according to a \(higher layer\) routing protocol's ordering of the NODES IN THE current routing tree....."](#)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0761**Comment submitted by: [Joe](#)[Kwak](#)[2002/01/18](#)Comment Type [Technical, Non-binding](#)Starting Page # **36**Starting Line # **11**Section **3.2.2.3.34.3**[MAC header never in message.](#)

Suggested Remedy

[Delete MAC header.](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [|\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0762**Comment submitted by: [Joe](#)[Kwak](#)[2002/01/18](#)Comment Type [Technical, Non-binding](#)Starting Page # **36**Starting Line # **33**Section **6.2.2.3.34.3**[NetInfoPresent not needed.](#)

Suggested Remedy

[Delete NetInfoPresent from table and also from list of parameters.](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [|\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0763**

Comment submitted by: [Joe](#)

[Kwak](#)

2002/01/18

Comment Type **Technical, Non-binding**

Starting Page # **35**

Starting Line # **44**

Section **6.2.2.3.34.2**

Padding nibble required.

Suggested Remedy

Add 4 bit padding nibble.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0764**

Comment submitted by: Joe

Kwak

2002/01/18

Comment Type **Technical, Non-binding** Starting Page # **37** Starting Line # **29** Section **6.2.2.3.34.3**

Standard MAC address is 48 bits. Need to explain/define the mapping/masking/truncating used to derive 32 bit MAC address. Other listed parameters need more explicit definitions or reference to definitions.

Suggested Remedy

Provide definition for 32 bit MAC address. Provide complete definition or reference to definition for: Power & antenna, Channel (and base channel), Rcv Link Quality, Rcv PHY, Rcv Xmt Power, Version, Capabilities, Region code, Operator ID.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

First definition request is superceded. All other points are accepted.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Mika Kasslin is tasked with providing the necessary text.

Editor's Notes**Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0765**

Comment submitted by: [Joe](#)

[Kwak](#)

2002/01/18

Comment Type **Technical, Non-binding**

Starting Page # **37**

Starting Line # **25**

Section **3.2.2.3.34.3**

"selected in a round-robin manner" is not clear. How is the list to be ordered and why?

Suggested Remedy

[Provide additional clarification or example.](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0766**Comment submitted by: **Joe****Kwak**

2002/01/18

Comment Type **Editorial**Starting Page # **37**Starting Line # **13**Section **6.2.2.3.34.3**

Parameter list has only incomplete description. Complete definition is provided in text below. Need to reference complete definitions which are below.

Suggested Remedy

p37 lines 13 and 15,
p38 line45:

add ", as defined below" to end of line.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** **k) done****Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0767**

Comment submitted by: panyuh

joo

Comment	Type	Starting Page #	Starting Line #	Section
Add STFBC to section 8.3.5.2.2.5 & 8.3.5.2.2.6	Technical, Non-binding	158	41	

Suggested Remedy

Add STFBC to section 8.3.5.2.2.5 & 8.3.5.2.2.6

8.3.5.2.2.5 frequency encoding & decoding

This space-time frequency block code can simultaneously obtain space-time & frequency diversity gain, so that the performance of using two transmission antennas are almost equivalent to use 4 transmission antennas. ST-frequency code is composed of 2 parts:

One for replica generator: It reproduces OFDM symbol to make frequency diversity. The replica symbol is cyclically shifts the input data in sub-carrier basis. The amount of cyclic shift is based on the stochastic properties of the channel environments.

And then, to obtain space diversity two symbols made of replica generator are mapped into space-time block code. At the receiver the

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for Recommendation

Resolution of Group Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0768**

Comment submitted by: KiHo

Chung

Comment Type **Technical, Non-binding**

Starting Page # **198**

Starting Line # **26**

Section **8.3.5.3.4.5.1.3**

Concept for Ranging Code Set needs to be added to section 8.3.5.3.4.5.1.3.
See C802.16aP-02/19r1.

Suggested Remedy

Add RCS concept to section Concept to section 8.3.5.3.4.5.1.3.
8.3.5.3.4.5.1.3.

BS broadcasts the information of Ranging Code Set using in own BS.
SS quasi-randomly selects Ranging Code among the Ranging Code Set.

Add index for Ranging Code Set to Table 16 of IEEE P802.16/D5-2001.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0769**

Comment submitted by: KiHo

Chung

Comment Type **Technical, Non-binding**Starting Page # **66**Starting Line # **60**Section **6.2.11.2**

Ranging Code shall be selected quasi-randomly instead of randomly.

See C802.16aP-02/19r1.

Suggested Remedy

Modify section 6.2.11.2.

the SS that wishes to perform ranging must select randomly a Ranging Code (Long or Short), which will be transmitted on a Ranging Sub-Channel in a randomly chosen OFDMA symbol.

==> the SS that wishes to perform ranging must select quasi-randomly a Ranging Code (Long or Short) according to bellow rule, which will be transmitted on a Ranging Sub-Channel in a randomly chosen OFDMA symbol.

Ranging Code Index = {SS MAC Address} modulo {The number of Ranging Codes}

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0770**Comment submitted by: **Carl****Eklund**

Member

2002/02/24

Comment	Type	Starting Page #	Starting Line #	Section
---------	------	-----------------	-----------------	---------

	Technical, Non-binding			
--	------------------------	--	--	--

For operation in unlicensed band it might be good to include a mechanism for authenticating the BS

Suggested Remedy

Add mechanism for BS authentication

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected-Duplicate**

Reason for Group's Decision/Resolution

No text provided but a good suggestion

Group's Notes

MAC

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0771**

Comment submitted by: Shawn

Taylor

Member

2002/02/25

Comment	Type	Starting Page #	Starting Line #	Section
Harmonize the two OFDMA modes.	Technical, Satisfied (was			

Suggested Remedy

At a minimum have a single FFT size (2K). A single subcarrier permutation would also be desirable.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified****Reason for Group's Decision/Resolution**

The FFT size has been harmonized at 2K.

Technical rationale for 2 subcarrier permutations has been presented.

Group's Notes**Group's Action Items****Editor's Notes****Editor's Actions** 1) none needed

Comment Type changed to "Technical, Satisfied (was Binding)" based on ruling of Working Group Chair (3 April 2002) that comment has been accepted in comment resolution and incorporated.

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0772**

Comment submitted by: Roger

Marks

Member

2002/02/25

Comment	Type	Starting Page #	Starting Line #	Section	Title
	Editorial	1	1		

Title must match that of approved PAR P802.16a.

Suggested Remedy

Change title to "Draft Amendment to IEEE Standard for Local and Metropolitan Area Networks -- Part 16: Air Interface for Fixed Broadband Wireless Access Systems -- Medium Access Control Modifications and Additional Physical Layer Specifications for 2-11 GHz"

Make same change on Page 18, Line 1.

Proposed Resolution

Recommendation: **Accepted**

Recommendation by Roger Marks

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change title to "Draft Amendment to IEEE Standard for Local and Metropolitan Area Networks -- Part 16: Air Interface for Fixed Broadband Wireless Access Systems -- Medium Access Control Modifications and Additional Physical Layer Specifications for 2-11 GHz"

Make same change on Page 18, Line 1.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0773**

Comment submitted by: Rémi

Chayer

Member

2002/02/22

Comment	Type	Technical, Non-binding	Starting Page #	1	Starting Line #	36	Section	Abstract
---------	------	------------------------	-----------------	---	-----------------	----	---------	----------

Throughout the document, mainly in the PHY section, there is some wording specifying certain PHY modes that are applicable to licensed and/or license-exempt bands only.

Suggested Remedy

Modify as follows:

Abstract: This document amends IEEE Standard 802.16 by enhancing the medium access control layer and providing additional physical layer specifications in support of broadband wireless access at frequencies from 2-11 GHz. The resulting standard specifies the air interface of fixed (stationary) broadband wireless access systems providing multiple services. The medium access control layer is capable of supporting multiple physical layer specifications optimized for the frequency bands of application. The standard includes particular physical layer specification applicable to systems operating between 2 and 66 GHz. It supports point-to-multipoint architectures and, ~~it~~

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Modify as follows:

Abstract: This document amends IEEE Standard 802.16 by enhancing the medium access control layer and providing additional physical layer specifications in support of broadband wireless access at frequencies from 2-11 GHz. The resulting standard specifies the air interface of fixed (stationary) broadband wireless access systems providing multiple services. The medium access control layer is capable of supporting multiple physical layer specifications optimized for the frequency bands of application. The standard includes particular physical layer specification applicable to systems operating between 2 and 66 GHz. It supports point-to-multipoint and optional mesh topologies.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0774**

Comment submitted by: [Jon](#)

[Labs](#)

[Member](#)

Comment Type [Editorial](#)

Starting Page # **1**

Starting Line # **43**

Section [Abstract](#)

'specification' should be 'specifications'

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

'specification' should be 'specifications'

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0775**

Comment submitted by: Rémi

Chayer

Member

2002/02/22

Comment Type **Technical, Non-binding** Starting Page # **7** Starting Line # **61** Section **Contents**

Throughout the document, mainly in the PHY section, there is some wording specifying certain PHY modes that are applicable to licensed and/or license-exempt bands only.

Suggested Remedy

Modify as follows:

6.2.6.6 ~~License-exempt~~ Optional mesh topology support..... 55

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

Modify as follows:

6.2.6.6 ~~License-exempt~~ Optional mesh topology support..... 55

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0776**

Comment submitted by: Rémi

Chayer

Member

2002/02/22

Comment Type **Technical, Non-binding** Starting Page # **8** Starting Line # **6** Section **Contents**

Throughout the document, mainly in the PHY section, there is some wording specifying certain PHY modes that are applicable to licensed and/or license-exempt bands only.

Suggested Remedy

Modify as follows:

6.2.7.6.4 ~~License-exempt~~Optional mesh mode..... 58

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

Modify as follows:

6.2.7.6.4 ~~License-exempt~~Optional mesh mode..... 58

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0777**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment Type **Editorial**Starting Page # **13**Starting Line # **51**Section **6.2.4.5.2**

There is no special definition of "ARQ fragment" as opposite to fragments of another sort. The term "ARQ fragment" is somehow misleading because sometimes it is a complete MAC PDU

Suggested Remedy

1. Give a proper name to "ARQ Fragment", for example "ARQ Block" or "ARQ unit". Add a definition of ARQ block as a unit of retransmission, either a MACPDU or a fragment of thereof

2. Replace "ARQ fragment" with "ARQ Block" throughout the document.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Include definition of ARQ Fragment

Reason for Group's Decision/Resolution**Group's Notes**

MAC

Group's Action Items

Bob to provide definition by March 22 [see IEEE C802.16a-02/44]

Editor's Notes**Editor's Actions** k) done

Implemented according to Bob's submission 02/44

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0778**

Comment submitted by: **Jon**

Labs

Member

Comment Type **Editorial**

Starting Page # **15**

Starting Line # **10**

Section

There seems to be two tables labelled Table 149 and two table labelled Table 150 in the document.

Suggested Remedy

Correct the numbering of the tables.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Correct the numbering of the tables.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0779**

Comment submitted by: Rémi

Chayer

Member

2002/02/22

Comment	Type Technical, Non-binding	Starting Page # 18	Starting Line # 37	Section 1.1
---------	------------------------------------	---------------------------	---------------------------	--------------------

Throughout the document, mainly in the PHY section, there is some wording specifying certain PHY modes that are applicable to licensed and/or license-exempt bands only.

It is not to an air interface standard to decide which technology should be used in one band or another; this is purely to the discretion of the Regulators to define the minimum technical requirements for coexistence purpose. I believe the segregation between the licensed and license-exempt bands contained in the document, probably a reminiscence of TG4, increases the number of PHY modes with no significant Air Interface standardization differences. thus weakening the document.

Suggested Remedy

This issue appears in many sections of the document. I will address them in this comment and following.

This standard specifies the physical layer (PHY) and medium access control layer (MAC) of the air interface of interoperable point-to-multipoint (and, ~~in license-exempt bands~~; optional mesh topology) broadband wireless access systems. The specification enables access to data, video, and voice services with a specified quality of service. The medium access control layer is structured to support multiple physical layer specifications, each suited to a particular operational environment, both in licensed bands designated for public network access and in license-exempt bands. It applies to systems operating between 2 and 66 GHz, where such services are permitted.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

This standard specifies the physical layer (PHY) and medium access control layer (MAC) of the air interface of interoperable point-to-multipoint (and, ~~in license-exempt bands~~; optional mesh topology) broadband wireless access systems. The specification enables access to data, video, and voice services with a specified quality of service. The medium access control layer is structured to support multiple physical layer specifications, each suited to a particular operational environment, both in licensed bands designated for public network access and in license-exempt bands. It applies to systems operating between 2 and 66 GHz, where such services are permitted.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0780**

Comment submitted by: Rémi

Chayer

Member

2002/02/22

Comment Type **Technical, Non-binding** Starting Page # **18** Starting Line # **48** Section **1.1**

Throughout the document, mainly in the PHY section, there is some wording specifying certain PHY modes that are applicable to licensed and/or license-exempt bands only.

Suggested Remedy

~~In license-exempt bands, w~~Where optional mesh systems are addressed, a system consists of an 802.16 MAC and PHY implementation with at least two mesh nodes communicating via a multipoint-to-multipoint radio air interface, along with the interfaces to external networks and services transported by the MAC and PHY.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

~~In license-exempt bands, w~~Where optional mesh systems are addressed, a system consists of an 802.16 MAC and PHY implementation with at least two mesh nodes communicating via a multipoint-to-multipoint radio air interface, along with the interfaces to external networks and services transported by the MAC and PHY.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0781**

Comment submitted by: Anader

Benyamin-Seeyar

Member

2002/02/22

Comment Type **Technical, Non-binding** Starting Page # **18** Starting Line # **60** Section **1.2.2**

"The channel bandwidths used in this physical environment typically vary from 1.5 to 14 MHz" is not correct. At least, for the upper limit given in Tables 172 and 195 there is mention of channel bandwidths up to 28 MHz.

Suggested Remedy

A typical channel bandwidth "from 1.5 to 14 MHz" has to be changed to "from 1.5 to 28 MHz".

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

A typical channel bandwidth "from 1.5 to 14 MHz" has to be changed to "from 1.5 to 28 MHz".

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0782**Comment submitted by: **Bob****Nelson**

Member

2002/02/25

Comment Type **Editorial**Starting Page # **19**Starting Line # **13**Section **1.2.3**

There are no "amendments" when the document is merged

Suggested RemedyChange "the PHY and MAC amendments introduce mechanisms ..."
to "the PHY and MAC provide mechanisms ..."**Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**Change "the PHY and MAC amendments introduce mechanisms ..."
to "the PHY and MAC provide mechanisms ..."**Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0783**Comment submitted by: **Anader****Benyamin-Seeyar**

Member

2002/02/22

Comment Type **Technical, Non-binding** Starting Page # **19** Starting Line # **26** Section **1.2.4**

Table 145 has too many rows and options and it can easily be reduced.

Suggested Remedy

To harmonize all the PHY options, remove **licensed and **licensed-exempt** from the second column (applicability column) of the table. This change will simplify the table to 4 rows rather than 6 rows.**

Designation	Applicability	PHY	MAC	Duplexing
WirelessMAN-SC	10-66 GHz	SC	Basic	TDD, FDD, HFDD

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

vote: in favor: 17, against: 17

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0784**

Comment submitted by: Rémi

Chayer

Member

2002/02/22

Comment Type **Technical, Non-binding** Starting Page # **19** Starting Line # **26** Section **1.2.4**

Throughout the document, mainly in the PHY section, there is some wording specifying certain PHY modes that are applicable to licensed and/or license-exempt bands only.

Suggested Remedy

In the "Applicability" column of Table 145, remove the distinction between licensed and license-exempt for all 2-11 GHz band.

Designation	Applicability	PHY	MAC	eD	Duplexing
WirelessMAN-SC	10-66 GHz	SC	Basic		TDD, FDD, HFDD
WirelessMAN-SC2	2-11 GHz	SC2	Basic, (ARQ), (STC), (AAS)		TDD, FDD
		SC2	Basic, (ARQ), (STC), DFS for license-exempt bands, (AAS)		TDD

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Rejected****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0785**

Comment submitted by: Yigal

Leiba

Member

2002/02/25

Comment Type **Technical, Non-binding** Starting Page # **19** Starting Line # **33** Section **1.2.4**

There is no reason why OFDM/OFDMA not support HFDD operation, that may enable lowering the cost of SS equipment

Suggested Remedy

Add 'HFDD' to the allowed duplexing modes for OFDM an OFDMA (for 2-11GHz licensed bands)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

add HFDD to SC2, OFDM and OFDMA in the overview table

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0786**

Comment submitted by: Anader

Benyamin-Seeyar

Member

2002/02/22

Comment Type **Editorial** Starting Page # **19** Starting Line # **48** Section **1.2.4**

Lines 48 to 49 are NOT needed. This creates more confusion into the standard.

Suggested Remedy

Delete Lines 48 to 49. There is no need to have separation between licensed and licensed-exempt band Air Interface standard.

~~Air interfaces compliant with the requirements for license exempt usage may also be referenced as Wire-less HUMAN systems. Support of any of the indicated duplexing modes suffices to achieve compliance.~~

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions l) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0787**

Comment submitted by: Rémi

Chayer

Member

2002/02/22

Comment Type **Technical, Non-binding** Starting Page # **19** Starting Line # **48** Section **1.2.4**

Throughout the document, mainly in the PHY section, there is some wording specifying certain PHY modes that are applicable to licensed and/or license-exempt bands only.

Suggested Remedy

Modify the paragraphs as follows:

"Air interfaces compliant with the requirements for license-exempt usage **must support DFS and** may also be referenced as WirelessHUMAN systems. Support of any of the indicated duplexing modes suffices to achieve compliance.

In order to claim compliance of a system with the IEEE 802.16 standard for licensed frequencies between 10 and 66 GHz, its PHY shall comply with the **SC2** PHY as described in clause 8.2.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: **Rejected******Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0788**Comment submitted by: [Avraham](#)[Freedman](#)

Member

[2002/02/20](#)Comment Type [Editorial](#)Starting Page # **19**Starting Line # **53**Section **1.2.4**[I believe the intention is 10-66 GHz SC](#)

Suggested Remedy

[Change "SC2" to "SC"](#)Proposed Resolution Recommendation: **Accepted**Recommendation by [Avraham Freedman](#)[Change "SC2" to "SC"](#)

Reason for Recommendation

[As commneted by so many](#)

Resolution of Group

Decision of Group: **Accepted**[Change "SC2" to "SC"](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0789**Comment submitted by: [Jerome](#)[Krinoch](#)

Member

[2002/02/25](#)Comment Type [Editorial](#)Starting Page # **19**Starting Line # **53**Section **1.2.4**[10-66 GHz uses the SC PHY, not SC2.](#)

Suggested Remedy

[pg 19, line 53 change SC2 to SC.](#)

Proposed Resolution Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**[see 0788](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [l\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0790**Comment submitted by: [Jon](#)[Labs](#)[Member](#)Comment Type [Editorial](#)Starting Page # **19**Starting Line # **53**Section **1.2.4**[I believe 'SC2' should be 'SC'.](#)

Suggested Remedy

[Change 'SC2' to 'SC'.](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**[see 0788](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [1\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0791**Comment submitted by: [Bob](#)[Nelson](#)[Member](#)[2002/02/25](#)Comment Type [Editorial](#)Starting Page # **19**Starting Line # **53**Section **1.2.4**[Incorrect version of SC specified](#)

Suggested Remedy

[Change SC2 to SC](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**[see 0788](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [1\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: [4b](#)

Comment Date

Comment # [0792](#)Comment submitted by: [Shawn](#)[Taylor](#)

Member

[2002/02/25](#)Comment Type [Editorial](#)Starting Page # [19](#)Starting Line # [53](#)

Section

[SC2 should read SC](#)Suggested Remedy
[fix typo](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: [Accepted-Duplicate](#)[see 0788](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [1\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: [4b](#)

Comment Date

Comment # [0793](#)Comment submitted by: [Lei](#)[Wang](#)

Member

[2002/02/25](#)Comment Type [Editorial](#)Starting Page # [19](#)Starting Line # [53](#)

Section

[typo](#)Suggested Remedy
[change "SC2 PHY" to "SC PHY".](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: [Accepted-Duplicate](#)[see 0788](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [1\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0794**Comment submitted by: **Anader****Benyamin-Seeyar**

Member

2002/02/22

Comment	Type	Starting Page #	Starting Line #	Section
	Technical, Non-binding	20	1	1.2.4

The first paragraph on page 20 is NOT needed (see previous comments).

Suggested Remedy

Delete the paragraph:

"In order to claim compliance of a system with the IEEE 802.16 standard for license-exempt frequencies, its PHY shall comply with the OFDMPHY as described in clause 8.3.5. The PHY may in addition comply with the OFDMA PHY as described in clause 8.3.5. It shall further comply with all applicable requirements set out in clause 8.3.3."

Since there is no special feature of OFDM/OFDMA based technology that separats it from other capable PHY technology (i.e.,

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Rejected
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Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes	Editor's Actions) none needed
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Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0795**

Comment submitted by: Rémi

Chayer

Member

2002/02/22

Comment	Type	Starting Page #	Starting Line #	Section
	Technical, Non-binding	20	1	1.2.4

Throughout the document, mainly in the PHY section, there is some wording specifying certain PHY modes that are applicable to licensed and/or license-exempt bands only.

Suggested Remedy

Delete the whole paragraph:

~~"In order to claim compliance of a system with the IEEE 802.16 standard for license exempt frequencies, its PHY shall comply with the OFDM PHY as described in clause 8.3.5. The PHY may in addition comply with the OFDMA PHY as described in clause 8.3.5. It shall further comply with all applicable requirements set out in clause 8.3.3."~~

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0796**

Comment submitted by: Yigal

Leiba

Member

2002/02/25

Comment Type **Technical, Non-binding** Starting Page # **20** Starting Line # **1** Section **1.2.4**

There is no technical justification why implementations in the license-exempt bands should have to implement an OFDM PHY if they only require use of the OFDMA PHY

Suggested Remedy

Change lines 1 to 5 to read "In order to claim compliance of a system with the IEEE 802.16 standard for license-exempt frequencies, its PHY shall comply with the OFDM PHY as described in clause 8.3.5, or with the OFDMA PHY as described in clause 8.3.5. It shall further comply with all applicable requirements set out in clause 8.3.3."
(change also a similar sentence in page 152)

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Rejected****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0797**

Comment submitted by: Panyuh

Joo

Member

2002/02/25

Comment Type **Editorial**

Starting Page # **20**

Starting Line # **18**

Section

Change

"advanced antenna system (AAS): A system exploiting the availability of more than one antenna to improve communication."

to

"advanced antenna system (AAS): An antenna system exploiting the availability of more than one antenna to improve communication."

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0798**Comment submitted by: **Anader****Benyamin-Seeyar**

Member

2002/02/22

Comment Type **Editorial**Starting Page # **20**Starting Line # **19**Section **3.0**

The definition of AAS is weak.

Suggested Remedy

Change the definition to :

"Adaptive antenna system (AAS): A system exploiting more than one antenna to improve the coverage and the system capacity."**Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Change the definition to :

"Adaptive antenna system (AAS): A system exploiting more than one antenna to improve the coverage and the system capacity."

move Alamouti and stc text from underneath AAS section headers.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0799**

Comment submitted by: **Bob**

Nelson

Member

2002/02/25

Starting Page # **20**

Starting Line # **35**

Section **3.61**

Comment Type **Editorial**

Should be singular

Suggested Remedy

Change "PSs" to "PS" on lines 35 and 44

Proposed Resolution Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change "PSs" to "PS" on lines 35 and 44

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0800**

Comment submitted by: Anader

Benyamin-Seeyar

Member

2002/02/22

Comment Type Editorial

Starting Page # 20

Starting Line # 37

Section 3.0

Reduce duplications.

Suggested Remedy

Reduce the definition of Tx/Rx Transition Gap and Rx/Tx Transition Gap:

3.61 Tx/Rx Transition Gap (TTG) : The Tx/Rx Transition Gap is a gap between the downlink burst and the subsequent uplink burst. This gap allows time for the BS to switch from transmit to receive mode and SSs to switch from receive to transmit mode. During this gap, the BS and SS are not transmitting modulated data but simply allowing the BS transmitter carrier to ramp down, the Tx/Rx antenna switch to actuate, and the BS receiver section to activate. After the gap, the BS receiver shall look for the first symbols of uplink burst. This gap is an integer number of **Physical Slots (PSs)** durations and starts on a PS boundary.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Reduce the definition of Tx/Rx Transition Gap and Rx/Tx Transition Gap:

3.61 Tx/Rx Transition Gap (TTG) : The Tx/Rx Transition Gap is a gap between the downlink burst and the subsequent uplink burst. This gap allows time for the BS to switch from transmit to receive mode and SSs to switch from receive to transmit mode. During this gap, the BS and SS are not transmitting modulated data but simply allowing the BS transmitter carrier to ramp down, the Tx/Rx antenna switch to actuate, and the BS receiver section to activate. After the gap, the BS receiver shall look for the first symbols of uplink burst. This gap is an integer number of **Physical Slots (PSs)** durations and starts on a PS boundary.

3.62 Rx/Tx Transition Gap (RTG) : The Rx/Tx Transition Gap **has a reverse role as TTG. That is, it is a gap between the uplink burst and the subsequent downlink burst.** This gap allows time for the BS to switch from receive to transmit mode and SSs to switch from transmit to receive mode. During this gap, the BS and SS are not transmitting modulated data but simply allowing the BS transmitter carrier to ramp up. the Tx/Rx antenna switch to actuate. and the SS receiver sections to activate. ~~After the gap.~~

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0801**

Comment submitted by: Jerome

Krinock

Member

2002/02/25

Comment Type **Editorial**Starting Page # **20**Starting Line # **46**Section **3.63**

Our definition of Turbo Decoding is incomplete.

Suggested Remedy

Replace the definition

soft input soft output decoding

with

iterative decoding, using soft inputs and soft outputs

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group**Decision of Group: **Accepted**

Replace the definition

soft input soft output decoding

with

iterative decoding, using soft inputs and soft outputs

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes**

Editor's Actions k) done

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0802**

Comment submitted by: Jerome

Krinock

Member

2002/02/25

Comment Type **Technical, Satisfied (was** Starting Page # **20** Starting Line # **47** Section **3.0**

The document lacks a definition of the OFDM signal, and also does not explain the connection between the OFDM carrier indices and the transmitted signal.

Currently, our OFDM description indexes carriers with both positive and negative numbers; i.e. -128 to +128. The "DC carrier" has index 0 and is not used. In contrast, OFDMA indexes carriers with only positive numbers; i.e. 0 to 2048.

Suggested Remedy

In clause 3, add the following definitions

carrier index An index number identifying a particular used carrier in an OFDMA signal. Carrier indices are greater than or equal to zero.

DC carrier In an OFDM or OFDMA signal, the carrier whose frequency would be equal to the RF center frequency of the station.

frequency offset index An index number identifying a particular carrier in an OFDM or OFDMA signal, which is related to its carrier index. Frequency offset indices may be positive or negative.

RF center frequency The center of the frequency band in which a BS or SS is intended to transmit.

Proposed Resolution

Recommendation: **Accepted**

Recommendation by Jerry Krinock

As remedy

Reason for Recommendation

Answer to Nico's question: Because the "carrier index" exists only for OFDMA signals, we should not use it in the definition of "frequency offset index", which exists for both OFDMA and OFDM.

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0803**

Comment submitted by: **Anader**

Benyamin-Seeyar

Member

2002/02/22

Comment Type **Editorial**

Starting Page # **20**

Starting Line # **55**

Section **4.0**

Definition of AGC.

Suggested Remedy
Change:

AGC --> "**Adaptive** Gain Control" to "**Automatic** Gain Control"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change:

AGC --> "**Adaptive** Gain Control" to "**Automatic** Gain Control"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0804**

Comment submitted by: Avraham

Freedman

Member

2002/02/20

Comment	Type	Starting Page #	Starting Line #	Section
	Editorial	20	56	4

BER should be Bit Error Ratio, as I was told by Jose

Suggested Remedy

Change "Rate" to "Ratio"

Proposed Resolution Recommendation: **Accepted**

Recommendation by Avraham Freedman

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

Change "Rate" to "Ratio"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0805**

Comment submitted by: Anader

Benyamin-Seeyar

Member

2002/02/22

Comment	Type	Starting Page #	Starting Line #	Section
	Editorial	20	59	4.0

There are many places within the document that uses BTC rather than TPC!

Suggested Remedy

Change "Block Turbo Code (BTC)" to "Turbo Procu~~t~~ Code (TPC)"Proposed Resolution Recommendation: **Accepted**

Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Modified**

replace every occurrence of TPC with BTC, and delete TPC definition

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0806**Comment submitted by: [Anader](#)[Benyamin-Seeyar](#)

Member

[2002/02/22](#)Comment Type [Editorial](#)Starting Page # **21**Starting Line # **38**Section **4.0**[For consistency, correct the lower case NLOS](#)

Suggested Remedy

[Correct the description of NLOS as:](#)[NLOS --> Non Line Of Sight](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**[Change definition of NLOS to "non-line of sight"](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0807**Comment submitted by: [Avraham](#)[Freedman](#)

Member

[2002/02/20](#)Comment Type [Editorial](#)Starting Page # **21**Starting Line # **41**Section **4**[The two columns merge](#)

Suggested Remedy

[Move the "explanation" column further by a space](#)

Proposed Resolution

Recommendation: **Accepted**Recommendation by [Avraham Freedman](#)

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**[Move the "explanation" column further by a space](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0808**

Comment submitted by: Avraham

Freedman

Member

2002/02/20

Comment Type **Editorial**

Starting Page # **22**

Starting Line # **0**

Section **6**

The header of all the MAC chapter (p.22 - p.73) is still IEEE P802.16a/D1-2001

Suggested Remedy

Change header to IEEE P802.16a/D2-2002

Proposed Resolution

Recommendation: **Accepted-Modified**

Recommendation by Avraham Freedman

Change header to "IEEE P802.16a/D3-2002."

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Change header to "IEEE P802.16a/D3-2002."

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0809**

Comment submitted by: Hai

Wang

Other

2002/02/21

Comment Type **Editorial**Starting Page # **22**Starting Line # **0**

Section

The version notation is wrong.

The right of page headers on page 22-73 should be "IEEE 802.16a/D2-2002", not "IEEE P802.16a/D1-2001".

Suggested RemedyChange "IEEE P802.16a/D1-2001"
to "IEEE P802.16a/D2-2002"**Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Duplicate**

see 808

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)

Ballot Number: **4b**

Comment Date

Comment # **0810**

Comment submitted by: Nico

van Waes

Member

2002/02/25

Comment Type [Technical, Satisfied \(was](#)

Starting Page # [22](#)

Starting Line # [1](#)

Section [6](#)

[Provided as requested in session #17](#)

Suggested Remedy

[update mesh overview as described in C80216a-02/30](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: [Accepted-Modified](#)

[update mesh overview as described in C80216a-02/30r1](#)

[Remove from C80216a-02/30, section 6.2, the paragraph beginning with "The mesh MAC is connectionless...."](#)

Reason for Group's Decision/Resolution

Group's Notes

[MAC](#)

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0811**Comment submitted by: **Panyuh****Joo**

Member

2002/02/25

Comment Type **Editorial** Starting Page # **22** Starting Line # **11** Section **6**
Change

"from the base station to the user,"

to

"from the base station to the subscriber station,"

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

"from the base station to the user," to

"from the BS to the SS,"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0812**

Comment submitted by: Jiacheng

Wang

Other

2002/02/20

Comment Type **Technical, Non-binding**

Starting Page # **22**

Starting Line # **11**

Section **6**

It is possible that more than one user connect to a subscriber station.

Also See definitions 3.12 "Downlink" .

Suggested Remedy

Change

"from the base station to the user,"

to

"from the base station to the subscriber station,"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Duplicate

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0813**

Comment submitted by: **Bob**

Nelson

Member

2002/02/25

Comment Type **Editorial**

Starting Page # **22**

Starting Line # **28**

Section **6**

Should be singular

Suggested Remedy

Change "360 degrees steerable" to "360 degree steerable"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

360 degrees steerable" to "360° steerable

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0814**

Comment submitted by: Avraham

Freedman

Member

2002/02/20

Comment Type **Editorial**Starting Page # **22**Starting Line # **30**Section **6**

The sentence: "where forwarding to systems more hops away from the mesh BS is no longer required" is not so clear (especially at this stage when the new reader first encounters the word "hop")

Suggested Remedy

Change "where forwarding to systems more hops away from the mesh BS is no longer required" to "where only a connection to a single point is needed"

Proposed Resolution**Recommendation: Accepted****Recommendation by** Avraham Freedman

Change "where forwarding to systems more hops away from the mesh BS is no longer required" to "where only a connection to a single point is needed"

Reason for Recommendation

The sentence is still there in C80216a-02/30r1, and is still not so clear. Any better wording will be welcome.

Resolution of Group**Decision of Group: Accepted**

Change "where forwarding to systems more hops away from the mesh BS is no longer required" to "where only a connection to a single point is needed"

Reason for Group's Decision/Resolution**Group's Notes**

MAC

Group's Action Items**Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0815**

Comment submitted by: Nico

van Waes

Member

2002/02/25

Comment Type [Technical, Satisfied \(was](#)Starting Page # **22**Starting Line # **31**Section **6.3/6.4**[Provided as requested in session #17](#)

Suggested Remedy

[update mesh SAP as described in C80216a-02/30](#)

Proposed Resolution Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**[update mesh SAP as described in C80216a-02/30r1](#)

Reason for Group's Decision/Resolution

Group's Notes

[MAC](#)

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0816**

Comment submitted by: Vladimir Yanover

Member

2002/02/25

Comment	Type	Technical, Non-binding	Starting Page #	22	Starting Line #	31	Section	6
---------	------	------------------------	-----------------	----	-----------------	----	---------	---

This comment requests a change in the base 802.16-D5 document. A motive is

1. to fix a problem encountered in the definition of MAC_CREATE_CONNECTION.request primitive
2. to employ multicast data transmissions

The motive are explained in details in the submission "Multicast Data in 802.16 MAC"

Suggested Remedy

1. Add one more subsection 6.1.1.1.2 as specified by the document "Multicast Data in 802.16 MAC" by Ken Stanwood and Vladimir Yanover under the title "Changes in Subsection 6.1.1.1.2"
2. Add a new section 6.1.1.1.5 as specified by the document "Multicast Data in 802.16 MAC" under the title "New Section 6.1.1.1.5"

Proposed Resolution Recommendation: **Accepted**

Recommendation by Vladimir Yanover

Reason for Recommendation**Resolution of Group** Decision of Group: **Accepted-Modified**

Section regarding broadcast CID is rejected

1. Establishment of Multicast Connection
 - 1.1. Changes in subsection 6.1.1.1.4

For a downlink multicast service, a MAC_CREATE_CONNECTION.request is issued by the CS at the BS for each SS that is associated with the service. An individual request contains the MAC Address of the SS to which the connection establishment is directed. It is stimulated by either the entry of the SS into the system or the provisioning of the service flow if this happens after the SS enters the system.

After the BS MAC receives such a request. it establishes a DL MAC

Reason for Group's Decision/Resolution

Broadcast ID provides no information on data being transmitted. There is no way for a subscriber station to interpret it.

Group's Notes

MAC

Group's Action Items

Ken Stanwood to provide revised text for multicast

Editor's Notes Editor's Actions k) done

Group action item completed. Text in resolution of group.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: [4b](#)

Comment Date

Comment # [0817](#)Comment submitted by: [Lei](#)[Wang](#)

Member

[2002/02/25](#)

Comment Type [Technical, Non-binding](#) Starting Page # [22](#) Starting Line # [43](#) Section

[needs a precise description about ARQ feedback as payload, not a sub-header, for Downlink type encoding.](#)

Suggested Remedy

- [change the description of entry 0x0A in Table 146 to:
ARQ feedback payload piggybacked and non-ARQ packing sub-headers present](#)
- [change the description of entry 0x0C in Table 146 to:
ARQ feedback payload piggybacked and ARQ packing sub-header present.](#)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: [Accepted-Modified](#)[Insert "payload" after "ARQ-Feedback" for codes 0A and 0C in table 145](#)

Reason for Group's Decision/Resolution

Group's Notes

[MAC](#)

Group's Action Items

Editor's Notes Editor's Actions [k\) done](#)[The editor assumes the group meant table 146 instead of 145.](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0818**

Comment submitted by: Lei

Wang

Member

2002/02/25

Comment Type **Technical, Non-binding** Starting Page # **23** Starting Line # **19** Section

needs a precise description about ARQ feedback as payload, not a sub-header, for Uplink type encoding.

Suggested Remedy

1. change the description of entry 0x0A in Table 146 to:
ARQ feedback payload piggybacked and non-ARQ packing sub-headers present
2. change the description of entry 0x0B in Table 146 to:
ARQ feedback payload piggybacked and non-ARQ packing and Grant Management sub-headers present
3. change the description of entry 0x0C in Table 146 to:

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Modified**

Insert "payload" after "ARQ-Feedback" for codes 0A, 0B, 0C and 0D in table 146

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes Editor's Actions k) done

editor assumes the group means table 147

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0819**

Comment submitted by: Subbu

Ponnuswamy

Member

2002/02/24

Comment	Type	Technical, Satisfied (was	Starting Page #	23	Starting Line #	29	Section	6.2.2
---------	------	---------------------------	-----------------	----	-----------------	----	---------	-------

Remove the inconsistency between the baseline document (P802.16/D5-2001) and this P802.16a/D2-2002. The description of the the ARQ packing/fragmentation sub-headers should go under clause 6.2.2.2. Only the description of how the packing sub-headers are used to pack multiple SDUs should go under clause 6.2.3.4. Also the packing/fragmentation sub-headers are different for ARQ and non-ARQ connections.

Also clarify the use of ARQ Feedback sub-header. ARQ Feedback is not really a sub-header; It only indicates the presense of ARQ feedback information as the last packed payload

Suggested Remedy

Use text and tables from <C802.16a-02/21>, Specific Changes to P802.16a/D2-2002 - #1

Proposed Resolution	Recommendation:	Recommendation by
----------------------------	------------------------	--------------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Accepted-Modified
----------------------------	---

Use specified changes with following modifications

Merge portions of 11-bit FSN into single field (comment #867)

Replace "ARQ connection" with "ARQ-enabled connection" (comment #876)

Reason for Group's Decision/Resolution**Group's Notes**

MAC

Group's Action Items

Editor's Notes	Editor's Actions k) done
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Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0820**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment Type **Technical, Non-binding**Starting Page # **23**Starting Line # **40**Section **6.2.2.3**

There is no DL-UL-MAP anymore

Suggested Remedy

Delete Type value = 33 from the Table 148 reserved for DL-UL-MAP

Proposed Resolution

Recommendation: **Accepted**

Recommendation by Vladimir Yanover

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Delete Type value = 33 from the Table 148 reserved for DL-UL-MAP

Reason for Group's Decision/Resolution

Group's Notes

MAC

Group's Action Items

Editor's Notes

Editor's Actions k) done

moved and renumbered in accordance with my proposal, even though the group appearantly failed to look at it

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0821**

Comment submitted by: Yigal

Leiba

Member

2002/02/25

Comment Type **Editorial**Starting Page # **23**Starting Line # **41**Section **6.2.2.3**

DL-UL-MAP is no longer with us

Suggested Remedy

Remove DL-UL-MAP from table 148, and update the 'Type' column numbers

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

MAC

Group's Action Items

Editor's Notes

Editor's Actions l) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0822**

Comment submitted by: **Bob**

Nelson

Member

2002/02/25

Comment Type **Technical, Non-binding**

Starting Page # **23**

Starting Line # **41**

Section **6.2.2.3**

This message was voted out at Session 17

Suggested Remedy

Remove the entry for the DL-UL-MAP from table 148

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

MAC

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0823**

Comment submitted by: Panyuh

Joo

Member

2002/02/25

Comment Type **Editorial**

Starting Page # **23**

Starting Line # **44**

Section **Table 148**

Change "AAS Channel State Feedback" to "AAS Channel State Feedback Request".

Change "AAS Channel State Response" to "AAS Channel State Feedback Response".

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change "AAS Channel State Feedback" to "AAS Channel State Feedback Request".

Change "AAS Channel State Response" to "AAS Channel State Feedback Response".

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0824**Comment submitted by: [Jiacheng](#)[Wang](#)

Other

[2002/02/20](#)Comment Type [Editorial](#)Starting Page # **23**Starting Line # **44**Section [Table 148](#)

type error

Suggested Remedy

[Change "AAS Channel State Feedback" to "AAS Channel State Feedback Request".](#)[Change "AAS Channel State Response" to "AAS Channel State Feedback Response".](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**[see 823](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [l\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0825**

Comment submitted by: Anader

Benyamin-Seeyar

Member

2002/02/22

Comment Type **Editorial**

Starting Page # **23**

Starting Line # **45**

Section **6.2.2.3**

Table 148 has two items CSF-REQ and CFS-RSP that are described in clause 6.2.2.3.31.1 and as it is described, there is no relation to AAS.

Suggested Remedy

Remove the AAS from both of "**AAS** Channel State Feedback" and "**AAS** Channel State Response" message descriptions.

Unless, there is a unique messaging format provided for AAS which I have not seen within the text.

35	CSF-REQ	AAS Channel State Feedback	Basic
36	CSF-RSP	AAS Channel State Response	Basic

Proposed Resolution **Recommendation:** **Recommendation by**

Reason for Recommendation

Resolution of Group **Decision of Group: Rejected**

Reason for Group's Decision/Resolution

These messages are listed under the header "support of optional AAS" in 6.2.2.3.33. As defined, they're only used in AAS.

Group's Notes

MAC

Group's Action Items

Editor's Notes **Editor's Actions** 1) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0826**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment	Type	Technical, Non-binding	Starting Page #	24	Starting Line #	2	Section	6.2.2.3.2
---------	------	------------------------	-----------------	----	-----------------	---	---------	-----------

The named section provides a format of DL-MAP message that has the following differences from the one figured in the base D5 document :

1. "PHY Synchronization" field specified as having 8 bits while D5 defines it as of "variable length" and refers to correspondent PHY section.
2. "Allocation_Start_Time" field is added

SC and OFDMA PHY sections already have (different) definitions of Synchronization field that also include Allocation Start Time field.

Suggested Remedy

1. Delete the section 6.2.2.3.2 Downlink MAP (DL-MAP) message
2. In table 206, after "Frame Number" add 32 bits Allocation_Start_Time field

Proposed ResolutionRecommendation: **Accepted**

Recommendation by Vladimir Yanover

Reason for Recommendation**Resolution of Group**Decision of Group: **Superseded****Reason for Group's Decision/Resolution**

828

Group's Notes

MAC

Group's Action Items**Editor's Notes**

Editor's Actions |) none needed

Really no clue what the group thinks this is superseded by. MAP deleted as suggested, as there are no mods left

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0827**Comment submitted by: [Yigal](#)[Leiba](#)

Member

[2002/02/25](#)Comment Type [Editorial](#)Starting Page # **24**Starting Line # **15**Section **6.2.2.3**

PHY synchronization field is not 8 bits wide. Field width is specified in the PHY section.

Suggested Remedy[Leave 'Size' field blank](#)**Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: [Accepted-Duplicate](#)**[Leave 'Size' field blank](#)**Reason for Group's Decision/Resolution**[828](#)**Group's Notes**[MAC](#)**Group's Action Items****Editor's Notes****Editor's Actions** [|\) none needed](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0828**Comment submitted by: [Bob Nelson](#)[Nelson](#)

Member

[2002/02/25](#)Comment Type [Technical, Non-binding](#)Starting Page # [24](#)Starting Line # [23](#)Section [6.2.2.3.2](#)[Allocation start time was moved to the Phy Synchronization field](#)**Suggested Remedy**[Delete row for allocation start time from table 149](#)**Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: [Accepted-Modified](#)**[Delete row for allocation start time from table 149](#)[Change size of Synchronization field to "variable"](#)**Reason for Group's Decision/Resolution****Group's Notes**[MAC](#)**Group's Action Items****Editor's Notes****Editor's Actions** [1\) none needed](#)**Editor's Questions and Concerns****Editor's Action Items**Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0829**Comment submitted by: [Lei Wang](#)[Wang](#)

Member

[2002/02/25](#)Comment Type [Editorial](#)Starting Page # [24](#)Starting Line # [24](#)Section [Table 149](#)[missing {](#)**Suggested Remedy**[append "{" to "Begin PHY Specific Section"](#)**Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: [Accepted](#)**[append "{" to "Begin PHY Specific Section"](#)**Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** [1\) none needed](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: [4b](#)

Comment Date

Comment # [0830](#)Comment submitted by: [Bob](#)[Nelson](#)

Member

[2002/02/25](#)Comment Type [Technical, Non-binding](#)Starting Page # [25](#)Starting Line # [17](#)Section [Uplink Map](#)[At session 17, the vote was to leave the UL-MAP number of elements at 16 bits](#)

Suggested Remedy

[Remove the changes noted in table 150 for "Number of UL-MAP Elements"](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: [Accepted](#)[Remove the changes noted in table 150 for "Number of UL-MAP Elements"](#)

Reason for Group's Decision/Resolution

Group's Notes

[MAC](#)

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)[MAP deleted as there are no mods left](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0831**

Comment submitted by: Jerome

Krinock

Member

2002/02/25

Comment Type **Editorial**

Starting Page # **26**

Starting Line # **1**

Section **6.2.2.3.6**

An OFDMA subchannel is referred to in various places as "subchannel", "sub-channel", and "sub_channel".

Although it is a part of the "channel", a "subchannel" is in fact always used as a basic, primitive element in OFDMA. Therefore, the term "subchannel" is preferred.

Suggested Remedy

The editor shall perform a search for the other two terms and replace them all with "subchannel".

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

The editor shall perform a search for the other two terms and replace them all with "subchannel".

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0832**

Comment submitted by: Vladimir Yanover

Member

2002/02/25

Comment	Type	Technical, Non-binding	Starting Page #	26	Starting Line #	23	Section	6.2.2.3.6
---------	------	------------------------	-----------------	----	-----------------	----	---------	-----------

RNG-RSP is issued in response to RNG-REQ, not to Reservation Request
 Note also that the section 8.3.5.5.2.3 figures Bandwidth Request, not Ranging!

There is no need in Focused Contention access mechanism for Periodic Ranging as a replacement of usual RNG-REQ. Periodic Ranging will be initiated by the SS from time to time and in these cases a simple reservation procedure can be applied (RR----allocation of UL burst for the SS ----transmission of RNG-REQ).

Suggested Remedy

- Delete the following text

"The following OFDM PHY parameters shall be included in the RNG-RSP message, when and only when the message is in response to a focused contention Bandwidth Request as defined in clause 8.3.5.5.2.3:
 Transmit Opportunity Index:
 Index number of the the Transmit Opportunity that was used in the Bandwidth Request which this message is responding to.

Proposed Resolution **Recommendation: Accepted** **Recommendation by** Vladimir Yanover

Reason for Recommendation

Resolution of Group **Decision of Group: Accepted**

- Delete the following text

"The following OFDM PHY parameters shall be included in the RNG-RSP message, when and only when the message is in response to a focused contention Bandwidth Request as defined in clause 8.3.5.5.2.3:
 Transmit Opportunity Index:
 Index number of the the Transmit Opportunity that was used in the Bandwidth Request which this message is responding to.

Contention Channel Index:
 Index number of the the Contention Channel which was used in the Bandwidth Request which this message is responding to.

Contention Code Index:
 Index number of the the Contention Code which was used in the Bandwidth Request which this

Reason for Group's Decision/Resolution**Group's Notes**

MAC

Group's Action Items

Editor's Notes **Editor's Actions** k) done

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0833**

Comment submitted by: Nico

van Waes

Member

2002/02/25

Comment Type **Technical, Satisfied (was** Starting Page # **26** Starting Line # **39** Section **multiple**

As requested in comments during #17, the mesh synchronization and network entry is specified in minute detail. Also provides authorization and security sublayer components.

Rationale for the tunneling as defined: It would be insecure and impractical to distribute customer data to the sponsor nodes. Also the MAC protocol does not define a forwarding function but relies on the higher layer (IP) therefore the choice of tunneling over UDP/IP. Tunneling the messages in the Sponsor is easier and more secure as end to end message authentication can be done.

Suggested Remedy

update mesh synchronization and network entry as described in C80216a-02/30

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0834**Comment submitted by: **Lei****Wang**

Member

2002/02/25

Comment	Type	Technical, Satisfied (was	Starting Page #	26	Starting Line #	50	Section
---------	------	---------------------------	-----------------	----	-----------------	----	---------

1. Remove the third ARQ ack type, i.e., selective with cumulative, which is very confusing, and
2. Clearly specify the roles of "FSN" in the ARQ feedback IE.

Suggested Remedy

1. on page 26, line 50, remove "selective with cumulative", and
2. on page 49, line 50, add the following:

When ACK type is cumulative (i.e., ACK Type=01), the acknowledged ARQ fragments by the ARQ feedback IE are specified by the the FSN (Fragment Sequence Number) field, which identifies the latest ARQ fragment of the ARQ fragment stream that has been successfully received. That is, all the ARQ fragments with the sequence numbers up to the specified FSN value minus one (i.e. FSN-1) have been received without errors.

When ACK type is selective (i.e., ACK Type=00), the acknowledged ARQ fragments by the ARQ feedback IE are specified by both the FSN field and the ACK MAP field, as shown below:

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Rejected
---------------------	------------------------------------

Reason for Group's Decision/Resolution

Withdrawn by author

Group's Notes

MAC

Group's Action Items

Editor's Notes	Editor's Actions	l) none needed
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Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0835**

Comment submitted by: **Bob**

Nelson

Member

2002/02/25

Comment Type **Editorial**

Starting Page # **27**

Starting Line # **15**

Section **6.2.2.3.20**

The for loop construct implies there is a known number of IE elements in the message. This is not the case.

Suggested Remedy

Change contents of table 149 to

```
ARQ_FeedBack_Message_Format() {
```

```
    Management Message Type 34
```

```
    while ( !last) {
```

```
        ARQ_Feedback_IE( !last )
```

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Change contents of table 149 to

```
ARQ_FeedBack_Message_Format() {
```

```
    Management Message Type 34
```

```
    while ( !last) {
```

```
        ARQ_Feedback_IE( !last )
```

```
    }
```

```
    ARQ_Feedback_IE( last )
```

```
}
```

Reason for Group's Decision/Resolution

Group's Notes

MAC

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0836**

Comment submitted by: **Vladimir**

Yanover

Member

2002/02/25

Comment Type **Editorial**

Starting Page # **28**

Starting Line # **43**

Section **6.2.2.3.32**

Suggested Remedy

Replace WirelessHUMAN with WirelessMAN throughout the document

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

MAC

Group's Action Items

Editor's Notes

Editor's Actions **l) none needed**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0837**

Comment submitted by: Panyuh

Joo

Member

2002/02/25

Comment Type **Editorial**

Starting Page # **28**

Starting Line # **60**

Section **6**

Change "Management Message Type 42" to "Management Message Type = 42".

Change "Management Message Type 35" to "Management Message Type = 35".

Change "Management Message Type 36" to "Management Message Type = 36".

Reason:

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change "Management Message Type 42" to "Management Message Type = 42".

Change "Management Message Type 35" to "Management Message Type = 35".

Change "Management Message Type 36" to "Management Message Type = 36".

Reason:

Add "=".

Also in Line 27 of Page 29 (Table 153) and Line 11 of Page 30 (Table 154)..

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0838**

Comment submitted by: Jiacheng

Wang

Other

2002/02/20

Comment Type **Editorial**Starting Page # **28**Starting Line # **60**Section **Table 152**

Add "=".

Also in Line 27 of Page 29 (Table 153) and Line 11 of Page 30 (Table 154).

Suggested Remedy

Change "Management Message Type 42" to "Management Message Type = 42".

Change "Management Message Type 35" to "Management Message Type = 35".

Change "Management Message Type 36" to "Management Message Type = 36".

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Duplicate**[see 837](#)**Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0839**Comment submitted by: **Bob****Nelson**

Member

2002/02/25

Comment Type **Technical, Non-binding** Starting Page # **29** Starting Line # **5** Section **6.2.2.3.33**

The DISCARD message makes no sense when originated by the receiver. Should the receiver want the transmitter to stop sending certain fragments, it is easier and (since there is no retransmission capability for the discard message) more reliable for the receiver to simply "lie" to the transmitter and show the fragments in question have been received in the appropriate Feedback IEs

Suggested Remedy

Remove the direction flag and define that this message is only sent from transmitter to receiver, when the transmitter chooses to terminate processing of a set of fragments

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Remove the direction flag and define that this message is only sent from transmitter to receiver, when the transmitter chooses to terminate processing of a set of fragments

Reason for Group's Decision/Resolution**Group's Notes****MAC****Group's Action Items****Editor's Notes****Editor's Actions** **k) done****Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0840**

Comment submitted by: **Lei**

Wang

Member

2002/02/25

Comment	Type Editorial	Starting Page # 29	Starting Line # 13	Section
---------	-----------------------	---------------------------	---------------------------	---------

typo
 Suggested Remedy
 change "Table 152" to "Table 153"

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Accepted
---------------------	------------------------------------

change "Table 152" to "Table 153"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes	Editor's Actions k) done
----------------	---------------------------------

links corrected for all three ARQ messages.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0841**

Comment submitted by: Yigal

Leiba

Member

2002/02/25

Comment	Type Editorial	Starting Page # 30	Starting Line # 4	Section 6.2.2.3.34
---------	-----------------------	---------------------------	--------------------------	---------------------------

Table 154 bears the wrong title

Suggested Remedy

Change the title to read:

"Table 154—ARQ Reset Message Syntax"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Change the title to read:

"Table 154—ARQ Reset Message Format"

change to "format" instead of "syntax" for this and a couple of other messages that use this

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0842**

Comment submitted by: Bob

Nelson

Member

2002/02/25

Comment	Type Editorial	Starting Page # 30	Starting Line # 4	Section 6.2.2.3.34
---------	-----------------------	---------------------------	--------------------------	---------------------------

Table 154 heading is wrong

Suggested Remedy

Change heading to "Table 154 -- ARQ Reset Message Syntax"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0843**

Comment submitted by: **Lei**

Wang

Member

2002/02/25

Comment	Type Editorial	Starting Page # 30	Starting Line # 4	Section
---------	-----------------------	---------------------------	--------------------------	---------

Suggested Remedy
change "Discard" to "Reset"

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0844**

Comment submitted by: Naftali

Chayat

Member

2002/02/25

Comment Type **Technical, Non-binding**

Starting Page # **31**

Starting Line # **26**

Section

Whenever there are packed bitfields, it is desirable that those aggregate into blocks which are either 8 or 16 bits, otherwise it is cumbersome to decompose those using SW. (Intel's 4004 was discontinued in the seventies).

the following fragment of the MSH-NCFG message does not satisfy this requirement:

Network base channel 4 bits

Reserved 4 bits

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Delete "Reserved" field instead

Reason for Group's Decision/Resolution

Group's Notes

MAC

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0845**

Comment submitted by: Itzik

Kitroser

Member

2002/02/25

Comment Type **Editorial**Starting Page # **32**Starting Line # **29**Section **6.2.2.3.35.1**

Table 222 describes OFDMA DIUC values.

Suggested Remedy

Replace reference to table 222 with more suitable reference (Table 159?)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

change to table 231

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0846**

Comment submitted by: Itzik

Kitroser

Member

2002/02/25

Comment Type **Technical, Non-binding**Starting Page # **33**Starting Line # **5**Section **6.2.2.3.35.1**

It is not clearly explained why this parameter is required, especially when the transmission is on hop to hop basis

Suggested Remedy

Explain why the Xmt energy/bit factor parameter is needed

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Clarification provided in C802.16a-02/30r1

Reason for Group's Decision/Resolution

Group's Notes

MAC

Group's Action Items

Editor's Notes

Editor's Actions l) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0847**

Comment submitted by: Avraham

Freedman

Member

2002/02/20

Comment Type **Editorial**
typoStarting Page # **33**Starting Line # **15**Section **6.2.2.3.35.1**

Suggested Remedy

Change "divived" to "divided"

Proposed Resolution

Recommendation: **Accepted**

Recommendation by Avraham Freedman

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change "divived" to "divided"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0848**

Comment submitted by: Itzik

Kitroser

Member

2002/02/25

Comment Type **Technical, Non-binding**
Currently this field is TBDStarting Page # **39**Starting Line # **34**Section **6.2.2.3.35.2**

Suggested Remedy

Give description to the capabilities field

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions l) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0849**

Comment submitted by: Nico

van Waes

Member

2002/02/25

Comment Type **Technical, Satisfied (was**

Starting Page # **39**

Starting Line # **47**

Section **multiple**

Cleaned up, clarified and corrected the specification.

Suggested Remedy

update mesh scheduling as described in C80216a-02/30

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0850**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment Type **Technical, Satisfied (was** Starting Page # **42** Starting Line # **58** Section **6.2.2.3.35.4**

Consider for example the following statement that explicitly proves that mesh mode, as it is described currently, does not fit 802.16 network model and MAC SAP definition. Changing the SAP will meet, I believe, a heavy resistance (at least from my side), so I would recommend the Mesh supporters to take this section out and first to try to accommodate it to the base 802.16 MAC. I can help with that, if needed.

"The assignments in the list are ordered according to a (higher-layer) routing protocol's ordering of the nodes the current routing tree to and from the BS, known to all nodes in the network (see clause 6.2.2.3.35.5)."

Suggested Remedy

Delete the whole section

6.2.2.3.35 Mesh capability support

Proposed Resolution Recommendation: Superseded**Recommendation by** Vladimir Yanover

If C802.16a-02/30 document is accepted, then this comments is superseded

Reason for Recommendation**Resolution of Group Decision of Group: Rejected****Reason for Group's Decision/Resolution**

Satisfied by adoption of C802.16a-02/30r1.

Group's Notes

MAC

Group's Action Items**Editor's Notes Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0851**Comment submitted by: [Itzik](#)[Kitroser](#)

Member

[2002/02/25](#)Comment Type [Editorial](#)Starting Page # **43**Starting Line # **7**Section **6.2.2.3.35.5**[To be coherent with other messages format](#)

Suggested Remedy

[Move field descriptions after the table.](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**[Move field descriptions after the table.](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0852**Comment submitted by: [Itzik](#)[Kitroser](#)

Member

[2002/02/25](#)Comment Type [Editorial](#)Starting Page # **44**Starting Line # **31**Section **6.2.2.3.35.5**[Typo](#)

Suggested Remedy

[Replace "NumberOfNodes" with "NumOfChildren"](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**[Replace "NumberOfNodes" with "NumOfChildren"](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0853**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment Type **Technical, Satisfied (was** Starting Page # **45** Starting Line # **1** Section **6.2.2.4**

This section, as many other Mesh mode MAC constructions, shows clearly that mesh mode appears in 802.16 MAC as something completely orthogonal to the rest of MAC. The following is a short list of processes / formats that have no commonality with main processes / formats of the base 802.16. the list starts [to keep formal order] from the Mesh sub-header fields

Broadcast Flag - in the base document figured by CID

Priority/Class , Reliability, Drop Precedence - in the base document figured by Service Flow parameters

XmtNbrID RcvNbrID - in the base document figured by CID. MAC ID

Suggested Remedy

Delete the section

6.2.2.4 Mesh Sub-header

Proposed Resolution Recommendation: **Accepted**

Recommendation by Vladimir Yanover

Reason for Recommendation

The recommendation follows Nico's recommendation

I confirm that this "binding" comment is resolved to my full satisfaction

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Comment is resolved to author's satisfaction...

Group's Notes

MAC

Group's Action Items

Editor's Notes

Editor's Actions l) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0854**

Comment submitted by: Subbu

Ponnuswamy

Member

2002/02/24

Comment Type **Technical, Satisfied (was** Starting Page # **45** Starting Line # **56** Section **6.2.3.4**

The packing headers of 10-60 GHz systems are not different from that of 2-11 GHz systems anymore. The differences in packing/fragmentation headers are only between ARQ and non-ARQ connections (Of course, 10-60 GHz systems, currently do not support ARQ).

The interaction between ARQ and fixed length packing of 802.16 are currently undefined. While it is not difficult to define a mechanism to transport fixed-length SDUs with ARQ enabled, not sure if there is enough interest within 2-11 GHz group.

Also there is no ARQ Feedback sub-header anymore. ARQ Feedback information is packed like any other payload.

Suggested Remedy

Replace lines 56 to 58 with the following:

"The construction of PDUs varies for ARQ and non-ARQ connections with respect to packing and fragmentation syntax. The packing and fragmentation mechanisms for both the ARQ and non-ARQ connections are described in the following subclauses."

Add subclause 6.2.3.4.1 under 6.2.3.4,

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Replace lines 56 to 58 with the following:

"The construction of PDUs varies for ARQ and non-ARQ connections with respect to packing and fragmentation syntax. The packing and fragmentation mechanisms for both the ARQ and non-ARQ connections are described in the following subclauses."

Add subclause 6.2.3.4.1 under 6.2.3.4,

6.2.3.4.1 Packing for non-ARQ connections

Change 6.2.3.4.1 to "6.2.3.4.1.1 Packing fixed-length MAC SDUs"

Change 6.2.3.4.2 to "6.2.3.4.1.2 Packing variable-length MAC SDUs"

Reason for Group's Decision/Resolution

Cleanup from initial changes at session 17

Group's Notes

MAC

Group's Action Items**Editor's Notes**

Editor's Actions k) done

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0855**Comment submitted by: [Subbu](#)[Ponnuswamy](#)

Member

2002/02/24

Comment Type [Technical](#), [Satisfied](#) (was Starting Page # [45](#) Starting Line # [56](#) Section [6.2.3.4](#))

There is no ARQ Feedback sub-header anymore. ARQ Feedback information is packed like any other payload. Describe how the ARQ feedback payload is transported.

Suggested Remedy

Add subclause 6.2.3.4.3

[6.2.3.4.3 Packing ARQ Feedback Information](#)

Insert text from <C802.16a-02/21>, 3 - Specific Changes to P802.16a/D2-2002 - #3

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: [Accepted-Modified](#)**

Add subclause 6.2.3.4.3

[6.2.3.4.3 Packing ARQ Feedback Information](#)

Insert text from <C802.16a-02/21>, 3 - Specific Changes to P802.16a/D2-2002 - #3

Include figure 136 from C802.16a-02/26**Reason for Group's Decision/Resolution****Group's Notes**[MAC](#)**Group's Action Items****Editor's Notes****Editor's Actions** [l\) none needed](#)[duplicate from 0854](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0856**Comment submitted by: [Lei](#)[Wang](#)

Member

[2002/02/25](#)Comment Type [Technical, Non-binding](#) Starting Page # [45](#) Starting Line # [56](#) Section[should use ARQ connection and non-ARQ connection to distinguish the two different packing/fragmentation mechanisms.](#)**Suggested Remedy**

1. [Change the paragraph on page 45, line 56 to the following:](#)

[The construction of MAC PDUs varies for non-ARQ connections and ARQ connections with respect to packing and fragmentation syntax. This is necessary to support the ARQ function efficiently. Both packing and segmentation mechanisms are described in the following subclauses.](#)

2. [change "10-66 GHz Systems" to "Non-ARQ Connections" in the subclause titles, on page 46, line 1, line5, and line 11.](#)

Proposed Resolution Recommendation: Recommendation by**Reason for Recommendation****Resolution of Group Decision of Group: [Superseded](#)****Reason for Group's Decision/Resolution**
[by comment 854](#)**Group's Notes****Group's Action Items****Editor's Notes Editor's Actions** [l\) none needed](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0857**

Comment submitted by: Lei

Wang

Member

2002/02/25

Comment	Type	Starting Page #	Starting Line #	Section
	Technical, Non-binding	46	15	

The concept of ARQ feedback payload, not a sub-header, needs a better description.

Suggested Remedy

1. change the section title of 6.2.3.4.3 to "Piggybacked ARQ Feedback and ARQ Packing and Segmentation Sub-headers".
2. add a sub-section in line 17, page 46,
6.2.3.4.3.1 Piggybacked ARQ Feedback
3. Change the section number to 6.2.3.4.3.2 in line 43, page 46,

Proposed Resolution	Recommendation:	Recommendation by
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Reason for Recommendation

Resolution of Group	Decision of Group: Superseded by comment 854
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Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes	Editor's Actions	l) none needed
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Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0858**

Comment submitted by: **Naftali**

Chayat

Member

2002/02/25

Comment Type **Editorial**

Starting Page # **46**

Starting Line # **18**

Section

change "in an MAC PDU" to "in a MAC PDU"

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

change "in an MAC PDU" to "in a MAC PDU"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0859**Comment submitted by: **Bob****Nelson**

Member

2002/02/25

Comment Type **Editorial**Starting Page # **46**Starting Line # **20**Section **6.2.3.4.3**

missing article "an"

Suggested Remedy

At end of line 20,
replace "... instead only indicates the presence of ARQ ..."
with "... instead only indicates the presence of an ARQ ..."

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

At end of line 20,
replace "... instead only indicates the presence of ARQ ..."
with "... instead only indicates the presence of an ARQ ..."

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0860**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment Type **Editorial**
ClarificationStarting Page # **46**Starting Line # **20**Section **6.2.3.4.3****Suggested Remedy**

Replace the paragraph

"The presence of sub-headers and/or ACK Feedback in an MAC PDU is indicated by the value of the TYPE field in the generic MAC header. Table 4 and 5 list the encoding of the TYPE field for both Downlink and Uplink. The ARQ Feedback does not add any sub-headers, instead only indicates the presence of ARQ Feedback payload in the MAC PDU. For example, the size and number of the sub-headers are the same for types 0x06 and 0x0C. When the message type indicates the presence of ARQ Feedback payload (e.g., types 0x0A and 0x0C), the first packed payload shall be the ARQ Feedback payload. Similar to other payloads,

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded**

see 855

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0861**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment Type **Editorial**Starting Page # **46**Starting Line # **29**Section **6.2.3.4.3**

There is a contradiction between the line
"Figure 136 illustrates the generic structure of the MAC PDU with various sub-headers."
and the title of Fig. 136 that calls this picture "Example".

Also the picture is not generic enough.

Instead, we have Fig. 137 for non-packed MAC PDU and Fig. 138 for packed MAC PDU. Together they cover all possibilities.

Suggested Remedy

Delete
"Figure 136 illustrates the generic structure of the MAC PDU with various sub-headers."

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded**[see 854](#)**Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0862**Comment submitted by: [Yigal](#)[Leiba](#)

Member

[2002/02/25](#)Comment Type [Technical, Non-binding](#)Starting Page # **46**Starting Line # **32**Section **6.2.3.4.3**[There isn't a strong relation between figure 136 and the text in the section](#)

Suggested Remedy

[Replace with the drawing called figure-136 in contribution IEEE 802.16a-02/23](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**[by comment 855](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [l\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0863**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment Type **Editorial**Starting Page # **46**Starting Line # **43**Section **6.2.3.4.3.1**

The suggested name is used throughout the document

Suggested Remedy

Change the title of 6.2.3.4.3.1

"ARQ Connection Fragmentation sub-header"

to the following

"ARQ Fragmentation sub-header"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Change the title of 6.2.3.4.3.1

"ARQ Connection Fragmentation sub-header"

to the following

"ARQ Fragmentation sub-header"

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed

this entire section was deleted per 0854

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0864**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment	Type	Technical, Satisfied (was	Starting Page #	46	Starting Line #	53	Section	6.2.4
---------	------	---------------------------	-----------------	----	-----------------	----	---------	-------

This comments requests to return to the version 802.16a-D1 from the prospect of ARQ specification
Changes done in 802.16a-D2 were not justified enough.

Obviously, usage of MAC PDU fragments as retransmission units does not provide enough flexibility during retransmissions. For example, suppose that a SS has a fragment for retransmission and requests bandwidth for that . It may easily happen, for example, that BS allocates to the SS less capacity than needed for the transmission of this fragment. It can happen again and again. What's then? Using blocks. we easily solve the problem: BS allocates capacity sufficient for minimum of {requested amount, block size}

Suggested Remedy

1. Insert here the content of the section 6.2.4.1 Block Numbering Scheme OF THE DOCUMENT 802.16a-D1

2. Replace throughout the Section 6.2.4

"ARQ fragment"

with

"ARQ block"

Proposed Resolution**Recommendation: Accepted****Recommendation by** Vladimir Yanover**Reason for Recommendation****Resolution of Group****Decision of Group: Rejected****Reason for Group's Decision/Resolution**

Vote of 4 for, 4 against, fails 75% approval requirement

Group's Notes

MAC

Group's Action Items**Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0865**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment	Type	Technical, Non-binding	Starting Page #	46	Starting Line #	55	Section	6.2.3.4.3.1
---------	------	------------------------	-----------------	----	-----------------	----	---------	-------------

1. Option of several Fragmentation subheaders does not exist
2. ARQ feedback cannot appear after fragmentation subheader. It appears either as a particular case of Packed payload, or in a message body is covered by ARQ Feedback Message

Suggested Remedy

1. Change the caption:

Figure 137—MAC PDU with ARQ fragmentation sub-header(s)

to

Figure 137—MAC PDU with ARQ fragmentation sub-header

Proposed Resolution **Recommendation: Accepted**

Recommendation by Vladimir Yanover

Reason for Recommendation

Resolution of Group **Decision of Group: Accepted**

1. Change the caption:

Figure 137—MAC PDU with ARQ fragmentation sub-header(s)

to

Figure 137—MAC PDU with ARQ fragmentation sub-header

2. Change at Fig. 137

"Payload (one SDU or fragment of an SDU or ARQ Feedback IEs)"

Reason for Group's Decision/Resolution**Group's Notes**

MAC

Group's Action Items

Editor's Notes **Editor's Actions** k) done

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0866**

Comment submitted by: [Itzik](#)

[Kitroser](#)

Member

[2002/02/25](#)

Comment Type **Technical, Non-binding**

Starting Page # **47**

Starting Line # **20**

Section **6.2.3.4.3.1**

[The current format does not make sense for this new message](#)

Suggested Remedy

[Unify the two FSN fields to one field](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

[by 867](#)

Reason for Group's Decision/Resolution

Group's Notes

[MAC](#)

Group's Action Items

Editor's Notes

Editor's Actions [|\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0867**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment Type **Technical, Satisfied (was** Starting Page # **47** Starting Line # **24** Section **6.2.3.4.3**

Having a binary field broken in two distant portions seems hardly acceptable for a standard (does anybody can point to any precedent?).

Note that in other places (ARQ Feedback IE) this is a single 11 bits field

Statement that "it is an extension of [TG1] format" is unclear and hardly can be accepted as a justification simply because FSN in "TG1" header and 3 isolated bits of FSN in ARQ-enabled connections have different meaning

Suggested Remedy

At Table 169 merge two "FSN" fields into a single 11 bits field, so that the order of fields will be

FC 2 bits

Reserved 3 bits

FSN 11 bits

Proposed Resolution**Recommendation: Accepted****Recommendation by** Vladimir Yanover**Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

At Table 169 merge two "FSN" fields into a single 11 bits field, so that the order of fields will be

FC 2 bits

Reserved 3 bits

FSN 11 bits

Reason for Group's Decision/Resolution**Group's Notes**

MAC

Group's Action Items**Editor's Notes****Editor's Actions** |) none needed

table was deleted by 0854

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0868**

Comment submitted by: **Bob**

Nelson

Member

2002/02/25

Comment Type **Editorial**

Starting Page # **47**

Starting Line # **32**

Section **6.2.3.4.5.2**

Missing article "an"

Suggested Remedy

At end of line 32,

replace "... thereof and ARQ feedback payload ..."

with "... thereof and an ARQ feedback payload ..."

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

At end of line 32,

replace "... thereof and ARQ feedback payload ..."

with "... thereof and an ARQ feedback payload ..."

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0869**Comment submitted by: [Lei](#)[Wang](#)

Member

[2002/02/25](#)Comment Type [Editorial](#)Starting Page # [47](#)Starting Line # [32](#)

Section

use "MAC PDU", not just "PDU"

Suggested Remedy

[add "MAC" in front of "PDU" on both line 32 and line 35, page 47.](#)

Proposed Resolution Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**[add "MAC" in front of "PDU" on both line 32 and line 35, page 47.](#)

Reason for Group's Decision/Resolution

Group's Notes

[MAC](#)

Group's Action Items

Editor's Notes

Editor's Actions [|\) none needed](#)[clause was deleted by 0854](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0870**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment Type **Editorial**
EditorialStarting Page # **47**Starting Line # **32**Section **6.2.3.4.3.2**Suggested Remedy
Replace the text

"In this case each PDU may contain multiple MAC SDUs or fragments thereof and ARQ feedback payload. Each of the packed MAC SDU or MAC SDU fragments or ARQ feedback payload requires its own packing sub-header as some of them may be transmissions while other are re-transmissions. The position of ARQ packing sub-header within a PDU and the contents of the packing sub-header are shown in Figure 138 and Table 166 respectively."

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Language cleaned up by comment 869. Reference to table 170 does not define position of structure

Group's Notes

MAC

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0871**Comment submitted by: **Lei****Wang**

Member

2002/02/25

Comment Type **Editorial**Starting Page # **47**Starting Line # **39**

Section

wrong references.

Suggested Remedy

1. Change "Table 166" to "Table 171", and
2. Change "clause 6.2.4.2" to "Clause 6.2.4.1".

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

1. Change "Table 166" to "Table 171", and
2. Change "clause 6.2.4.2" to "Clause 6.2.4.1".

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0872**Comment submitted by: **Vladimir****Yanover**

Member

2002/02/25

Comment Type **Editorial**Starting Page # **47**Starting Line # **40**Section **6.2.3.4.3.2****Suggested Remedy**

Change the reference from Table 166, clause 6.2.4.2 to Table 171 and clause 6.2.4.1

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Duplicate****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** l) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0873**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment Type **Technical, Non-binding** Starting Page # **47** Starting Line # **47** Section **6.2.3.4.3.2**

For 1 - see Table 148

For 2 - ARQ feedback appears only once and as the first packed payload

Suggested Remedy

At Figure 138:

1. Change the first "ARQ Packing Subheader" to "Grant Management Subheader (optional, UL only), ARQ Packing Subheader"
2. Delete in the second payload "a set of ARQ_Feedback_IEs"

Proposed ResolutionRecommendation: **Accepted**

Recommendation by Vladimir Yanover

Reason for Recommendation**Resolution of Group**Decision of Group: **Accepted-Modified**

Insert "Grant Management Subheader (optional, UL only) before first ARQ Packing Subheader" and after Mac header

Reason for Group's Decision/Resolution**Group's Notes**

MAC

Group's Action Items**Editor's Notes**

Editor's Actions k) done

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0874**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment	Type Editorial	Starting Page # 48	Starting Line # 6	Section 6.2.3.4.3.2
---------	-----------------------	---------------------------	--------------------------	----------------------------

Having a binary field broken in two distant portions seems hardly acceptable for a standard (does anybody can point to any precedent?).

Note that in other places (ARQ Feedback IE) this is a single 11 bits field

Statement that "it is an extension of [TG1] format" is hardly acceptable (what does it mean precisely?)

Suggested Remedy

At Table 169 merge two "FSN" fields into a single 11 bits field, so that the order of fields will be

FC 2 bits

FSN 11 bits

Length 11 bits

Proposed Resolution	Recommendation:	Recommendation by
----------------------------	------------------------	--------------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Accepted
----------------------------	------------------------------------

At Table 169 merge two "FSN" fields into a single 11 bits field, so that the order of fields will be

FC 2 bits

FSN 11 bits

Length 11 bits

Reason for Group's Decision/Resolution**Group's Notes**

MAC

Group's Action Items

Editor's Notes	Editor's Actions) none needed
-----------------------	--

table deleted by 0854

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: [4b](#)

Comment Date

Comment # [0875](#)Comment submitted by: [Itzik](#)[Kitroser](#)

Member

[2002/02/25](#)Comment Type [Technical, Non-binding](#)Starting Page # [48](#)Starting Line # [22](#)Section [6.2.3.4.3.2](#)[The current format does not make sense for this new message](#)

Suggested Remedy

[Unify the two FSN fields to one field](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: [Superseded](#)

Reason for Group's Decision/Resolution

[874](#)

Group's Notes

[MAC](#)

Group's Action Items

Editor's Notes

Editor's Actions [1\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0876**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment Type **Editorial**Starting Page # **48**Starting Line # **37**Section **6.2.4.**

Name "ARQ connection" is hardly acceptable semantically

Suggested Remedy

1. Define "reliable connection" as a connection with ARQ enabled and "non-reliable connection" as a connection with ARQ disabled

2. Replace throughout the document

"ARQ Connection"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Replace "ARQ Connection" with "ARQ-enabled Connection"

Leave "non-ARQ connection" as is

Reason for Group's Decision/Resolution**Group's Notes**

MAC

Group's Action Items**Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0877**Comment submitted by: **Anader****Benyamin-Seeyar**

Member

2002/02/22

Comment Type **Editorial**Starting Page # **48**Starting Line # **39**Section **6.2.4**

In the Note: ARQ shall not be used with the PHY specification defined in 8.2, add word clause 8.2.

Suggested Remedy

In the Note: ARQ shall not be used with the PHY specification defined in 8.2, add clause beside the 8.2

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

In the Note: ARQ shall not be used with the PHY specification defined in 8.2, add clause beside the 8.2

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0878**Comment submitted by: **Subbu****Ponnuswamy**

Member

2002/02/24

Comment Type **Editorial**Starting Page # **48**Starting Line # **53**Section **6.2.4**

Make it clear that the TYPE field does always mean the addition of a sub-header

Suggested Remedy

Replace lines 53-56 with

"MAC header, zero or more optional main or packing sub-headers and a payload, where the presence of subheaders or the ARQ Feedback payload is indicated by the TYPE field in the generic MAC header. A MAC PDU may carry one or more whole or fragmented SDUs or ARQ Feedback payload"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

delete lines 52-56

Reason for Group's Decision/Resolution

Group's Notes

MAC

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0879**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment Type [Editorial](#)Starting Page # [48](#)Starting Line # [54](#)Section [6.2.4](#)

It is a (correct) definition of MAC PDU commonly used throughout both the base document and 16a amendment

Suggested Remedy

Remove the following text to 6.2.2. or take it out

"The term MAC PDU (Protocol Data Unit), used throughout this clause, refers to a MAC PDU with a single MAC header, zero or more optional main or packing sub-headers and a payload, where the presence of sub-headers is indicated by the TYPE field in the generic MAC header. A MAC PDU may carry one or more whole or fragmented SDUs."

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: [Superseded](#)****Reason for Group's Decision/Resolution**[878](#)**Group's Notes**[MAC](#)**Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0880**Comment submitted by: **Subbu****Ponnuswamy**

Member

2002/02/24

Comment Type **Editorial**Starting Page # **49**Starting Line # **3**Section **6.2.4.1**

Use consistent terminology

Fix typos

Suggested Remedy

In line 3,

change "Table 166" to "Table 171"

change "ARQ acknowledgement information element" to "ARQ Feedback information element"

In line 4,

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

In line 3,

change "Table 166" to "Table 171"

change "ARQ acknowledgement information element" to "ARQ Feedback information element"

In line 4,

change "may be a transported" to "may be transported"

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0881**

Comment submitted by: [Lei](#)

[Wang](#)

Member

[2002/02/25](#)

Comment Type [Editorial](#)

Starting Page # **49**

Starting Line # **3**

Section

wrong reference.

Suggested Remedy

change "Table 166" to "Table 171".

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0882**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment Type **Editorial**

Starting Page # **49**

Starting Line # **3**

Section **6.2.4.1**

Editorial

Suggested Remedy

Change

"This information element may be transported as a piggybacked ARQ feedback payload or as a payload in a standalone PDU."

to

"A set of information elements of this format may be transported either as a packed payload ("piggybacked") within a packed MAC PDU or as a payload of a standalone MAC PDU."

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Reason for Group's Decision/Resolution

Change

"This information element may be transported as a piggybacked ARQ feedback payload or as a payload in a standalone PDU."

to

"A set of information elements of this format may be transported either as a packed payload ("piggybacked") within a packed MAC PDU or as a

Group's Notes

MAC

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0883**Comment submitted by: [Bob Nelson](#)

Nelson

Member

2002/02/25

Comment Type [Editorial](#)Starting Page # **49**Starting Line # **4**Section **6.2.4.1**[Wordsmithing...](#)

Suggested Remedy

Replace "Table 166 shows the basic ARQ ..."
with "Table 166 defines the ARQ ..."

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**[Table 171 defines the ARQ...](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0884**Comment submitted by: [Subbu Ponnuswamy](#)

Ponnuswamy

Member

2002/02/24

Comment Type [Technical, Satisfied \(was](#)Starting Page # **49**Starting Line # **9**Section **6.2.4.1**[Table 171 needs to be updated to reflect the new ACK type. Also fix typos](#)

Suggested Remedy

Use the table from <C802.16a-02/21>, Specific Changes to P802.16a/D2-2002 - #4

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**[Use the table from <C802.16a-02/21>, Specific Changes to P802.16a/D2-2002 - #4](#)

Reason for Group's Decision/Resolution

Group's Notes

[MAC](#)

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0885**

Comment submitted by: Yigal

Leiba

Member

2002/02/25

Comment Type **Technical, Non-binding** Starting Page # **49** Starting Line # **10** Section **6.2.4.1**

Table 171 does not support the 'cumulative with selective' ack type

Suggested Remedy

For the 'ACK type' field change the encoding to '01 = cumulative with selective ACK entry'

Remove the note from the 'Number of 16 bits ACK maps' field

To the 'ACK map' field add the sentence in the end, "for cumulative with selective ACK type, all ARQ fragments whose number is less than the FSN value have been received correctly"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution**

884

Group's Notes

MAC

Group's Action Items**Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: [4b](#)

Comment Date

Comment # [0886](#)Comment submitted by: [Bob](#)[Nelson](#)

Member

[2002/02/25](#)Comment Type [Technical, Non-binding](#) Starting Page # [49](#) Starting Line # [24](#) Section [6.2.4.1](#)[The selective/cumulative ACK type approved at session 17 is missing \(although references are mad to it in later sections\)](#)**Suggested Remedy**[Add appropriate text to table 171 to implement the approved comment from session 17. \(Items most likely affected are ACK Type and Number of ACK Maps\)](#)**Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group:** [Superceded](#)**Reason for Group's Decision/Resolution**[884](#)**Group's Notes**[MAC](#)**Group's Action Items****Editor's Notes****Editor's Actions** [l\) none needed](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0887**Comment submitted by: [Vladimir](#)[Yanover](#)

Member

[2002/02/25](#)Comment Type [Technical, Non-binding](#)Starting Page # [49](#)Starting Line # [54](#)Section [6.2.4.2](#)[Max possible value for 11 bits FSN field](#)

Suggested Remedy

[Define ARQ_MAX_FSN as \$2^{11} - 1\$](#) Proposed Resolution Recommendation: **Accepted**Recommendation by [Vladimir Yanover](#)

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Modified**[Replace all occurrences of ARQ_MAX_FSN with ARQ_FSN_MODULUS](#)

Add section

[6.2.4.2.1 ARQ_FSN_MODULUS](#)[ARQ_FSN_MODULUS is equal to the number of unique FSN values, i.e. \$2^{11}\$.](#)

Reason for Group's Decision/Resolution

Group's Notes

[MAC](#)

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0888**

Comment submitted by: **Subbu**

Ponnuswamy

Member

2002/02/24

Comment Type **Editorial**

Starting Page # **49**

Starting Line # **60**

Section **6.2.4.2.1**

Fix typo

Suggested Remedy

change "An ARQ fragments is" to "An ARQ fragment is"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

change "An ARQ fragments is" to "An ARQ fragment is"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0889**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment Type **Editorial**Starting Page # **50**Starting Line # **15**Section **6.2.4.2.2****Editorial****Suggested Remedy**
Change

"ARQ_SYNC_LOSS_TIMEOUT is the minimum time interval after which the ARQ synchronization shall be considered lost."

to

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

change

"ARQ_SYNC_LOSS_TIMEOUT is the minimum time interval after which the ARQ synchronization shall be considered lost."

to

"ARQ_SYNC_LOSS_TIMEOUT is the length of a time interval from last transmitted / received SDU, in which at least one MAC PDU was transmitted / received with no change in the position of ARQ Tx / Rx window. after this time interval passed. ARQ

Reason for Group's Decision/Resolution**Group's Notes**

MAC

Group's Action Items

Itzik to provide revised definition

Editor's Notes**Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0890**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment Type **Editorial**

Starting Page # **50**

Starting Line # **63**

Section **6.2.4.5.1**

Max. FSN value is $2^{11}-1$, and calculations should be done modulo 2^{11}

Suggested Remedy

Change

"fsn' = (fsn - FSN_base) mod ARQ_MAX_FSN"

to

"fsn' = (fsn - FSN_base) mod ARQ_MAX_FSN + 1"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

Group's Notes

MAC

Group's Action Items

find comment number

Editor's Notes

Editor's Actions |) none needed

huh?

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0891**

Comment submitted by: **Subbu**

Ponnuswamy

Member

2002/02/24

Comment Type **Editorial**

Starting Page # **51**

Starting Line # **1**

Section **6.2.4.5.1**

Use consistent terminology

Suggested Remedy

Change

"The base values for the receive and transmit state machines" to
"The base values for the receiver and transmitter state machines"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change

"The base values for the receive and transmit state machines" to
"The base values for the receiver and transmitter state machines"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0892**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment	Type	Starting Page #	Starting Line #	Section
	Editorial	51	7	6.2.4.5.2

1. MAC protocol at present time does not contain an algorithm or tips on the choice of proper fragment size
2. There is no restriction in D5 on packing several fragments of the same SDU into a single MAC PDU (though it is not efficient)
3. We have to specify what SHOULD be done instead of what SHOULD NOT be done.

Suggested Remedy

Change

"The ARQ protocol is responsible for choosing the right fragment size on a per-fragment basis. The fragment size is not a fixed value that remains constant for a particular connection. Unlike non-ARQ connections, where a single MAC PDU may not have two consecutive fragments of the same MSDU in the first transmission, such fragmentation is allowed for ARQ connections. ARQ connections may send consecutive fragments of the same MSDU in a single MAC PDU. Once defined, the size of a fragment cannot be changed

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

"The ARQ protocol is responsible for choosing the right fragment size on a per-fragment basis. The fragment size is not a fixed value that remains constant for a particular connection. Unlike non-ARQ connections, where a single MAC PDU would not normally have two consecutive fragments of the same MAC SDU. Such fragmentation could be beneficial for ARQ connections to facilitate retransmission. MAC SDU fragment structure shall be maintained for retransmissions.

Reason for Group's Decision/Resolution**Group's Notes**

MAC

Group's Action Items**Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0893**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment Type **Technical, Non-binding**Starting Page # **51**Starting Line # **24**Section **6.2.4.5.2**

More clear definition of "giving a precedence"

Suggested Remedy

Replace

"The transmitter policy is that if any waiting-for-retransmission ARQ fragments exist, they should be given precedence over not-sent packets for the same connection. ARQ fragments that are outstanding or discarded"

with

Proposed Resolution

Recommendation: **Accepted**

Recommendation by Vladimir Yanover

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Replace

"The transmitter policy is that if any waiting-for-retransmission ARQ fragments exist, they should be given precedence over not-sent packets for the same connection. ARQ fragments that are outstanding or discarded"

with

"For a given connection the transmitter should first handle (transmit or discard) fragments in 'waiting-for-retransmission' state and only then fragments in 'non-sent' state"

Reason for Group's Decision/Resolution

Group's Notes

MAC

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0894**

Comment submitted by: Yigal

Leiba

Member

2002/02/25

Comment Type **Technical, Non-binding**Starting Page # **51**Starting Line # **58**Section **6.2.4.5.2**

Some of the text has been lost

Suggested Remedy

Replace with the following (adapted fro the original P802.16ab-01/01r2 with slight modifications):

"The transmitter checks (ARQ_TX_WINDOW_START + ARQ_WINDOW_SIZE - ARQ_TX_NEXT_FSN) to see how many ARQ fragments can be transmitted, and creates a full or partial MAC PDU that does not exceed this value. The state variable ARQ_TX_NEXT_FSN is copied into the FSN field before transmission, and ARQ_TX_NEXT_FSN is incremented after transmission by the number of fragments in the full or partial MAC PDU."

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Replace with the following (adapted fro the original P802.16ab-01/01r2 with slight modifications):

"The transmitter checks (ARQ_TX_WINDOW_START + ARQ_WINDOW_SIZE - ARQ_TX_NEXT_FSN) to see how many ARQ fragments can be transmitted, and creates a full or partial MAC PDU that does not exceed this value. The state variable ARQ_TX_NEXT_FSN is copied into the FSN field before transmission, and ARQ_TX_NEXT_FSN is incremented after transmission by the number of fragments in the full or partial MAC PDU."

Reason for Group's Decision/Resolution**Group's Notes**

MAC

Group's Action Items**Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0895**Comment submitted by: **Lei****Wang**

Member

2002/02/25

Comment	Type	Starting Page #	Starting Line #	Section
---------	------	-----------------	-----------------	---------

Technical, Non-binding

52

1

Section

follow-up changes based on the ARQ acknowledge type definition.

Suggested Remedy

1. remove "cumulative with selective" from line 1, page 52.
2. replace "For the rest of the bitmaps" with "If it is a selective acknowledgement, for the rest of the bitmapx," on line 4, page 52.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Rejected****Reason for Group's Decision/Resolution**

Withdrawn by author

Group's Notes

MAC

Group's Action Items**Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0896**

Comment submitted by: Yigal

Leiba

Member

2002/02/25

Comment Type **Technical, Non-binding** Starting Page # **52** Starting Line # **5** Section **6.2.4.5.2**

The exception 'except the most significant bit of the first 16-bitmap' does not make sense. When a cumulative-with-selective ACK is received, all values below the FSN are ACKed, and the MSB refers to the FSN itself, so it should be treated like any other bit.

Suggested Remedy

Delete the words "except the most significant bit of the first 16-bitmap" from the sentence

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Rejected****Reason for Group's Decision/Resolution**

The existing text describes the special case of selective/cumulative maps. In this case the msb of the first map word corresponding to the cumulative ACK will always be zero because of the definition of cumulative ACK and the how maps are to be formed.

Group's Notes

MAC

Group's Action Items**Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0897**

Comment submitted by: Yigal

Leiba

Member

2002/02/25

Comment Type **Technical, Non-binding** Starting Page # **52** Starting Line # **12** Section **6.2.4.5.2**

This paragraph has left me confused. Perhaps a drawing will help, but I did not understand it, so I can't help

Suggested Remedy

Clarify paragraph, and add a drawing if possible. Besides the unclarity, I think it would be advised NOT to send any packets on the connection until the reset handshake is finished.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified****Reason for Group's Decision/Resolution****Group's Notes**

MAC

Group's Action Items

Bob will provide text/diagram to resolve comment [see IEEE C802.16a-02/44]

Editor's Notes**Editor's Actions** k) done

Implemented according to Bob's submissions -02/44

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0898**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment Type **Technical, Non-binding**Starting Page # **52**Starting Line # **20**Section **6.2.4.5.2**

It is suggested to reset the ARQ state machines if the synchronization lost (even once).
This will ensure correct ARQ operations

Suggested Remedy

Replace

"Reset shall be generated only as a last resort under abnormal conditions, e.g., repeated loss of synchronization"

with

"Reset shall be generated only as a last resort under abnormal conditions, e.g. loss of synchronization"

Proposed Resolution

Recommendation: **Accepted**

Recommendation by Vladimir Yanover

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Reason for Group's Decision/Resolution

Group's Notes

MAC

Group's Action Items

Bob will provide text/diagram to resolve comment [see IEEE C802.16a-02/44]

Editor's Notes

Editor's Actions k) done

Implemented according to Bob's submissions -02/44

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0899**Comment submitted by: **Bob****Nelson**

Member

2002/02/25

Comment Type **Editorial**Starting Page # **52**Starting Line # **26**Section **6.2.4.5.2**

The text must be changed to be consistent with change in definition of DISCARD message in an earlier comment. (comment changes message to be from transmitter to receiver only)

Suggested Remedy

Replace the paragraph starting at line 26 with

A Discard message may be sent to the receiver when the transmitter wants to skip ARQ fragments up to the FSN value specified in the Discard message. Upon receipt of the message, the receiver updates its statistics to indicate the specified fragments were received and forwards the information to the transmitter through an ARQ Feedback IE at the appropriate time.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Replace the paragraph starting at line 26 with

A Discard message may be sent to the receiver when the transmitter wants to skip ARQ fragments up to the FSN value specified in the Discard message. Upon receipt of the message, the receiver updates its state information to indicate the specified fragments were received and forwards the information to the transmitter through an ARQ Feedback IE at the appropriate time.

Reason for Group's Decision/Resolution**Group's Notes****MAC****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: [4b](#)

Comment Date

Comment # [0900](#)Comment submitted by: [Yigal](#)[Leiba](#)

Member

[2002/02/25](#)

Comment Type [Technical, Non-binding](#) Starting Page # [52](#) Starting Line # [30](#) Section [6.2.4.5.2](#)

The exception "provided the FSN value is within the transmitter window" is problematic. What happens if this condition is not met? the sender of the DISCARD message cannot tell if the condition has been met or not, and this may lead to a synchroniztion loss.

Suggested Remedy

[Clarify the reason for the exception, or remove it.](#)

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group:** [Superceded](#)[899](#)**Reason for Group's Decision/Resolution****Group's Notes**[MAC](#)**Group's Action Items****Editor's Notes****Editor's Actions** [l\) none needed](#)**Editor's Questions and Concerns****Editor's Action Items**Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: [4b](#)

Comment Date

Comment # [0901](#)Comment submitted by: [Bob](#)[Nelson](#)

Member

[2002/02/25](#)

Comment Type [Editorial](#) Starting Page # [52](#) Starting Line # [35](#) Section [6.2.4.5.3](#)

[Wrong article](#)**Suggested Remedy**

[Replace the two occurrences of "an PDU" on line 35 with "a PDU"](#)

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group:** [Accepted](#)

[Replace the two occurrences of "an PDU" on line 35 with "a PDU"](#)

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** [k\) done](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0902**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment Type **Technical, Non-binding**Starting Page # **52**Starting Line # **36**Section **6.2.4.5.2**

Duplicates should not participate in de-fragmentation.

Suggested Remedy

Remove the sentence

"If an PDU passes the checksum, it is unpacked and de-fragmented, if necessary. "

to the location after "The receiver should discard duplicate ARQ fragments (i.e. ARQ fragments that where already received correctly) within the window."

Proposed Resolution

Recommendation: **Accepted**

Recommendation by Vladimir Yanover

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Current text is informational and not incorrect

Group's Notes

MAC

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0903**

Comment submitted by: Yigal

Leiba

Member

2002/02/25

Comment Type **Technical, Non-binding** Starting Page # **53** Starting Line # **1** Section **6.2.4.5.3**

In figure 140 there are a few problems:

1. The arrow from DS to RC has the wrong direction
2. An ACK message should ALWAYS be sent for a correctly received fragment in order to avoid deadlock in case on an ACK loss

Suggested Remedy

1. Reverse the direction of the arrow from DS to RC
2. Change the text on this arrow to read 'Send ACK, discard fragment if duplicate'

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

1. Reverse the direction of the arrow from DS to RC
2. Change the text on this arrow to read 'Send ACK, discard fragment if duplicate'

Reason for Group's Decision/Resolution**Group's Notes**

MAC

Group's Action Items

Itzik to provide revised diagram

Editor's Notes**Editor's Actions** k) done

Figure updated. Effort by Itzik not needed.

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0904**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment Type [Technical, Non-binding](#)Starting Page # **53**Starting Line # **3**Section **6.2.4.5.2**[seems a typo](#)

Suggested Remedy

[At Fig. 140, change the direction of the arrow between RC and DS](#)Proposed Resolution Recommendation: **Accepted**Recommendation by [Vladimir Yanover](#)

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Duplicate**[see 903](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [l\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0905**

Comment submitted by: Avraham

Freedman

Member

2002/02/20

Comment Type [Editorial](#)Starting Page # **53**Starting Line # **9**Section **6.2.2.6.35.4**[Grammer](#)

Suggested Remedy

[change "be braodcasted" to "be broadcast"](#)Proposed Resolution Recommendation: **Accepted**Recommendation by [Avraham Freedman](#)

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**[change "be braodcasted" to "be broadcast"](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0906**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment Type **Technical, Non-binding**Starting Page # **53**Starting Line # **39**Section **6.2.5.4.2**

This change makes ARQ operations safer

Suggested Remedy

Replace

"When this occurs, the receiver recovers by advancing the value of ARQ_RX_WINDOW_START. The value is advanced by locating the oldest fragment that has been successfully received and then searching after that fragment for the lowest (oldest) sequence number corresponding to a fragment that has not yet been success-fully received."

Proposed Resolution

Recommendation: **Accepted**

Recommendation by Vladimir Yanover

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

RB4a: Don't delete anything. Add the sentence (at line 43):

"Alternatively, When this occurs, the receiver may initiate an ARQ state machines resent sequence by using the ARQ Reset message"

Reason for Group's Decision/Resolution

Group's Notes

MAC

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0907**Comment submitted by: [Yigal](#)[Leiba](#)

Member

[2002/02/25](#)Comment Type [Editorial](#)Starting Page # **53**Starting Line # **45**Section **6.2.4.5.3**[The sentence belongs to the preceeding paragraph](#)

Suggested Remedy

[Attach the sentence beginning with "ARQ_RX_WINDOW_START is then ..." to the preceeding paragraph](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**[Attach the sentence beginning with "ARQ_RX_WINDOW_START is then ..." to the preceeding paragraph](#)

Reason for Group's Decision/Resolution

Group's Notes

[MAC](#)

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0908**

Comment submitted by: Bob

Nelson

Member

2002/02/25

Comment	Type	Starting Page #	Starting Line #	Section
	Technical, Non-binding	53	49	6.2.4.5.3

The text must be changed to be consistent with change in definition of DISCARD message in an earlier comment. (comment changes message to be from transmitter to receiver only)

Transmission of a Discard message in the described situation is unreliable. With no retransmission mechanism, loss of the discard message means that other mechanisms, ie the lifetime timeout and contents of feedback IEs must be robust enough to handle the described situation.

Suggested Remedy

Replace paragraph starting at line 49 (through 52) with:

The receiver marks the skipped messages as received, and and sends an ARQ Feedback IE to the transmitter with the updated information.

Replace the paragraph starting at line 54 with

Proposed Resolution	Recommendation:	Recommendation by
----------------------------	------------------------	--------------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Accepted
----------------------------	------------------------------------

Replace paragraph starting at line 49 (through 52) with:

The receiver marks the skipped messages as received, and and sends an ARQ Feedback IE to the transmitter with the updated information.

Replace the paragraph starting at line 54 with

When a discard message is received from the transmitter, the receiver shall discard the specified fragments, advance the receiver window up to the FSN value specified in the Discard message, and mark the messages as received for ARQ feedback IE reporting.

Reason for Group's Decision/Resolution**Group's Notes**

MAC

Group's Action Items

Editor's Notes	Editor's Actions k) done
-----------------------	---------------------------------

minus an "and"

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0909**

Comment submitted by: Yigal

Leiba

Member

2002/02/25

Comment Type **Technical, Non-binding** Starting Page # **53** Starting Line # **54** Section **6.2.4.5.3**

The exception "provided the FSN value is within the receiver window" is problematic. What happens if this condition is not met? the sender of the DISCARD message cannot tell if the condition has been met or not, and this may lead to a synchronization loss.

Suggested Remedy

Clarify the reason for the exception, or remove it.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****908****Group's Notes****MAC****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0910**Comment submitted by: **Lei****Wang**

Member

2002/02/25

Comment Type **Technical, Non-binding** Starting Page # **53** Starting Line # **62** Section

follow-up changes based on the ARQ acknowledgement type definitions.

Suggested Remedy

remove "or a combination of both (i.e., cumulative with selective)"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

withdrawn by author

Group's Notes

MAC

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0911**

Comment submitted by: Yigal

Leiba

Member

2002/02/25

Comment Type **Editorial**Starting Page # **54**Starting Line # **1**Section **6.2.4.5.3**

The sentence "The receiver shall respond with an acknowledgement, whenever an ARQ sub-header is received with the A-bit set." is an old relic (the A-bit no longer exists)

Suggested Remedy

Remove the sentence "The receiver shall respond with an acknowledgement, whenever an ARQ sub-header is received with the A-bit set."

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Remove the sentence "The receiver shall respond with an acknowledgement, whenever an ARQ sub-header is received with the A-bit set."

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0912**

Comment submitted by: **Subbu**

Ponnuswamy

Member

2002/02/24

Comment Type **Technical, Satisfied (was**

Starting Page # **54**

Starting Line # **1**

Section **6.2.4.5.3**

There is no A-bit anymore

Suggested Remedy

Remove the sentence

"The receiver shall respond with an acknowledgement, whenever an ARQ sub-header is received with the A-bit set."

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

911

Group's Notes

MAC

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0913**

Comment submitted by: **Lei**

Wang

Member

2002/02/25

Comment Type **Technical, Non-binding**

Starting Page # **54**

Starting Line # **1**

Section

there is no ARQ sub-header or A-bit in 802.16a/D2

Suggested Remedy

remove the sentence "The receiver shall respond"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

911

Group's Notes

MAC

Group's Action Items

Editor's Notes

Editor's Actions **l) none needed**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0914**Comment submitted by: [Vladimir](#)[Yanover](#)

Member

[2002/02/25](#)Comment Type [Technical, Non-binding](#)Starting Page # **54**Starting Line # **2**Section **6.2.4.5.2**[There is no A-bit anymore](#)

Suggested Remedy

[Delete](#)["The receiver shall respond with an acknowledgement, whenever an ARQ sub-header is received with the A-bit set."](#)

Proposed Resolution

Recommendation: **Accepted**Recommendation by [Vladimir Yanover](#)

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

[911](#)

Group's Notes

[MAC](#)

Group's Action Items

Editor's Notes

Editor's Actions [l\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0915**Comment submitted by: **Bob****Nelson**

Member

2002/02/25

Comment Type **Technical, Non-binding** Starting Page # **54** Starting Line # **5** Section **6.2.4.5.3**

The following paragraph specifies when an SDU should actually be handed off to the application. This paragraph only specifies when it is ready for consideration.

Suggested Remedy

Replace the paragraph/sentence on line 5 with

A MAC SDU is ready to be handed to the upper layers when all of the ARQ fragments of the MAC SDU have been correctly received within the time-out values defined.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Replace the paragraph/sentence on line 5 with

A MAC SDU is ready to be handed to the upper layers when all of the ARQ fragments of the MAC SDU have been correctly received within the time-out values defined.

Reason for Group's Decision/Resolution**Group's Notes****MAC****Group's Action Items****Editor's Notes****Editor's Actions** **k) done****Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0916**Comment submitted by: [Yigal](#)[Leiba](#)

Member

[2002/02/25](#)Comment Type [Technical, Non-binding](#)Starting Page # **54**Starting Line # **16**Section **6.2.4.5.3**[Again I am confused. A drawing should help here as well](#)

Suggested Remedy

[Clarify](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Reason for Group's Decision/Resolution

Group's Notes

[MAC](#)

Group's Action Items

[Bob will provide text/diagram to resolve comment \[see IEEE C802.16a-02/44\]](#)

Editor's Notes

Editor's Actions [1\) none needed](#)[resolved by Bob's 02/44 submission on earlier comments](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

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Comment Date

Comment # **0917**

Comment submitted by: Jerome

Krinock

Member

2002/02/25

Comment Type **Editorial**

Starting Page # **54**

Starting Line # **37**

Section **6.2.6**

The relationship between mini-slots and Physical Slots which is asked to be added to clause 6.2.6 is already given earlier, in clause 6.2.2.3.1 of the base document.

Suggested Remedy

In sec. 6.2.6, replace the text

The relationship between mini-slots and Physical Slots is given by: Mini-slot = Physical Slot 2^m when $m=0,1,2,3,4,5,6,7$ with

The relationship between mini-slots and Physical Slots is given in 6.2.2.3.1.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

n sec. 6.2.6, replace the text

The relationship between mini-slots and Physical Slots is given by: Mini-slot = Physical Slot 2^m when $m=0,1,2,3,4,5,6,7$ with

The relationship between mini-slots and Physical Slots is given in 6.2.2.3.3.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0918**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment Type **Technical, Non-binding** Starting Page # **54** Starting Line # **54** Section **6.2.6**

BANDWIDTH in OFDMA is allocated in two-dimensional units
Offset in DL-MAP IE OFDM should be expressed in units of symbol duration

Suggested Remedy

Change

"Allocation of bandwidth within a frame is performed in terms of mini-slots (MS)"

to

"Time within a frame is measured in units of mini-slots (MS) or symbol duration "

Proposed Resolution

Recommendation: **Accepted**

Recommendation by Vladimir Yanover

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

The text is informative and refers the reader to the appropriate PHY for specific information

Group's Notes

MAC

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0919**

Comment submitted by: Rémi

Chayer

Member

2002/02/22

Comment	Type	Starting Page #	Starting Line #	Section
	Technical, Non-binding	55	42	6.2.6.6

Throughout the document, mainly in the PHY section, there is some wording specifying certain PHY modes that are applicable to licensed and/or license-exempt bands only.

Suggested Remedy

Modify the paragraph as follows:

"6.2.6.6 ~~License-exempt~~ Optional mesh topology support

The **WirelessMAN and** WirelessHUMAN system provides optional support for mesh topology. Unlike the PMP mode, there are no clearly separate downlink and uplink subframes in the mesh mode. Each station is able to create direct communication links to a number of other stations in the network instead of communicating only with a BS. However, in typical installations, there will still be certain nodes which provide the BS function

Proposed Resolution	Recommendation:	Recommendation by
----------------------------	------------------------	--------------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Rejected
----------------------------	---

Apply all PHYs to both licensed and license-exempt bands.
vote: 24 - 13

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes	Editor's Actions) none needed
-----------------------	--

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0920**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment Type **Editorial**Starting Page # **57**Starting Line # **1**Section **6.2.7.6.2**

Suggested Remedy

1. Rename the section

6.2.7.6.2 SC2 PHY

to

6.2.7.6.2 MAP Relevance and Synchronization for SC2 PHY

2. rename the section

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

There's no point in repeating the 6.2.7.6 header in all 6.2.7.6.x headers

Group's Notes

MAC

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0921**

Comment submitted by: Rémi

Chayer

Member

2002/02/22

Comment Type **Technical, Non-binding** Starting Page # **58** Starting Line # **19** Section **6.2.7.6.4**

Throughout the document, mainly in the PHY section, there is some wording specifying certain PHY modes that are applicable to licensed and/or license-exempt bands only.

Suggested Remedy

Modify the title as follows:

"6.2.7.6.4 ~~License-exempt~~Optional mesh mode"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0922**

Comment submitted by: Avraham

Freedman

Member

2002/02/20

Comment Type [Editorial](#) Starting Page # **61** Starting Line # **32** Section **6.2.7.6.4.5.1**
 Typos

Suggested Remedy

Change "looses" to "loses"
 also in lines 39 (change "This loses" to "This node loses") and line 46

Proposed ResolutionRecommendation: **Accepted**

Recommendation by Avraham Freedman

Reason for Recommendation**Resolution of Group**Decision of Group: **Accepted**

Change "looses" to "loses"
 also in lines 39 (change "This loses" to "This node loses") and line 46

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes**Editor's Actions [k\) done](#)**Editor's Questions and Concerns****Editor's Action Items**Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0923**

Comment submitted by: Anader

Benyamin-Seeyar

Member

2002/02/22

Comment Type [Editorial](#) Starting Page # **64** Starting Line # **11** Section **6.2.7.7.1**
 References [B61], [B62], [B63] and [B65] are wrong or missing!

Suggested Remedy

We have to add these references.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation**Resolution of Group**Decision of Group: **Accepted-Modified**

point to [B56] through [B60] and [B62] instead (bad links)

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes**Editor's Actions [k\) done](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0924**

Comment submitted by: Avraham

Freedman

Member

2002/02/20

Comment Type **Technical, Non-binding** Starting Page # **64** Starting Line # **11** Section **6.2.7.7.1**

This is a repeat of comment 243 of LB4, which was wrongly defined "suprceded".

There is a need to describe here a little bit better the operation of AAS vs. non-AAS to the MAC guy who is going to read this. The sentence "AASthrough the use of more than one antenna element, can improve range and system capacity." applies also to STC, while the section doesn't.

Suggested Remedy

Advanced Antenna Systems, AAS, (see [B59], [B60], [B61], [B62], [B63], [B65] for generic literature), through the use of more than one antenna element, can improve range and system capacity, by adapting the antenna pattern and concentrating its radiation to each individual subscriber.

Proposed ResolutionRecommendation: **Accepted-Modified**

Recommendation by Avraham Freedman

Change the senetence, with the references as modified by comment 923.

Reason for Recommendation

Until the Ad Hoc comes up with a better text . One should rememebr that this is only a suggestion to improve the introduction.

Resolution of GroupDecision of Group: **Accepted-Modified**

Advanced Antenna Systems, AAS, (see [B56] through [B60], [B62] for generic literature), through the use of more than one antenna element, can improve range and system capacity, by adapting the antenna pattern and concentrating its radiation to each individual subscriber.

Reason for Group's Decision/Resolution**Group's Notes**

MAC

Group's Action Items**Editor's Notes**

Editor's Actions k) done

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0925**

Comment submitted by: Avraham

Freedman

Member

2002/02/20

Comment Type [Editorial](#) Starting Page # **64** Starting Line # **64** Section **6.2.7.7.2**
 typo

Suggested Remedy

change "OFDMA sub-channel" to "OFDMA sub-channels"

Proposed ResolutionRecommendation: **Accepted-Modified**

Recommendation by Avraham Freedman

change "OFDMA sub-channel" to "OFDMA subchannels"

Reason for Recommendation**Resolution of Group**Decision of Group: **Accepted-Modified**

change "OFDMA sub-channel" to "OFDMA subchannels"

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes**Editor's Actions [k\) done](#)**Editor's Questions and Concerns****Editor's Action Items**Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0926**

Comment submitted by: Jon

Labs

Member

Comment Type [Editorial](#) Starting Page # **69** Starting Line # **1** Section **6.2.11.2**

'Figure 149 illustrates the concept of access scheme 2.' is a rewording of the last line of the previous paragraph:

'The second example, shown in Figure 149, depicts the case in which a small set of sub-channels is allocated throughout the whole frame.'

Suggested Remedy

Remove the line 'Figure 149 illustrates...'. The other text is more descriptive.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation**Resolution of Group**Decision of Group: **Accepted**

Remove the line 'Figure 149 illustrates...'. The other text is more descriptive.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes**Editor's Actions [k\) done](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: [4b](#)

Comment Date

Comment # [0927](#)Comment submitted by: [Jerome](#)[Krinoock](#)

Member

[2002/02/25](#)Comment Type [Editorial](#)Starting Page # [69](#)Starting Line # [37](#)Section [6.2.11.2.1](#)

This section makes reference to "Long" and "Short" ranging, which is now deprecated.

Suggested Remedy

Change "(Long or Short)" to "(see clause 8.3.5.6.5.1.3)"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: [Accepted](#)**

Change "(Long or Short)" to "(see clause 8.3.5.6.5.1.3)"

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** [k\) done](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0928**

Comment submitted by: Panyuh

Joo

Member

2002/02/25

Comment Type **Technical, Binding**Starting Page # **69**Starting Line # **40**Section **6.2.11.2.1**

Quasi-random Ranging Code Selection is necessary for OFDMA PHY. Quasi-random Ranging Code Selection has better benefit than Random selection for avoiding of collision in Bandwidth Request Ranging.

Suggested Remedy

Refer to coming contribution.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Rejected****Reason for Group's Decision/Resolution**

O for, 3 against

Current solution was deemed adequate in view of no simulation or other documentation on the superiority of the method suggested in the comment. Such documentation is invited.

Group's Notes

MAC

Group's Action Items

need rebuttal

Editor's Notes**Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0929**

Comment submitted by: Jon

Labs

Member

Comment Type **Editorial**Starting Page # **69**Starting Line # **52**Section **6.2.11.2.1**

'therefore' is misspelled.

Suggested Remedy

Change 'therefore' to 'therefore'

Proposed Resolution Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change 'therefore' to 'therefore'

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0930**

Comment submitted by: Anader

Benyamin-Seeyar

Member

2002/02/22

Comment Type **Editorial**Starting Page # **69**Starting Line # **56**Section **6.2.11.2**

Correction of bee to been.

Suggested Remedy

Proposed Resolution Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Correction of bee to been.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0931**

Comment submitted by: Jon

Labs

Member

Comment Type **Editorial**Starting Page # **69**Starting Line # **56**Section **6.2.11.2.1**

'bee' is a misspelling.

Suggested Remedy

Change 'bee' to 'been'

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions l) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0932**

Comment submitted by: Yigal

Leiba

Member

2002/02/25

Comment Type **Technical, Non-binding**Starting Page # **71**Starting Line # **1**Section **6.2.11.2.1**

Figure 151 is no longer relevant, as ranging sub-channels are ALWAYS allocated dynamically , and an SS should ALWAYS adhere to the UL-MAP for determination of the allowed ranging symbols and ranging sub-channels

Suggested Remedy

Remove figure 151

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Remove figure 151

Reason for Group's Decision/Resolution

Group's Notes

MAC

Group's Action Items

Editor's Notes

Editor's Actions k) done

Also updated the line above figure 150 to "Figure 158 describes the ranging adjustment process."

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0933**

Comment submitted by: Nico

van Waes

Member

2002/02/25

Comment Type **Technical, Satisfied (was** Starting Page # **71** Starting Line # **40** Section **6.2.11.3**
DFS as defined is utterly insufficient to allow operation in regions where DFS is mandated.

Suggested Remedy

DFS should be split in initial and maintenance DFS. It should distinguish between avoidance of primary services (i.e. radar) and non-protected services. For primary services, it ought to specify a minimum listening percentage of the BS, and a minimum reaction time etc..

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group**Decision of Group: **Accepted-Modified****Reason for Group's Decision/Resolution****Group's Notes**

MAC

Group's Action Items

Carl to provide appropriate text

Editor's Notes

Editor's Actions k) done

DFS text inserted and edited

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0934**Comment submitted by: [Avraham](#)[Freedman](#)

Member

[2002/02/20](#)Comment Type [Editorial](#)Starting Page # **71**Starting Line # **47**Section **6.2.11.3**[The paragraph probably does not refer to itself](#)

Suggested Remedy

[Change "6.2.11.3" to "6.2.11"](#)Proposed Resolution Recommendation: **Accepted-Duplicate**Recommendation by [Avraham Freedman](#)[Change "6.2.11.3" to "6.2.11.2"](#)

Reason for Recommendation

[As per comments 935 ,936](#)

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

[Will be replaced/updated by Carl's DFS action item response](#)

Group's Notes

[MAC](#)

Group's Action Items

Editor's Notes

Editor's Actions [l\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0935**

Comment submitted by: Panyuh

Joo

Member

2002/02/25

Comment Type **Editorial**

Starting Page # **71**

Starting Line # **47**

Section **6.2.11.3**

Change
"The initial ranging mechanism described in clause 6.2.11.3"
to
"The initial ranging mechanism described in clause 6.2.11.2"

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0936**

Comment submitted by: Jiacheng

Wang

Other

2002/02/20

Comment Type **Editorial**

Starting Page # **71**

Starting Line # **47**

Section **6.2.11.3**

type error

Suggested Remedy

Change

"The initial ranging mechanism described in clause 6.2.11.3"

to

"The initial ranging mechanism described in clause 6.2.11.2"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0937**

Comment submitted by: **Lei**

Wang

Member

2002/02/25

Comment Type **Editorial**

Starting Page # **72**

Starting Line # **1**

Section

wrong section number

Suggested Remedy

change "6.2.11.3.0.1" to "6.2.11.3.1"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

change "6.2.11.3.0.1" to "6.2.11.3.1"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0938**

Comment submitted by: Nico

van Waes

Member

2002/02/25

Comment Type **Technical, Satisfied (was**

Starting Page # **72**

Starting Line # **49**

Section **6.5**

Suggested Remedy

[update mesh addressing as described in C80216a-02/30](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

[update mesh addressing as described in C80216a-02/30r1](#)

Reason for Group's Decision/Resolution

[r1 remedies the reason for rejection](#)

Group's Notes

[MAC](#)

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0939**

Comment submitted by: Eric

Jacobsen

Member

2002/02/25

Comment Type **Technical, Satisfied (was** Starting Page # **74** Starting Line # **12** Section **8.3**

The existence of multiple, disparate, non-interoperable modes in the PHY layer is cumbersome and unnecessary.

Suggested Remedy

Reduce the number of major configurations to those that can be practically constructed in a single embodiment that can be shown to provide the performance required as indicated in the FRD. Surveys of recent literature show the continued treatments of the advantages of OFDM modulation in such applications for increasing capacity and surviving the expected channels. Despite the significant amount of detailed work that has gone into the single carrier portion of the document, there is no evidence that it will provide any advantage over the OFDM modes, and a good deal of evidence to create doubt that it will perform adequately in practical NLOS deployments. Deletion of the single carrier portions of the document will greatly improve the condition, practicality, and likelihood of success of the standard.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group**Decision of Group: **Rejected**

unanimously rejected

Reason for Group's Decision/Resolution

need to support multiple modes to support different applications and environments.
for comparative information, see for example 80216.3c-01/32

Group's Notes**Group's Action Items****Editor's Notes**

Editor's Actions |) none needed

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0940**

Comment submitted by: **Anader**

Benyamin-Seeyar

Member

2002/02/22

Comment Type **Technical, Non-binding** Starting Page # **74** Starting Line # **40** Section **8.3.1**

1) The generic PHY block diagram for the SC receive part is depicted wrongly.

2) The OFDM part of diagram do not match to that of the SC.

Suggested Remedy

1) The receive sequence of RX part for the SC has to change as follows:

- ^
- | **Pilot Removal**
- | Equalization
- | Quadrature **Demodulator**

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Modified**

delete 8.3.1 entirely
delete 8.3.2 entirely and just leave one paragraph:

8.3.1 Targeted frequency bands

This clause is informative and indicates frequency bands, and their allowed channel spacings, to which this PHY layer may be applicable.
[Insert Table 172]

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0941**

Comment submitted by: Fengming

Cao

Other

2002/02/20

Comment Type **Editorial**

Starting Page # **75**

Starting Line # **21**

Section **8.3.1.3**

The purpose of the interleaver is to prevent a series of consecutive bad bits, not symbols.
So change "symbols" to "bits".

Suggested Remedy

change "Interleaving is used to spread consecutive bits into separate symbols
after modulation; the purpose of the interleaver is to prevent a series of consecutive bad symbols, "

to "Interleaving is used to spread consecutive bits into separate symbols
after modulation; the purpose of the interleaver is to prevent a series of consecutive bad bits,"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Superseded

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0942**

Comment submitted by: Panyuh

Joo

Member

2002/02/25

Comment	Type Editorial	Starting Page # 75	Starting Line # 21	Section
---------	-----------------------	---------------------------	---------------------------	---------

Change "the purpose of the interleaver is to prevent a series of consecutive bad symbols,"
to "the purpose of the interleaver is to prevent a series of consecutive bad bits,"

Suggested Remedy

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for Recommendation

Resolution of Group Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0943**

Comment submitted by: Anader

Benyamin-Seeyar

Member

2002/02/22

Comment	Type Editorial	Starting Page # 75	Starting Line # 54	Section 8.3.1.5
---------	-----------------------	---------------------------	---------------------------	------------------------

The clause 8.3.1.5 header Single carrier (SC) should be corrected .

Suggested Remedy

Change the 8.3.1.5 header to "**Single Carrier (SC) System**"

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Modified**

Change the 8.3.1.5 header to "**Single Carrier (SC) System**"

Change "Single Carrier" to "single carrier" globally.

In document, set all terms into lower case, unless a specific named entity.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) in progress

partially complete

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0944**

Comment submitted by: Anader

Benyamin-Seeyar

Member

2002/02/22

Comment Type **Editorial**Starting Page # **75**Starting Line # **60**Section **8.3.1.5**

Add a reference for the requirement for an equalizer at the end of the last paragraph.

Suggested Remedy

Add Reference **[B25]** as a reference at the end of last paragraph.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0945**

Comment submitted by: Jon

Labs

Member

Comment Type **Editorial**Starting Page # **76**Starting Line # **3**Section **8.3.1.6**

The first two paragraphs are simply cut-and-pastes of the two paragraphs starting at line 39 on page 75.

Suggested Remedy

Remove the two paragraphs, and begin the paragraph on line 35 with "The time/frequency map pertains to the OFDM and OFDMA PHY's only. The time/frequency map, shown in..."

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Remove the two paragraphs, and begin the paragraph on line 35 with "The time/frequency map pertains to the OFDM and OFDMA PHY's only. The time/frequency map, shown in..."

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

superceded by 0940

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0946**

Comment submitted by: Anader

Benyamin-Seeyar

Member

2002/02/22

Comment Type **Editorial**Starting Page # **76**Starting Line # **4**Section **8.3.1.6**

The first two paragraphs of this clause are exact copy of the two paragraphs given in the previous page in clause 8.3.1.4.

Suggested Remedy

Remove the first two paragraphs without loss of any important information. In fact, it is appropriate to the topic to start at the third paragraph.

8.3.1.6 Time/frequency map

~~In a multi-carrier system, data is mapped to symbols and then multiplexed into a number of simultaneous lower speed streams, with each stream being modulated, i.e., borne, by a different carrier. The available channel bandwidth is thereby subdivided among these multiple carriers. Although the frequency response~~

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

superceded by 0940

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0947**

Comment submitted by: Panyuh

Joo

Member

2002/02/25

Comment Type **Editorial**Starting Page # **77**Starting Line # **8**

Section

The processing of nulling the guard bins, happens in the frequency domain, corresponding to the clause's title 8.3.1.7, but it is not clear in description. So it needs clarification

Suggested Remedy

"8.3.1.7 Frequency and time domain processing (F&T)

This block includes nulling the guard bins in the frequency domain, and implementing an inverse transform. In the time domain, it also includes a cyclic prefix operation, and may include windowing, clipping and filtering."

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0948**

Comment submitted by: Marianna

Goldhammer

Member

2002/02/22

Comment Type **Editorial**

Starting Page # **78**

Starting Line # **8**

Section **8.3.2.1**

Table 172

the table gives regulatory channel spacing, not allocations

Suggested Remedy

Replace "Table 172—Frequency bands and channel allocation" with "Table 172—Frequency bands and allowed channel spacing"

Replace "Nominal /typical channel spacing / allocation"

with

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0949**

Comment submitted by: Yigal

Leiba

Member

2002/02/25

Comment	Type Editorial	Starting Page # 79	Starting Line # 1	Section 8.3.2.2
---------	-----------------------	---------------------------	--------------------------	------------------------

The masks in figures 155-157 may change in the future

Suggested Remedy

Delete the figures, and just refer to standards

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0950**

Comment submitted by: Eric

Jacobsen

Member

2002/02/25

Comment	Type Technical, Satisfied (was	Starting Page # 79	Starting Line # 4	Section 8.3.2.2
---------	---------------------------------------	---------------------------	--------------------------	------------------------

Figure 155 is useless as it stands. Something as significant as a spectral mask should be fully specified in a standard.

Suggested Remedy

Include the values for the frequency reference points A-E, as well as the definitions of system type A - G. If this is not acceptable for some reason, then I suggest deleting the figure entirely, since it is not useful as it is.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

figure deleted by previous comment as suggested

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0951**

Comment submitted by: Malik

Audeh

Member

2002/02/21

Comment Type **Technical, Non-binding** Starting Page # **80** Starting Line # **32** Section **8.3.2.2**

The MMDS spectral mask in Figure 157 is only correct for low-power devices (< -6 dBm EIRP).

Suggested Remedy

Add a new mask figure in addition to Fig. 157 that is 38 dB down at +/- 3 MHz and 60 dB down at +/- 6 MHz for devices above -6 dBm EIRP that are typical of most MMDS transmitters both at the base station and at the subscriber station.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0952**

Comment submitted by: Anader

Benyamin-Seeyar

Member

2002/02/22

Comment Type **Technical, Non-binding** Starting Page # **82** Starting Line # **8** Section **8.3.3.1.1**

The main Duplexing modes supported by all three PHY modes are FDD and TDD. Therefore, Half-FDD is not needed to be specified as a separate mode.

Suggested Remedy

Delete the "half-duplex frequency division (H-FDD)" from the first sentence.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Rejected-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0953**

Comment submitted by: Jon

Labs

Member

Comment Type **Technical, Non-binding**

Starting Page # **82**

Starting Line # **8**

Section **8.3.3.1.1**

According to table 145 we are not doing HFDD for sub 11 GHz.

Suggested Remedy

Remove all reference to HFDD in section 8.3.3.1.1.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0954**Comment submitted by: **Anader****Benyamin-Seeyar**

Member

2002/02/22

Comment Type **Editorial**Starting Page # **82**Starting Line # **41**Section **8.3.3.1.4**

The subclause 8.3.3.1.4 .1 FEC is NOT another coding scheme !

Suggested Remedy

The header of clause **8.3.3.1.4 Channel coding schemes** can be changed to "**8.3.3.1.4 Channel FEC coding schemes**" and remove 8.3.3.1.4 .1 FEC subclause.

Then, update the numbering of subclauses within the clause 8.3.3.1.4.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

The header of clause **8.3.3.1.4 Channel coding schemes** can be changed to "**8.3.3.1.4 Channel FEC coding schemes**" and remove 8.3.3.1.4 .1 FEC subclause.

Then, update the numbering of subclauses within the clause 8.3.3.1.4.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0955**

Comment submitted by: Jon

Labs

Member

Comment Type **Editorial**Starting Page # **83**Starting Line # **28**Section **8.3.3.1.4.2.1**

I found the wording for the definitions of N, K and T, slightly confusing.

Suggested Remedy

For clarity, I would write the definitions as follows:

N = number of overall bytes after encoding

K = number of data bytes before encoding

T = number of data bytes which can be corrected

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

write the definitions as follows:

N = number of overall bytes after encoding

K = number of data bytes before encoding

T = number of data bytes which can be corrected

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0956**Comment submitted by: [Jon](#)[Labs](#)[Member](#)Comment Type [Editorial](#)Starting Page # **84**Starting Line # **34**Section **8.3.3.1.4.2.2**[Reference to Table 150 and Figure 158 are incorrect.](#)**Suggested Remedy**[Change 'Table 170' to 'Table 174'. Also change 'Figure 158' to 'Figure 159'.](#)**Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: [Accepted](#)**[Change 'Table 170' to 'Table 174'. Also change 'Figure 158' to 'Figure 159'.](#)**Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** [k\) done](#)**Editor's Questions and Concerns****Editor's Action Items**Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0957**Comment submitted by: [Jon](#)[Labs](#)[Member](#)Comment Type [Editorial](#)Starting Page # **85**Starting Line # **46**Section **8.3.3.1.4.3.1**[In Table 175, 'General polynomial' is not the correct title for the column.](#)**Suggested Remedy**[Change 'General' to 'Generator'.](#)**Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: [Accepted](#)**[Change 'General' to 'Generator'.](#)**Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** [k\) done](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0958**

Comment submitted by: [Jon](#)

[Labs](#)

[Member](#)

Comment Type [Editorial](#)

Starting Page # **86**

Starting Line # **18**

Section **8.3.3.1.4.3.1**

(64, 63) is not an extended Hamming code.

Suggested Remedy

Change 'Extended Hamming Code' to 'Parity Check Code'.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: [Accepted](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0959**Comment submitted by: **Anader****Benyamin-Seeyar**

Member

2002/02/22

Comment Type **Editorial**Starting Page # **86**Starting Line # **29**Section **8.3.3.1.4.3.1**

There is inconsistency in using upper case and lower case for MSB and LSB within this document.

Suggested Remedy

Convert all **lsb to LSB** and **msb to MSB** through clause 8.3.3.1.4.3 and the whole document.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Confirm that, throughout document, the case of MSB, LSB, msb, and lsb are used as defined in IEEE Std 802.16; namely:

lsb least significant bit

LSB least significant byte

msb most significant bit

MSB most significant byte

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done

LSB and MSB are only used in chapter 11 in two places, rest converted

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0960**Comment submitted by: **Anader****Benyamin-Seeyar**

Member

2002/02/22

Comment Type **Editorial**Starting Page # **87**Starting Line # **42**Section **8.3.3.1.4.3.3**

The sentence "**Many different turbo decoders are available and described in detail in published academic papers**" needs a reference.

Suggested Remedy

Add reference(s) at the end of the paragraph for TPC decoding algorithms.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Reference the following: [B20], [B36] and

J. Hagenauer, "The Turbo principle: Tutorial introduction and state of the art," in Proceedings of the International Symposium on Turbo Codes, Brest, France, Sept. 1997, pp. 1--11.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0961**Comment submitted by: **Anader****Benyamin-Seeyar**

Member

2002/02/22

Comment Type **Editorial**Starting Page # **88**Starting Line # **4**Section **8.3.3.1.5**

References to Figure 161and Figure 162 are wrong.

Suggested Remedy

Change references from "Figure 161and Figure 162" to "Figure 162 and Figure 163"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change references from "Figure 161and Figure 162" to "Figure 162 and Figure 163"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0962**Comment submitted by: **Jon****Labs**

Member

Comment Type **Editorial**Starting Page # **88**Starting Line # **5**Section **8.3.3.1.5**

Number of figures is incorrect.

Suggested Remedy

Correct 'Figure 161 and Figure 162' to 'Figure 162 and Figure 163'.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **l) none needed**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0963**

Comment submitted by: Yigal

Leiba

Member

2002/02/25

Comment	Type	Starting Page #	Starting Line #	Section
	Technical, Non-binding	89	47	8.3.3.1.5

Two problems with table 177:

1. Who's to tell what normalization factor is used (peak or average)?
2. The peak power criterion is not well defined, but rather there is a probability distribution of peak-to-average value for each specific waveform. For instance, peak-to-average ratio differs between SC and OFDM/OFDMA, and might also significantly change due to signal processing intended to reduce the peak-to-average ratio of the waveform

Suggested Remedy

Remove the "Equal peak power" column from table 177, and correct the preceding sentence

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group**Decision of Group: **Accepted**

motion: remove equal peak power column for OFDM/A	vote: 11-0
remove equal peak power column for SC2	vote: 13-1

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes**

Editor's Actions k) done

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0964**

Comment submitted by: Panyuh

Joo

Member

2002/02/25

Comment	Type	Editorial	Starting Page #	91	Starting Line #	15	Section
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Change "if it is supported and applicable to all the SS s of a BS."
to "if it is supported and applicable to all the SSs of a BS."

Suggested Remedy

Proposed Resolution	Recommendation:	Recommendation by
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Reason for Recommendation

Resolution of Group	Decision of Group: Accepted-Modified
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actually on page 155, line 51

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes	Editor's Actions	k) done
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Editor's Questions and Concerns**Editor's Action Items**Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0965**

Comment submitted by: Panyuh

Joo

Member

2002/02/25

Comment	Type	Editorial	Starting Page #	91	Starting Line #	49	Section
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The formula has a error, left a symbol '^' dBm is typo.

Suggested Remedy

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Accepted-Modified
---------------------	---

move units outside equations on page 91 through 94

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes	Editor's Actions	k) done
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Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0966**

Comment submitted by: Rémi

Chayer

Member

2002/02/22

Comment Type **Technical, Non-binding**

Starting Page # **94**

Starting Line # **40**

Section **8.3.3.2.2**

Throughout the document, mainly in the PHY section, there is some wording specifying certain PHY modes that are applicable to licensed and/or license-exempt bands only.

Suggested Remedy

Modify the table as follows:

"Table 178— Downlink data modulation schemes (M= mandatory, O=optional)

	BPSK	QPSK	16QAM	64QAM	256QAM
Licensed —SC2	O	M	M	M	O
Licensed —OFDM	N/A	M	M	O	N/A

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Modify the table as follows:

"Table 178— Downlink data modulation schemes (M= mandatory, O=optional)

	BPSK	QPSK	16QAM	64QAM	256QAM
Licensed —SC2	O	M	M	M	O
Licensed —OFDM/OFDMA	N/A	M	M	O	N/A
License exempt —OFDM	N/A	M	M	O	N/A"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0967**

Comment submitted by: **Anader**

Benyamin-Seeyar

Member

2002/02/22

Comment Type **Technical, Non-binding**

Starting Page # **94**

Starting Line # **46**

Section **8.3.3.2.2**

The Downlink and Uplink Tables 178 and 179 should be reduced from three rows to two rows without loss of information.

Suggested Remedy

Table 178 for Downlink can be simplified as follows:

	BPSK		QPSK		16QAM		64QAM		256QAM
SC2	O		M		M		M		O
OFDM / OFDMA	N/A		M		M		O		N/A

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

simplify table 179 as follows:

	BPSK		QPSK		16QAM		64QAM
SC2	O		M		M		O
OFDM / OFDMA	N/A		M		M		O

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0968**

Comment submitted by: Avraham

Freedman

Member

2002/02/20

Comment Type **Editorial**Starting Page # **94**Starting Line # **47**Section **6.3.3.2**

OFDMA is not mentioned in table 178, while it is mentioned in table 179.

Suggested Remedy

Change "OFDM" to "OFDM/A" in line 47 and line 49, table 178.

Change : "OFDM/OFDMA" to "OFDM/A" in table 179, p.95 l.14

Change "OFDM" to "OFDM/A" in table in table 179, p. 95 l. 16

Proposed ResolutionRecommendation: **Accepted-Duplicate**

Recommendation by Avraham Freedman

As per comment 967

Reason for Recommendation**Resolution of Group**Decision of Group: **Accepted-Duplicate****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes**

Editor's Actions |) none needed

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0969**Comment submitted by: **Anader****Benyamin-Seeyar**

Member

2002/02/22

Comment Type **Editorial**Starting Page # **95**Starting Line # **1**Section **8.3.3.3.1**

The subclause "8.3.3.3.1 Uplink data modulation schemes" is redundant.

Suggested Remedy

Delete subclause 8.3.3.3.1 Uplink data modulation schemes.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified****8.3.3.2 Multiplexing and data modulation schemes**

In the DL, each downlink RF channel is subdivided into fixed frames with which the RF carrier is suitably modulated to provide a digital bit stream.

Within each RF channel a frame structure is used to organize and schedule the transmission of voice, video and data traffic.

The applicable modulation schemes for the downlink are shown in Table 178.

[Insert Table 178]

In the UL, TDMA is required. The applicable modulation schemes for the uplink are shown in Table 179.

[Insert Table 179]

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0970**

Comment submitted by: Rémi

Chayer

Member

2002/02/22

Comment Type **Technical, Non-binding**

Starting Page # **95**

Starting Line # **6**

Section **8.3.3.3.1**

Throughout the document, mainly in the PHY section, there is some wording specifying certain PHY modes that are applicable to licensed and/or license-exempt bands only.

Suggested Remedy

Modify the table as follows:

Table 179—Uplink Data modulation schemes (M= mandatory, O=optional)

	BPSK	QPSK	16QAM	64QAM
Licensed —SC2	O	M	M	O
Licensed —OFDM/OFDMA	N/A	M	M	O
License-exempt —OFDM				

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0971**

Comment submitted by: Brian

Gieschen

Member

2002/02/25

Comment Type **Technical, Satisfied (was** Starting Page # **95** Starting Line # **27** Section **table 180**

The maximum frame duration should be allowed to go longer to accomodate; 1.75 MHz channel sizes and the cooresponding increases in symbol length and TDD modes which use the frame duration to contain both uplink and downlink traffic. Further, to accomodate subscriber units which cannot accomodate longer frame durations, a negotiation mechanism should be introduced to allow the Access point to schedule frames accordingly.

Suggested Remedy

1) change table 180 to:

Code(N)	PMP	Mesh
0-6	N/2+2	N+4
7-11	N-1	N+4
12-51	N-1	reserved
52-255	reserved	reserved

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group:** **Rejected-Duplicate****Reason for Group's Decision/Resolution**

no identifiable increase in effeciency is shown.
increases the latency in the system

Group's Notes**Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0972**

Comment submitted by: Yigal

Leiba

Member

2002/02/25

Comment Type **Technical (was Editorial)**Starting Page # **95**Starting Line # **42**Section **8.3.3.4**

A comment to change 'mini-slot' duration to 'OFDM symbol duration' has been accepted in the past (comment #322 from Levi meeting)

Suggested Remedy

Change 'mini-slot' duration to 'OFDM symbol duration'

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Change 'mini-slot' duration to 'OFDM symbol duration'

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0973**

Comment submitted by: Fengming

Cao

Other

2002/02/20

Comment Type **Editorial**Starting Page # **95**Starting Line # **44**Section **8.3.3.4**

The Alamouti STC here is only used in the case of two branches(BS tx)vs one branch(SS rx), therefore, the number of OFDM symbols for the downlink(TDD and FDD mode) should be even. Particularly in TDD mode, the number of OFDM symbols for the uplink may be odd.

In order to clarify, "in the downlink" need be added.

Suggested Remedy

change "When using Alamouti STC Encoding, the frame shall contain (in addition to all other requirements) an even number of OFDM symbols."

to "When using Alamouti STC Encoding, the frame shall contain (in addition to all other requirements) an even number of OFDM symbols in the downlink."

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

change "When using Alamouti STC Encoding, the frame shall contain (in addition to all other requirements) an even number of OFDM symbols."

to "When using Alamouti STC Encoding, the frame shall contain (in addition to all other requirements) an even number of data OFDM symbols in the downlink."

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes**

Editor's Actions k) done

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0974**

Comment submitted by: Panyuh

Joo

Member

2002/02/25

Comment	Type	Starting Page #	Starting Line #	Section
	Editorial	95	44	

Chage "When using Alamouti STC Encoding, the frame shall contain (in addition to all other requirements) an even number of OFDM symbols."
to " When using Alamouti STC Encoding, the frame shall contain (in addition to all other requirements) an even number of OFDM symbols in the downlink."

Suggested Remedy

Proposed Resolution	Recommendation:	Recommendation by
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Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0975**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Editorial**

Starting Page # **97**

Starting Line # **1**

Section **8.3.4.1.1**

Heading "Source Bit Randomization for Energy Dispersal" seems overly long.

Suggested Remedy

Retitle section as

[Source Bit Randomization](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Retitle section as

[Source Bit Randomization](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0976**

Comment submitted by: Paul

Struhsaker

Member

2002/02/21

Comment Type **Technical, Non-binding** Starting Page # **97** Starting Line # **50** Section **8.3.4.1.2.1.1**
 support for N-K =16 will be Manditory and the nominal The capability to puncture (N-K less than 16)will be an Option

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

replace the sentence with:

Support for N-K =16 will be mandatory and the capability to puncture (N-K less than 16) will be optional.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Sentence didn't quite fit in flow: modified to read as follows:

Support of shortening the N of this base code while maintaining is mandatory. The capability to also puncture, such that , is optional. A burst profile specifies N-K when optional puncturing is used.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0977**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Technical, Satisfied (was** Starting Page # **97** Starting Line # **57**Section **8.3.4.1.2.1.2**

Make UL and DL descriptions more symmetric, by making support of interleaving optional for both UL & DL. This makes UCD and DCD TLV elements common. Also doesn't make sense to restrict use on the UL, if support is optional, and the implementation could improve performance for longer packets.

Suggested Remedy

Replace
Support of interleaving between the inner and outer code is optional on the DL, but shall not be used in broadcast burst profiles or on the UL.

with

Support of interleaving between the inner and outer code is optional. Interleaving shall not be used in

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

Replace
Support of interleaving between the inner and outer code is optional on the DL, but shall not be used in broadcast burst profiles or on the UL.

with

Support of interleaving between the inner and outer code is optional. Interleaving shall not be used in broadcast burst profiles.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes Editor's Actions k) done

Used the above, with a few small editorial changes to fix typos and improve the flow of the resulting text.

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0978**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Technical, Satisfied (was** Starting Page # **97** Starting Line # **64** Section **8.3.4.1.2.1.2**
 Add Interleaver description, which was promised last meeting.

This interleaver algorithm uses modulo-RS codeword spacing and resembles the one used in the 'dynamic mode' TDMA Upstream interleaver of DOCSIS 2.0.

Suggested Remedy

Add the following text description:

The optional interleaver changes the order of bytes at the Reed Solomon (RS) encoder output. A receiver restores the order of the bytes prior to RS decoding.

The interleaver is a block interleaver, where a table is 'written', i.e., filled, row-wise (one row per RS code word) and 'read' column-wise. The number of rows, R, used by the interleaver is a burst parameter. So that

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

Add the following text description:

The optional interleaver changes the order of bytes at the Reed Solomon (RS) encoder output. A receiver restores the order of the bytes prior to RS decoding.

The interleaver is a block interleaver, where a table is 'written', i.e., filled, row-wise (one row per RS code word) and 'read' column-wise. The number of rows, R, used by the interleaver is a burst parameter. So that bursts are not generated that exceed an intended receiver's capabilities, the largest R supported by a terminal is communicated during SS registration.

Operating parameters for an interleaver are summarized in Table X.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes Editor's Actions k) done

Used the above, with a few small editorial changes to fix typos and improve the flow of the resulting text.

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0979**

Comment submitted by: Anader

Benyamin-Seeyar

Member

2002/02/22

Comment	Type	Technical, Non-binding	Starting Page #	101	Starting Line #	56	Section	8.3.4.1.2.1.3.8
---------	------	------------------------	-----------------	-----	-----------------	----	---------	-----------------

The inner code blocks are to be terminated using either **Zero-state** or **Tail biting** termination. According to the contribution made by Hui-Ling Lou and Kok-Wui Cheong from Marvell Semiconductors, it was clearly shown that **Zero-state** termination process can be simpler with lower memory and delay requirement. The added overhead of 6 bits over an average packet size of ~200 Bytes is an insignificant saving. Therefore, **Zero-state** termination is a preferred option to be considered as **mandatory** choice for SC PHY.

Suggested Remedy

Replace Tail Biting text with "Zero-state termination" as mandatory choice:

Inner code blocks are to be terminated using zero-state in transitions between adaptive modulation (and FEC) types, at the ends of bursts, or as instructed by the MAC and frame control.

When using zero state termination, the basic rate **1/2** convolutional encoder is initialized with its registers in the all-zeros state. Inner encoding begins from this state, by accepting data inputs. To zero state terminate at the end of the code block, a sufficient number of zero inputs are fed the baseline

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

[see 980](#)

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0980**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Technical, Satisfied (was** Starting Page # **101** Starting Line # **56** Section **8.3.4.1.2.1.3.8**
 After considerable analysis, for the single carrier system, zero-state termination appears a more practical solution.

Here are some reasons:

- 1) Tail-biting awkward and not so hardware efficient for SC system, due to arbitrary packet sizes and the fact that different FDEs may use different FFT sizes. (In contrast, OFDM has natural symbol boundaries.)
- 2) Acquisition (and re-acquisition) problematic due to discontinuities at termination boundaries.

Suggested Remedy

Remove tail-biting specification in section, and replace with zero-state termination specification, which is:

Inner code blocks are to be zero-state terminated in transitions between adaptive modulation (and FEC) types, at the ends of bursts, or as instructed by the MAC and frame control.

When using zero state termination, the baseline rate $\frac{1}{2}$ convolutional encoder shall be initialized with its registers in the all-zeros state. Inner encoding shall begin from this state, by accepting bit inputs.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Remove tail-biting specification in section, and replace with zero-state termination specification, which is:

Inner code blocks are to be zero-state terminated in transitions between adaptive modulation (and FEC) types, at the ends of bursts, or as instructed by the MAC and frame control.

When using zero state termination, the baseline rate $\frac{1}{2}$ convolutional encoder shall be initialized with its registers in the all-zeros state. Inner encoding shall begin from this state, by accepting bit inputs.

To terminate the inner code (and return the encoder to the all-zeros state) at the end of a code block, at least 6 zero inputs shall be fed into the baseline rate $\frac{1}{2}$ binary convolutional encoder so that its register memory is flushed, i.e., its state memory is driven to zero. Once the first flushing zero bit is introduced into the convolutional encoder memory, all input bits, including the systematic input bits that are parallel to the binary convolutional encoder inputs, shall have zero value.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0981**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment	Type	Starting Page #	Starting Line #	Section
	Technical, Non-binding	101	61	8.3.4.1.2.1.3.8

Makes more sense to denominate sub-block sizes in terms of symbols rather than bits fed to the inner encoder.

(Withdraw this comment, because sub-block termination not required if previous comment accepted)

Suggested Remedy

Replace 2nd paragraph of clause 8.3.4.1.2.1.3.8 with:

Within long blocks of a single adaptive modulation type, the inner code shall also be terminated in sub-blocks of length 128 symbols. However, when the data available for the final sub-block does not fill an entire sub-block, the final sub-block shall be merged with the previous full sub-block, to compose an extended-length sub-block of length less than 256 symbols. Tail-biting termination shall occur only at the end of this extended-length sub-block.

Proposed Resolution	Recommendation:	Recommendation by
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Reason for Recommendation

Resolution of Group	Decision of Group: Superseded
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Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes	Editor's Actions) none needed
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Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0982**

Comment submitted by: Jori

Arrakoski

Member

2002/02/25

Comment Type **Technical, Satisfied (was** Starting Page # **103** Starting Line # **46** Section **8.3.4.1.2.2**
The benefits of using FEC are so obvious that a mode without FEC doesn't make any sense. Systems without FEC might not have the technology credibility required a sound standard.

Suggested Remedy

Remove Section

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

vote 7 in favor, 14 against

Reason for Group's Decision/Resolution

See next comment (0983) for a proposed modification. Your heart is in the right place, but there are several reasons to justify the existence of this mode.

a) You need the no FEC type for sending null fill data (to fill a frame). Null fill allows the demod to be aligned and track, but does not require the FEC to operate.

So it's not really difficult to eliminate it completely as a data type.

b) I also replied to a similar comment at the last meeting. explaining why this option is also credible for data transport.

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0983**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Editorial**Starting Page # **103**Starting Line # **49**Section **8.3.4.1.2.2**

Probably need to note here that support of uncoded QPSK explicitly mandatory, since clause 8.3.4.1.3.1.3 mandates that the capability to generate null payload fill is mandatory, and null payload fill uses uncoded QPSK.

Suggested Remedy

After the first sentence, which ends on line 50, write

Support of no-FEC operation for QPSK is mandatory, but is optional for all other QAM.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

After the first sentence, which ends on line 50, write

Support of no-FEC operation for QPSK is mandatory, but is optional for all other QAM.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0984**Comment submitted by: [Anader](#)[Benyamin-Seeyar](#)

Member

2002/02/22

Comment Type [Editorial](#)Starting Page # **105**Starting Line # **23**Section **8.3.4.1.3.1**[The acronym for RxDS is missing.](#)

Suggested Remedy

[Add "Receiver Interval for Ramp Down" before \(RxDS\).](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**[add RxDS in chapter 3: Receiver Delay Spread Clearing Interval](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)[Added to list of abbreviations and acronyms in Chapter 4. -brian](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **0985**Comment submitted by: [Paul](#)[Struhsaker](#)

Member

2002/02/21

Comment Type [Technical, Non-binding](#)Starting Page # **108**Starting Line # **5**Section **8.3.4.1.3.2.2**[The table value for 256 Frank-Zadoff is Manditory for chanel bandwidths greater than 7.5 Mhz and option for channels less than 7.5 Mhz](#)

Suggested Remedy

[Add this restriction or an equivalent comment note to the Table](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0986**Comment submitted by: **Brian****Eidson**

Member

2002/02/25

Comment Type **Editorial**Starting Page # **108**Starting Line # **18**Section **8.3.4.1.3.2.2**

The word "default" seems more appropriate than "nominal" when indicating the most-likely to be used-mode, which should probably be tried first during initial acquisition.

Suggested Remedy

Change "(nominal)" in Table 183 to "(default)"

and make the same change on line 54.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** [k\) done](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0987**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type Technical, Satisfied (was Starting Page # 108 Starting Line # 53 Section 8.3.4.1.3.2.2
 Support of a 256 symbol UW seems impractical and overkill for lower symbol rates.
 Making U=256 mandatory for symbol rates greater than or equal to 10 Msymb/sec seems more reasonable.

Suggested Remedy

Change

"The sequence lengths U = 64 and 256 in
 Table 183 shall be supported, with 64 symbols considered the nominal."

to be

The sequence length U=64 shall be supported and considered a default setting; U=256 shall also

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

Amend such that U = 64 mandatory (and default setting); U = 256 support mandatory for symb rates ≥ 20 Msymb/s; U = 16 support also mandatory for ≤ 1.25 Msymb/s. (some FDD ULs may want to use this)

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes Editor's Actions k) done

Used the following text:

The sequence length U = 64 shall be supported and considered a default setting. U = 16 shall also be supported for symbol rates below 1.25 Msymb/s. and U = 256 shall also be supported for symbol rates above 20 Msymb/s.

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0988**Comment submitted by: **Anader****Benyamin-Seeyar**

Member

2002/02/22

Comment Type **Editorial**Starting Page # **109**Starting Line # **45**Section **8.3.4.1.4.1.1.1**

Figure 177 has to be divided into DL and UL. The uplink does not show the STG gap interval.

Suggested Remedy

Separate DLand UL diagram on Figure 177—1) Example of FDD with burst TDM DL and 2) Figure 178—Example of FDD with burst TDMA UL.

Then, add SS Transition Gap (STG) between UL Sub-frame (N-1) and UL Sub-frame (N).

Also, change **US** to **UL** in the diagram.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

modify figure 177 to illustrate STG

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** e) editor disagrees

Changed US to UL. However, the RxDS **is** part of the STG, and this is difficult to illustrate. For this reason, modified the text in the associated description in 8.3.3.1.4.1.1.2 such that it now reads:

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0989**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment	Type	Technical, Non-binding	Starting Page #	110	Starting Line #	8	Section	8.3.4.1.4.1.1.1
---------	------	------------------------	-----------------	-----	-----------------	---	---------	-----------------

Not sure if termination at X_FCH may is necessary. It is safe to terminate like this, but could waste BW.
This also requires a parameter to be known by the SS.

Suggested Remedy

If this is not necessary, then perhaps this specification should be that the termination would occur after 1 RS codeword of symbols (256 symbols - 6 zero state termination symbols), which would include more than X_FCH symbols, but less than all of the FCH-resident symbols. Need to check how this fits into the MAC bookkeeping of bytes in MAPs.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**replace "T_{X_FCH}" with "255"**Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** 1) none needed

This comment was actually withdrawn (by the author, me), but the record must not have captured this. No action is needed.

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0990**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Technical, Satisfied (was** Starting Page # **110** Starting Line # **32** Section **8.3.4.1.4.1.1.1**
 Need description of how to handle multiple bursts within a single MAC frame.

This isn't as ridiculous as it sounds, because if a system mixes regular (non-Alamouti-encoded) with Alamouti-encoded packets, then the bursts must be segregated, so the SSs not supporting Alamouti will not get confused. Multiple bursts might also be sent when adaptive antennas are used.

Suggested Remedy

Add one last paragraph to section, which follows:

When more than one bursts are to be transmitted within a single DL MAC sub-frame, the DL-MAP of the first payload in the followup burst shall have a burst profile with its DL Burst Transition Gap (DL-BTG) entry enabled. The DL-BTG is a burst profile parameter, which can be specified as part of a DL-MAP. When enabled, the DL-BTG also indicates the length of the gap between the bursts in units of PSs. The DL-BTG

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

When more than one bursts are to be transmitted within a single DL MAC sub-frame, the DL-MAP of the first payload in the followup burst shall have a burst profile with its DL Burst Transition Gap (DL-BTG) entry enabled. The DL-BTG is a burst profile parameter, which can be specified as part of a DL-MAP. When enabled, the DL-BTG also indicates the length of the gap between the bursts in units of PSs. The DL-BTG must be at least as long as the RxDS terminating a burst.

Note that this comment would be located in the burst FDD section. Make sure that reference to this element is also added to the TDD description, as well

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0991**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Technical, Satisfied (was** Starting Page # **111** Starting Line # **34** Section **8.3.4.1.4.1.3.2**
 Make DCD Burst descriptors consistent with TLVs of chapter 11.

Suggested Remedy

Replace old list with following list:

Modulation Type

FEC Code Type

Reed Solomon Information Bytes (K)

Reed Solomon Parity Bytes (R)

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Replace old list with following list:

Modulation Type

FEC Code Type

Reed Solomon Information Bytes (K)

Reed Solomon Parity Bytes (R)

BTC Row Code Type

BTC Column Code Type

BTC Interleaving Type

DIUC Mandatory Exit Threshold

DIUC Minimum Entry Threshold

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done

Updated to reflect latest TLVs in document.

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0992**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Technical, Non-binding** Starting Page # **111** Starting Line # **53**Section **8.3.4.1.4.1.3.3**

The channel descriptor message elements for SC do not agree with the TLVs of Ch 11, because the editors of these sections aren't the same. What's more, I'm making proposed changes to the TLVs again. We need to find a way to exchange info so that the end product is consistent.

Suggested Remedy

Here's my best guess what the entries now should be:

Uplink_Burst_Profile
 Symbol Rate
 Frequency
 SS Transition Gap
 Roll-Off Factor

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Uplink_Burst_Profile
 Symbol Rate
 Frequency
 SS Transition Gap
 Roll-Off Factor
 Power Adjustment Rule
 Contention-Based Reservation Timeout
 Channel Width

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done

Updated to include latest TLVs introduced into document.

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0993**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Technical, Satisfied (was** Starting Page # **113** Starting Line # **51** Section **8.3.4.1.4.2.1.1**
 Make DCD Channel descriptors consistent with TLVs of chapter 11.

Suggested Remedy

Replace old list with following list:

Downlink_Burst_Profile
 BS Transmit Power
 Frame Duration Code
 Power Adjustment Code
 DCD Channel ID

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Replace old list with following list:

Downlink_Burst_Profile
 BS Transmit Power
 Frame Duration Code
 Power Adjustment Code
 DCD Channel ID
 TTG

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done

Made consistent with latest TLVs.

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0994**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Technical, Non-binding**

Starting Page # **114**

Starting Line # **33**

Section **8.3.4.1.4.2.1.4**

Make UCD burst descriptors consistent with TLVs of Ch 11.

Suggested Remedy

Replace previous list with:

- Modulation Type
- Preamble Length
- FEC Code Type
- Reed Solomon Information Bytes
- Reed Solomon Parity Bytes

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Replace previous list with:

- Modulation Type
- Preamble Length
- FEC Code Type
- Reed Solomon Information Bytes
- Reed Solomon Parity Bytes
- BTC Row Code Type
- BTC Column Code Type
- BTC Interleaving Type
- Convolutional Code-specific Parameters
- Unique Word Length

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Harmonized with latest TLV update.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0995**

Comment submitted by: **Anader**

Benyamin-Seeyar

Member

2002/02/22

Comment Type **Editorial**

Starting Page # **117**

Starting Line # **10**

Section **8.3.4.1.4.5.1.1**

The PHY Synch Field text:

"The format of the PHY Synchronization Field of the Frame Control message, described in 6.2.2.3.2, is given in Table 188. The Frame Duration Codes are given in Table 180. The Frame number is incremented by 1 each frame and eventually wraps around to zero.

TABLE 188

Suggested Remedy

Change the above text with the following:

"The format of the PHY Synchronization Field of the Frame Control message, described in 6.2.2.3.2, is given in Table 188. A BS shall generate DL-MAP messages in the format shown in Table 188, including all of the following parameters:

TABLE 188

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

Change text in comment with the following:

"The format of the PHY Synchronization Field of the Frame Control message, described in 6.2.2.3.2, is given in Table 188. A BS shall generate DL-MAP messages in the format shown in Table 188, including all of the following parameters:

TABLE 188

Frame duration code()- The Frame Duration Codes are given in Table 180.

Frame number- The Frame number is incremented by 1 each frame and eventually wraps around to zero.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0996**

Comment submitted by: **Bob**

Nelson

Member

2002/02/25

Comment Type **Technical, Non-binding**
Typo

Starting Page # **117**

Starting Line # **34**

Section **8.3.4.1.4.5.1.1**

Suggested Remedy

Replace "uplink" with "downlink" on line 34.

On line 35, replace "start of a frame"
with "start of the frame"

Proposed Resolution Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **0997**

Comment submitted by: **Anader**

Benyamin-Seeyar

Member

2002/02/22

Comment Type **Editorial**

Starting Page # **117**

Starting Line # **39**

Section **8.3.4.1.4.5.1.2**

The acronym IE is being used later on in this section and it needs to be described here.

Suggested Remedy

Add IE after the text as follows:

The number of downlink **Information Elements (IE)** that may appear in a occupies 8 bits.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

replace "information elements" with "IE"
check whether IE is defined in chapter 3

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Added IE entry to Chapter 4 list of acronyms.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: 802.16a/D2 [D1<770]

Ballot Number: 4b

Comment Date

Comment # 0998

Comment submitted by: Bob

Nelson

Member

2002/02/25

Comment Type Technical, Non-binding

Starting Page # 118

Starting Line # 8

Section 8.3.4.1.4.5.1.3

Table title is wrong

Location of map is unnecessary. For SC2, the maps always appear at the start of the frame.

Use extra space for more burst types

Table includes a connection ID field which does not exist in the IE definition

Suggested Remedy

Change Table 190 title to "SC2 Downlink Interval Usage Codes"

Redefine contents of TABLE 190 to be

Reserved	0	Reserved
----------	---	----------

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Change Table 190 title to "SC2 Downlink Interval Usage Codes"

Redefine contents of TABLE 190 to be

Reserved	0	Reserved
----------	---	----------

Data Grant 1	1	Starting offset of data grant 1 burst type
--------------	---	--

Data Grant 2	2	Starting offset of data grant 1 burst type
--------------	---	--

Data Grant 3	3	Starting offset of data grant 1 burst type
--------------	---	--

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

The resolution seems to imply that the Connection ID column is removed, so I removed it. If my interpretation is wrong, we should add it back.

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **0999**Comment submitted by: **Anader****Benyamin-Seeyar**

Member

2002/02/22

Comment Type **Editorial**Starting Page # **118**Starting Line # **19**Section **8.3.4.1.5.1.2**

Clean up Table 190.

Suggested Remedy

- 1) Last column of Table 190 insert blank between Type x and assignment.
- 2) Change **USed** to **Used** on line 35.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group**Decision of Group: **Accepted**

- 1) Last column of Table 190 insert blank between Type x and assignment.
- 2) Change **USed** to **Used** on line 35.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes**

Editor's Actions 1) none needed

Changes in comment 0998 eliminated need to do anything here.

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1000**

Comment submitted by: Yigal

Leiba

Member

2002/02/25

Comment Type **Editorial**

Starting Page # **118**

Starting Line # **38**

Section **8.3.4.1.4.5.1.1**

I believe 'Gap' for UIUC=9 should actually be 'Map'
Is this table be for DIUC encodings or for UIUC encodings (note that table 192 seems to be for UIUC encodings)?

Suggested Remedy

Check, and correct

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

change UIUC to DIUC in table 190

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1001**

Comment submitted by: **Anader**

Benyamin-Seeyar

Member

2002/02/22

Comment Type **Editorial**

Starting Page # **119**

Starting Line # **4**

Section **8.3.4.1.4.5.2.2**

Reference to Table 193 is wrong.

Suggested Remedy

It should refer to Table **192**.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

replace 191 with 192 and 193 with 191
fix line 27

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1002**

Comment submitted by: Anader

Benyamin-Seeyar

Member

2002/02/22

Comment Type **Editorial**Starting Page # **119**Starting Line # **24**Section **8.3.4.1.4.5.2.2**

The following text after Table 191 is incomplete.

CID

UIUC- Uplink Interval Usage Code (see Table 108 in clause 8.2.6.1.2)

Offset - Offset (in units of mini-slots) to the start of the data burst from the mini-slot boundary specified by the uplink Allocation Start Time.

Suggested Remedy

Replace the above text with the following text:

Connection Identifier (CID)- Represents the assignment of the IE to a unicast, multicast, or broadcast address. When specifically addressed to allocate a bandwidth grant, the CID may be either the Basic CID of the SS or a Traffic CID for one of the connections of the S.S

Uplink Interval Usage Code (UIUC)- A four-bit Uplink Interval Usage Code shall be used to define the type of uplink access and the burst type associated with that access. A Burst Descriptor shall be included into an UCD message for each Uplink Interval Usage Code that is to be used in

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Replace text after table 191 with the following text:

Connection Identifier (CID)- Represents the assignment of the IE to a unicast, multicast, or broadcast address. When specifically addressed to allocate a bandwidth grant, the CID may be either the Basic CID of the SS or a Traffic CID for one of the connections of the S.S

Uplink Interval Usage Code (UIUC)- A four-bit Uplink Interval Usage Code shall be used to define the type of uplink access and the burst type associated with that access. A Burst Descriptor shall be included into an UCD message for each Uplink Interval Usage Code that is to be used in the UL-MAP. The UIUC shall be one of the values defined in Table 108 in clause 8.2.6.1.2.

Offset- The offset indicates the start time, in units of mini-slots, of the burst relative to the Allocation Start Time given in the UL-MAP message. Consequently the first IE will have an offset of 0. The end of the last allocated burst is indicated by allocating a NULL burst (CID = 0 and UIUC = 14) with zero duration. The time instants indicated by the offsets are the transmission times of the first symbol of the burst including preamble.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **1003**Comment submitted by: [John](#)[Langley](#)

Member

Comment Type [Editorial](#)Starting Page # **121**Starting Line # **18**Section **8.3.4.2**

[Clause 8.3.4.2](#) is ambiguous as to whether if, in a network in which the base station employs [Alamouti antenna diversity](#), all subscriber stations must support the [Alamouti processing](#).

Suggested Remedy

[Explain explicitly how both all Alamouti and mixed-capability networks could be implemented.](#)

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group:** **Superseded****Reason for Group's Decision/Resolution**[see comment 1017](#)**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) [none needed](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1004**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Editorial**

Starting Page # **121**

Starting Line # **29**

Section **8.3.4.2**

Eliminate non-normative wording.

Suggested Remedy

Replace

"However, framing considerations arise when the Alamouti transmit diversity scheme [B41], which achieves 2-way maximal ratio transmit diversity combining, is to be applied."

with

However, framing considerations arise when the Alamouti transmit diversity scheme [B41] is to be used.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Replace

"However, framing considerations arise when the Alamouti transmit diversity scheme [B41], which achieves 2-way maximal ratio transmit diversity combining, is to be applied."

with

However, framing considerations arise when the Alamouti transmit diversity scheme [B41] is to be used.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1005**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Technical (was Editorial)**

Starting Page # **121**

Starting Line # **30**

Section **8.3.4.2**

Improve wording of final sentence

Suggested Remedy

Replace

"Clause 8.3.4.2.1 describes the Alamouti scheme and provides guidances on the framing used that may be used to implement it" with

"Clause 8.3.4.2.1 describes the Alamouti scheme and specifies framing used for its implementation."

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Replace

"Clause 8.3.4.2.1 describes the Alamouti scheme and provides guidances on the framing used that may be used to implement it" with

"Clause 8.3.4.2.1 describes the Alamouti scheme and specifies framing used for its implementation."

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1006**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Editorial**

Starting Page # **121**

Starting Line # **36**

Section **8.3.4.2.1**

Sentence could be clearer. Also, distinction between burst and continuous formats unnecessary, if application the same for both.

Suggested Remedy

Change

"The Alamouti transmit diversity scheme may be applied to either continuous or burst formats, if two consecutive blocks of data are logically coupled, and are jointly processed at both the transmitter and receiver."

to

The Alamouti transmit diversity scheme logically pairs blocks of data. These

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Change

"The Alamouti transmit diversity scheme may be applied to either continuous or burst formats, if two consecutive blocks of data are logically coupled, and are jointly processed at both the transmitter and receiver."

to

The Alamouti transmit diversity scheme logically pairs blocks of data. These paired blocks are jointly processed at both the transmitter and receiver.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1007**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Editorial**Starting Page # **121**Starting Line # **36**Section **8.3.4.2.1**

Although implementation of Alamouti TX diversity is optional, that fact is not stated in the beginning of the Alamouti section.

Suggested Remedy

Begin section with sentence:

Implementation of Alamouti transmit diversity is optional; however, if it is implemented it shall follow the guidelines which follow.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Begin section with sentence:

Implementation of Alamouti transmit diversity is optional. However, if implemented, it shall be implemented as follows:

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1008**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Editorial**

Starting Page # **121**

Starting Line # **39**

Section **8.3.4.2.1**

Create section heading "Paired Block Processing" because need to subdivide Alamouti clause into several subclauses to logically incorporate requirements framing and coexistence (with non-Alamouti-encoded data).

Suggested Remedy

Create section heading

8.3.4.2.1 Paired Block Processing

directly before Figure 179.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Create section heading

8.3.4.2.1 Paired Block Processing

directly before Figure 179.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1009**

Comment submitted by: **Brian**

Eidson

Member

2002/02/25

Comment Type **Editorial**

Starting Page # **123**

Starting Line # **5**

Section **8.3.4.2.1**

Insert clause heading Framing Elements and Paired Block Framing (for logical clarity)

Suggested Remedy

Insert at line 5:

8.3.4.2.2 Framing Elements

8.3.4.2.2.1 Paired Block Profiles

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Insert at line 5:

8.3.4.2.2 Framing Elements

8.3.4.2.2.1 Paired Block Profiles

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1010**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Technical, Satisfied (was**

Starting Page # **123**

Starting Line # **50**

Section **8.3.4.2**

Need to indicate that N, the length of an Alamouti block, is a burst profile parameter.

Suggested Remedy

Insert sentence at line 50:

N, the length of an Alamouti block, is a burst profile parameter.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Insert sentence at line 50:

N, the length of an Alamouti block, is a burst profile parameter.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1011**

Comment submitted by: **Brian**

Eidson

Member

2002/02/25

Comment Type **Editorial**

Starting Page # **124**

Starting Line # **33**

Section **8.3.4.2.1**

Create clause heading for logical development reasons

Suggested Remedy

Create the below heading directly after Figure 181

8.3.4.2.2.2 Alamouti Preamble

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Create the below heading directly after Figure 181

8.3.4.2.2.2 Alamouti Preamble

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1012**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Editorial**

Starting Page # **124**

Starting Line # **34**

Section **8.3.4.2**

Improve effectiveness of sentence

"Figure 182 illustrates the structure to be used as a burst frame preamble for an Alamouti transmit diversity system."

Suggested Remedy

Rewrite as

Figure 182 illustrates the burst frame preamble that shall be used for bursts using Alamouti transmit diversity encoding.

Also, I'll add illustration of ramp-up subelement to preamble illustrated Figure 182.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Rewrite as

Figure 182 illustrates the burst frame preamble that shall be used for bursts using Alamouti transmit diversity encoding.

add illustration of ramp-up subelement to preamble illustrated Figure 182.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1013**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Technical, Satisfied (was**

Starting Page # **124**

Starting Line # **35**

Section **8.3.4.2**

Clarification of statement

"The number of UW blocks composing this structure is a burst profile parameter, which may vary with the burst profile selected"

The general burst profile setting can be re-used for this, but the length should be interpreted as the 1/2 the total number of UWs in the Alamouti preamble length. The reason for this is that one wants to estimate two channels. and if one allows the general setting. then this cuts in half the max preamble length for estimating

Suggested Remedy
Rewrite sentence as

The number of UW blocks composing an Alamouti burst preamble is a burst profile parameter, and uses the general burst profile encoding for the number of UWs in a Preamble. However, since two channels must be estimated, the the total number of UWs used to construct an Alamouti burst preamble shall be twice the number specified in the burst profile encoding.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

Rewrite sentence as

The number of UW blocks composing an Alamouti burst preamble is a burst profile parameter, and uses the general burst profile encoding for the number of UWs in a Preamble. However, since two channels must be estimated, the the total number of UWs used to construct an Alamouti burst preamble shall be twice the number specified in the burst profile encoding.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1014**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Editorial**

Starting Page # **124**

Starting Line # **39**

Section **8.3.4.2.1**

Eliminate "(of burst or continuous format)" since continuous is now a burst format.

Suggested Remedy

Delete

"(of burst or continuous format)"
from text

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Delete

"(of burst or continuous format)"
from text

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1015**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Technical, Satisfied (was**
 No specification of ramp up in Alamouti preamble.

Starting Page # **124**Starting Line # **61**Section **8.3.4.2****Suggested Remedy**

Add subclause at end of preamble section saying:

8.3.4.2.2.2.1 Ramp up

Ramp-up shall use the same procedure clause 8.3.4.1.3.1.1.2, with the ramp up symbols for each transmit antenna being derived from a length-R partial cyclic prefix of the first length-U symbol data element in the Preamble. Note that the second transmit antenna derives its cyclic prefix from $-u^*([(U-n)\text{mod}U])$.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Add subclause at end of preamble section saying:

8.3.4.2.2.2.1 Ramp up

Ramp-up shall use the same procedure clause 8.3.4.1.3.1.1.2, with the ramp up symbols for each transmit antenna being derived from a length-R partial cyclic prefix of the first length-U symbol data element in the Preamble. Note that the second transmit antenna derives its cyclic prefix from $-u^*([(U-n)\text{mod}U])$.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1016**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Technical, Satisfied (was**Starting Page # **124**Starting Line # **62**Section **8.3.4.2**

No specification on how Alamouti Bursts are constructed.

Suggested Remedy

Create section which builds Preamble and Paired Blocks into Burst. Text should follow current end of Alamouti clause, after the preamble description.

Text to be used:

8.3.4.2.3 Alamouti Burst Construction

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Create section which builds Preamble and Paired Blocks into Burst. Text should follow current end of Alamouti clause, after the preamble description.

Text to be used:

8.3.4.2.3 Alamouti Burst Construction

An Alamouti Burst shall consist of a preamble, followed by a payload, which may consist of multiple pairs of Alamouti blocks. Unlike conventional bursts, a full U-length RxDS element shall not appear at the conclusion of an Alamouti burst. Ramp down does follow the end of a burst, but shall be raised cosine windowed in the same fashion that ramp-up is, and shall have the same length, R, as ramp-up.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1017**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type Technical, Satisfied (was Starting Page # 124 Starting Line # 63 Section 8.3.4.2
 Need to describe interoperation of DL that has some SSs capable of receiving Alamouti encoded data while some are not

Suggested Remedy

Add following clause specifying Interoperatio:n

8.3.4.2.4 Interoperable DL Operation

For interoperability reasons, Alamouti-encoded data and conventionally-encoded data shall not be time division multiplexed within the same burst. Instead, the Alamouti data shall be encapsulated

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group**Decision of Group: **Accepted**

Add following clause specifying Interoperatio:n

8.3.4.2.4 Interoperable DL Operation

For interoperability reasons, Alamouti-encoded data and conventionally-encoded data shall not be time division multiplexed within the same burst. Instead, the Alamouti data shall be encapsulated within its own burst, and have its own preamble.

All bursts with different Alamouti block sizes, N, shall also be segregated, although they may share the same preamble.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes**

Editor's Actions k) done

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1018**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Editorial**Starting Page # **124**Starting Line # **64**Section **8.3.4.2**

Alamouti clauses are sequenced bottom-up rather than top-down like the framing descriptions in earlier clauses.

In particular, the channel estimation equations don't seem to be in the right place. Also, the frame elements of an Alamouti burst need to be illustrated. Perhaps, also, an illustration of the burst segregation necessary for interoperation with non-Alamouti data would also be instructive.

Suggested Remedy

Need some editorial liberty to re-organize (cut and paste) segments of Alamouti text so that a better top-down flow is achieved---and then the go-ahead to re-word/re-edit the reorganized text in a very tight, normative way. Topics for improvements will be confined to the above. The two aforesaid figures may also be added.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Need some editorial liberty to re-organize (cut and paste) segments of Alamouti text so that a better top-down flow is achieved---and then the go-ahead to re-word/re-edit the reorganized text in a very tight, normative way. Topics for improvements will be confined to the above. The two aforesaid figures may also be added.

Some other things that need changing: Use of N is not consistent. In two contexts (figures 179 and 181) it includes the guard intervals; in other contexts (e.g., the block multiplexing of Table 193 and Figure 180), it does not. Propose to modify Figures 179 and 181 (and their descriptive text) to be consistent by using a new variable, B which includes the guard interval. This variable will also have to be incorporated in Figure 180.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1019**

Comment submitted by: Paul

Struhsaker

Member

2002/02/21

Comment Type **Technical, Non-binding**Starting Page # **125**Starting Line # **21**Section **8.3.4.3.1.2**

TBD Phase noise values

Suggested Remedy

Insert

1.1 degrees RMS from 10 Khz to 2 Mhz (downlink)

2.3 degrees RMS from 10Khz to 2Mhz (uplink)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Insert

1.1 degrees RMS from 10 Khz to 2 Mhz (downlink)

2.3 degrees RMS from 10Khz to 2Mhz (uplink)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1020**

Comment submitted by: Paul

Struhsaker

Member

2002/02/21

Comment Type **Technical, Non-binding**Starting Page # **125**Starting Line # **35**Section **8.3.4.3.1.3**

data and table are inaccurate

Suggested Remedy

change from 20 PPM to 15 PPM for the subscriber (ss)

change from 7.5 PPM to 4 PPM for the baseststion (bs)

Table 194 should have the folowing entries for channel BW in MHZ and Nominal Symbol Rate

25 19.84

20 15.84

14 11.04

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

change from 20 PPM to 15 PPM for the subscriber (ss)

change from 7.5 PPM to 4 PPM for the basestation (bs)

Table 194: have the folowing entries for channel BW in MHz and Nominal Symbol Rate

25 19.84

20 15.84

14 11.04

10 7.84

7 5.44

6 4.64

5 3.84

3.5 2.64

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1021**Comment submitted by: **Paul****Struhsaker**

Member

2002/02/21

Comment Type **Technical, Non-binding**Starting Page # **126**Starting Line # **4**Section **8.3.4.3.1.5**

TBD values need filled

Suggested Remedy

Insert

40 dB at the transmit antenna feed point

3.1% EVM assuming 64 QAM

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Insert

40 dB at the transmit antenna feed point

3.1% EVM assuming 64 QAM

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1022**

Comment submitted by: Paul

Struhsaker

Member

2002/02/21

Comment Type **Technical, Non-binding**Starting Page # **126**Starting Line # **37**Section **8.3.4.3.1.10**

Replace the table with a simple formula based on bandwidth

Suggested Remedy

Replace the table with

$$-114 + 10 \cdot \log(BW) + SNR_{req} + NF, \text{ where}$$

BW - Bandwidth in MHz. (.125 to 28 MHz)

SNR_{req} - Required SNR for 10⁻⁶ BER and no FEC coding

NF - Noise figure of the radio (Conservatively 7 dB assumed)

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Replace the table with

$$-114 + 10 \cdot \log(BW) + SNR_{req} + NF, \text{ where}$$

BW - Bandwidth in MHz. (.125 to 28 MHz)

SNR_{req} - Required SNR for 10⁻⁶ BER and no FEC coding

NF - Noise figure of the radio (Conservatively 7 dB assumed)

The SNR_{req} values are (for uncoded signals at 10⁻⁶ BER):

4 QAM - 13.6 dB

16 QAM - 20.4 dB

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1023**

Comment submitted by: Rémi

Chayer

Member

2002/02/22

Comment Type **Technical, Non-binding** Starting Page # **130** Starting Line # **16** Section **8.3.5.1**

Throughout the document, mainly in the PHY section, there is some wording specifying certain PHY modes that are applicable to licensed and/or license-exempt bands only.

Suggested Remedy

Modify the paragraph as follows:

The PHYs in this clause are designed for operation in 2-11 GHz frequency bands. ~~The PHY features in clause 8.3.5.8 have been designed specifically for 5 GHz license-exempt operation.~~

Also the content of the current Section 8.3.5.8 should be moved into the common section.

Proposed Resolution Recommendation: Recommendation by**Reason for Recommendation****Resolution of Group Decision of Group: Rejected****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1024**Comment submitted by: **Jerome****Krinock**

Member

2002/02/25

Comment Type **Editorial**Starting Page # **130**Starting Line # **42**Section **8.3.5.1.1**

We use F_s for "sampling frequency". However, in most engineering literature, frequency is a lower-case f . Upper-case F is often a "factor" of some kind. This makes our standard confusing to the first-time reader.

Suggested Remedy

Search and replace all F_s with f_s .

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**Search and replace all F_s with f_s .

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1025**

Comment submitted by: Tal

Kaitz

Member

2002/02/25

Comment Type **Technical, Non-binding**

Starting Page # **131**

Starting Line # **23**

Section **8.3.5.1.2**

It should be explicitly stated that the guard interval should not change within a frame. Otherwise the receive should handle multiple GI lengths, which is a real headache.

Suggested Remedy

Add the sentence : "The CP duration should not change within a frame"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

Add at end of section:

On initialization, a SS should search all possible values of CP until it finds the CP being used by the BS. Once a specific CP duration has been selected by the BS for operation on the DL, it should not be changed. Changing the CP would force all the SS to resynchronize to the BS.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)

Ballot Number: **4b**

Comment Date

Comment # **1026**

Comment submitted by: [Shawn](#)

[Taylor](#)

Member

[2002/02/25](#)

Comment	Type Editorial	Starting Page # 133	Starting Line #	Section
---------	--------------------------------	-------------------------------------	-----------------	---------

[Tables should not use numbers with numerators and denominators.](#)

Suggested Remedy

[Use fractional representation with 2 decimal places.](#)

Proposed Resolution	Recommendation:	Recommendation by
----------------------------	------------------------	--------------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Rejected
----------------------------	---

Reason for Group's Decision/Resolution

[Withdrawn by commenter.](#)

Group's Notes

Group's Action Items

Editor's Notes	Editor's Actions 1) none needed
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Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1027**

Comment submitted by: Naftali

Chayat

Member

2002/02/25

Comment Type **Technical, Satisfied (was** Starting Page # **133** Starting Line # **1** Section **8.3.5.1.4**

The sampling rate for the OFDM modes is $7/6 \cdot BW$ while for OFDMA modes it is $8/7 \cdot BW$. This difference will impede in the future introduction of CPEs which support both modes. We recommend to make the sampling rate $8/7 \cdot BW$ for all OFDM/A modes for the following reasons:

* The data rate difference between the $7/6$ and $8/7$ is just 2%.

** those 2% can be used to add 4 more pilots, it desired. In fact, 8 more pilots can be added without violating ETSI masks (did not check for others)

* In European rasters ($n \cdot 1.75$ MHz) the sampling rate will become $n \cdot 2$ MHz. which is much nicer than implementing $2 \cdot 2.041666667$ MHz

Suggested Remedy

redefine the sampling rate for all modes to be $8/7 \cdot (\text{channel spacing})$.

adjust the content of tables 196-199 accordingly

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

use $8/7$ for bandwidths which are a multiple of 1.75 MHz

Reason for Group's Decision/Resolution

motion to split: use $8/7$ for bandwidths which are a multiple of 1.75 MHz -> vote: in favor 18, against 3 -> pass

use $8/7$ for bandwidths which are a multiple of 1.5 MHz -> vote: in favor 12, against 11 -> fail

use $8/7$ for bandwidths which are a multiple of 1.25 MHz -> vote: in favor 16, against 9 -> fail

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1028**

Comment submitted by: Naftali

Chayat

Member

2002/02/25

Comment	Type	Starting Page #	Starting Line #	Section
	Technical, Non-binding	133	1	8.3.5.1.4

The restriction of FFT size to one size per mode (2048 for OFDMA, 4096 for OFDMA2, 256 for OFDM) makes little physical sense. The multipath duration, and correspondingly the desired Fourier interval duration, does not scale with bandwidth. The constant in the design should be the Fourier interval duration, rather than the FFT size. For example, 7 MHz channel (8 Msamples/sec) with FFT size 2048 yields 256 microsecond Fourier interval duration, while for 3.5 MHz we have 512 microseconds and for 1.75 MHz we have 1024 microseconds. Given that the minimal OFDMA payload is 4 OFDM symbols, such design approach levies a heavy latency penalty. It also makes the phase noise problem worse. For the FFT size of 4096 the problem is twice as bad. For example, for 1.5 MHz channel and FFT=4094 the symbol duration is 2.4 milliseconds!

Suggested Remedy

Consider creating a single scalable structure for both OFDMA and OFDMA2 covering FFT sizes 256-4096.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Rejected****Reason for Group's Decision/Resolution**

No specific text provided

Group's Notes**Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1029**

Comment submitted by: Marianna

Goldhammer

Member

2002/02/22

Comment Type **Technical, Satisfied (was**

Starting Page # **133**

Starting Line # **3**

Section **8.3.5.1.4**

The standard shall be consolidated, using the same relation for sampling rate, for all the OFDM PHY modes.

It is proposed that $F_s = 8/7 * BW$ (the OFDMA relation) will be applied also to the OFDM mode.

The existing relation conducts, for most of the bands, to strange oscillator frequencies or high interpolation efforts. The ETSI bands are a good example.

Suggested Remedy

Replace text in rows 4,5,6:

The following tables give some calculations of the carrier spacing, symbol duration and CP duration for different masks. The sampling rate is defined for 256-OFDM (see clause 8.3.5.5.3) and for OFDMA (see clause 8.3.5.6.3) as: $F_s = BW * 8/7$.

Modify accordingly the Tables 196, 197, 198, 199.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Duplicate

see 1027

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1030**

Comment submitted by: Tal

Kaitz

Member

2002/02/25

Comment Type **Technical, Satisfied (was** Starting Page # **133** Starting Line # **3** Section **8.3.5.1.4**

The sampling ratio F_s is defined for the OFDM mode to be 7/6 while for the OFDMA mode it is 8/7.
This has several disadvantages:

1. With 7/6 sampling, the channel spacing is NOT an integer multiple of subcarrier spacings. As a result, adjacent channels will not be orthogonal to each other. This will have implications of the design of the receive filters in SU. If orthogonality was assured the filters could be implemented in the frequency domain with FFT techniques. If orthogonality is not assured, the filters should be implemented in the time domain.

Suggested Remedy

Change 7/6 to 8/7 and related parameters in tables 196-199

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Duplicate**

see 1027

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1031**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment Type **Technical, Satisfied (was**Starting Page # **133**Starting Line # **3**Section **8.3.5.1.4**

The sampling ratio F_s is defined for the OFDM mode as 7/6
 This has several disadvantages:

1. With 7/6 sampling, the channel spacing is NOT an integer multiple of subcarrier spacings. As a result, adjacent channels will not be orthogonal to each other. This will have negative implications on the design of the receive filters in SU. If orthogonality was assured the filters could be implemented in frequency domain with FFT techniques. If orthogonality is not assured, the filters should be implemented in the time domain.

Suggested Remedy

Change 7/6 to 8/7 and related parameters in tables 196-199

Proposed ResolutionRecommendation: **Accepted**

Recommendation by Vladimir Yanover

Reason for Recommendation**Resolution of Group**Decision of Group: **Accepted-Duplicate**

see 1027

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes**

Editor's Actions |) none needed

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1032**

Comment submitted by: **Anader**

Benyamin-Seeyar

Member

2002/02/22

Comment Type **Technical, Non-binding**

Starting Page # **133**

Starting Line # **11**

Section **8.3.5.1.4**

During last Session, it was decided to replace Tables 196 to Table 199 with some formulations or to move them to clause B.3.3 as informative text rather than normative text.

Suggested Remedy

In fact, by using equations (13) to (16) in Section 8.3.5 and the first paragraph of 8.3.5.1.4, one can derive all the above mentioned tables.

Therefore as a reference or as informative values, these tables can easily be moved to B.3.3 without loss of normative information.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

move tables 196-199 to B.3.3

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **1033**Comment submitted by: [Avraham](#)[Freedman](#)

Member

2002/02/20

Comment Type [Editorial](#)Starting Page # **133**Starting Line # **31**Section **8.3.5.1.4**

A line divides the "delta F (kHz) " box

Suggested Remedy[Merge the cells in line 31-32, second column
also in Tables 196-198 p. 133-139](#)**Proposed Resolution** Recommendation: **Accepted**Recommendation by [Avraham Freedman](#)[Merge the cells in line 31-32, second column
also in Tables 196-198 p. 133-139](#)**Reason for Recommendation****Resolution of Group** Decision of Group: **Accepted**[Merge the cells in line 31-32, second column
also in Tables 196-198 p. 133-139](#)**Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes** Editor's Actions [k\) done](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1034**

Comment submitted by: **Panyuh**

Joo

Member

2002/02/25

Comment Type **Editorial**

Starting Page # **135**

Starting Line # **13**

Section **Table 197**

Change

"kHz)"

to

"(kHz)"

Type error

Also in Line 13 of Page 137 (Table 198).

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1035**

Comment submitted by: **Jiacheng**

Wang

Other

2002/02/20

Comment Type **Editorial**

Starting Page # **135**

Starting Line # **13**

Section **Table 197**

type error.

Also in Line 13 of Page 137 (Table 198), Line 13 of Page 139 (Table 199).

Suggested Remedy

Change
"kHz"

to
"(kHz)"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1036**

Comment submitted by: Jerome

Krinock

Member

2002/02/25

Comment Type **Technical, Satisfied (was** Starting Page # **139** Starting Line # **61** Section **8.3.5.2.1**

Throughout the OFDM and OFDMA clauses, we use a number of symbols and phrases which are not defined in any normative clause. Here are some examples:

N_{FFT} is used in 8.3.5.6.2.3, 8.3.5.5.3, 8.3.5.6.3 and 8.3.5.6.5.

F_s is used in 8.3.5.5.3.

Suggested Remedy

Replace clause 8.3.5.2.1 with the revision from clause 2 of contribution C80216a-02/29.

In clause 8.3.5.2.8, two places, replace "inter-carrier spacing" with "carrier spacing".

In clause 8.3.5.6.6.2, replace "4 OFDM symbols" with "4 times the OFDM symbol duration T_s ".

Proposed Resolution

Recommendation: **Accepted-Modified**

Recommendation by Jerry Krinock

As remedy, except cut out the phrase "including units of Hertz" when copying from contribution C80216a-02/29.

Reason for Recommendation

My original wording was to emphasize that the units were part of the quantity; however this is probably too wordy and causes confusion. The trouble with Nico's proposed resolution is that if you specify it "in MHz", then, for example, if the channel bandwidth is 3.5 MHz, BW is simply "3.5", and in the next section, when you multiply BW by a constant to get F_s , you find that F_s is dimensionless (and pretty small!!). If we just delete the "including units of Hertz", then the reader may use Hz, MHz, rad/sec or whatever they want, and these will carry through to the other formulae.

Resolution of Group

Decision of Group: **Accepted**

Replace clause 8.3.5.2.1 with the revision from clause 2 of contribution C80216a-02/29.

In clause 8.3.5.2.8, two places, replace "inter-carrier spacing" with "carrier spacing".

In clause 8.3.5.6.6.2, replace "4 OFDM symbols" with "4 times the OFDM symbol duration T_s ".

Except change first paragraph to: "BW. This is the nominal channel bandwidth."

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1037**Comment submitted by: **Jori****Arrakoski**

Member

2002/02/25

Comment Type **Technical, Satisfied (was**Starting Page # **140**Starting Line # **53**Section **8.3.5.2.2.2**

A maximally simple and robust FEC is required for license-exempt usage.

Suggested Remedy

Add 1/2 BPSK (as defined in 802.11a) at least as an optional mode.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

BPSK 1/2 offers a marginal improvement in robustness for a substantial decrease in capacity. Simplicity is certainly not an issue if you have already implemented QPSK.

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1038**Comment submitted by: **Jon****Labs**

Member

Comment Type **Technical, Non-binding**Starting Page # **141**Starting Line # **58**Section **8.3.5.2.3**

I thought we are not using BPSK at all for OFDM and OFDMA.

Suggested Remedy

Change pilot carrier modulation to QPSK

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1039**Comment submitted by: **Shawn****Taylor**

Member

2002/02/25

Comment	Type	Starting Page #	Starting Line #	Section
---------	------	-----------------	-----------------	---------

Editorial

142

Figure 188 doesn't match the polynomial defined on line 41.

Suggested Remedy

Correct drawing to reflect polynomial

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

number boxes in figure 187 and 188 1 through 9 and 1 through 10 respectively.

change polynomial to $1+x^9+x^{11}$

fix figure according to polynomial.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1040**

Comment submitted by: Yigal

Leiba

Member

2002/02/25

Comment	Type	Starting Page #	Starting Line #	Section
	Technical, Non-binding	142	8	8.3.5.2.3.1

1) The 'Rate_ID' definition and the table are misplaced, as they only apply to the the OFDM/OFDMA DL frame prefix (for the rest of the data the DIUC/UIUC indicate the modulation)

2) The length of the cyclic prefix need not be indicated in the 'Rate_ID', as it will never be received if the cyclic prefix length has not been correctly identified

Suggested Remedy

1) Move lines 8 to 30 to a new section titled:
"8.3.5.2.3.3 Modulation and coding in the DL frame prefix"

2) Change the Rate_ID encodings to be the following:

- 0 = QPSK (RS+CC) 1/2
- 1 = QPSK (RS+CC) 3/4
- 2 = 16QAM (RS+CC) 1/2

Proposed Resolution	Recommendation:	Recommendation by
----------------------------	------------------------	--------------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Accepted-Modified
----------------------------	---

1) Move lines 8 to 30 to a new section titled:
"8.3.5.2.3.3 Modulation and coding in the DL frame prefix"

2) Change the Rate_ID encodings to be the following:

- 0 = QPSK (RS+CC) 1/2
- 1 = QPSK (RS+CC) 3/4
- 2 = 16QAM (RS+CC) 1/2
- 3 = 16QAM (RS+CC) 3/4
- 4 = 64QAM (RS+CC) 2/3
- 5 = 64QAM (RS+CC) 3/4
- 6-15 Reserved

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes	Editor's Actions k) done
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Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1041**Comment submitted by: **Lei****Wang**

Member

2002/02/25

Comment Type **Technical, Satisfied (was** Starting Page # **142** Starting Line # **10** Section

Rate_ID is only used in the FCH to describe the burst profiles of the first DL burst after the FCH.

Suggested Remedy

add the following after "to be used":

in the first DL burst immediately following the FCH (Frame Control Header).

Proposed Resolution Recommendation: Recommendation by**Reason for Recommendation****Resolution of Group Decision of Group: Accepted**

add the following after "to be used":

in the first DL burst immediately following the FCH (Frame Control Header).

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1042**

Comment submitted by: Tal

Kaitz

Member

2002/02/25

Comment Type **Technical, Non-binding**

Starting Page # **142**

Starting Line # **14**

Section **8.3.5.2.3**

Table 200 goes only up to 16QAM 3/4 without other QAM64 modes

Suggested Remedy

Add other rates to table 200

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1043**

Comment submitted by: Tal

Kaitz

Member

2002/02/25

Comment	Type	Technical, Non-binding	Starting Page #	142	Starting Line #	36	Section	8.3.5.3.2.3.2
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The text implies that the pilot phase depends only on the subcarrier location k , and not on the OFDM symbol index. That is, the pilot symbol is constant in time. This may cause the appearance of peaks in the frequency domain. This will be apparent when the signal is viewed with a spectrum analyzer with a small resolution bandwidth. The peaks may violate certain regulatory masks.

The solution is to modulate the pilot both in frequency and in time. The modulation in frequency can be performed with an identical PN generator initiated with the same sequence.

Suggested Remedy

Use the following text:

"Pilot carriers ... shall be modulated according to their location within the OFDM symbol and within the location within the frame".

"The Pseudo Random Binary Sequence (PRBS) generator depicted hereafter, shall be used to produce a sequence w_l , where l is an integer index. The value of the pilot modulation in subcarrier k , and in symbol n shall be $w_k \text{ XOR } w_n$ ".

Proposed Resolution**Recommendation:****Recommendation by**

The initialization of the sequence could be changed on each symbol, this initialization should be start on a DL burst and every user UL transmission and should be deterministic.

It could be defined as Current Sequence + n for the UL and Current sequence - n for the DL

Reason for Recommendation**Resolution of Group****Decision of Group: Accepted**

Notes to the editor:

1. A broken reference has been found on page 178, line 34. It should be changed to point to the new section 8.3.5.6.3.4.

put in this text (modifies existing text)

8.3.5.2.3.2 Pilot Modulation

Pilot carriers shall be inserted into each data burst in order to constitute the Symbol and they shall be modulated according to their carrier location within the OFDM symbol. The Pseudo Random Binary Sequence (PRBS) generator depicted hereafter shall be used to produce a sequence, w_k . The polynomial for the PRBS generator shall be $X^{11} + X^2 + 1$.

[Insert figure 188 from page 142]

Figure 188-PRBS for pilot modulation

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1044**

Comment submitted by: Tal

Kaitz

Member

2002/02/25

Comment Type **Editorial**Starting Page # **143**Starting Line # **20**Section **8.3.5.2.3.2**

This section describes the Pilot modulation as a PHY element which is common to all PHYs. The paragraph beginning at line 20 describes the preamble for OFDMA only, which has nothing to do with the pilot modulation .

Suggested Remedy

Remove the paragraph beginning at section 20 to its rightfull place in section 8.3.5.6

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions l) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1045**

Comment submitted by: Lei

Wang

Member

2002/02/25

Comment Type **Editorial**Starting Page # **143**Starting Line # **32**

Section

move the text to the right place.

Suggested Remedy

Move the paragraph in line 32, page 143 to line 7, page 144.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Move the paragraph in line 32, page 143 to line 7, page 144.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1046**

Comment submitted by: Anader

Benyamin-Seeyar

Member

2002/02/22

Comment Type **Editorial**Starting Page # **144**Starting Line # **20**Section **8.3.5.2.4.2**

Ranging of **portable subscriber** is beyond the scope of this standard.

Suggested Remedy

Change the text as follows:

Ranging on re-registration follows the same process as new registration. The purpose of the ranging parameter expiry is in support of **portable Subscriber applications capability. A **portable** subscriber unit's stored parameters will expire and are removed after the expiry intervals and hence no longer consume memory space and algorithm decision time.**

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

replace paragraph on line 19 with: Ranging on re-registration follows the same process as new registration.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1047**

Comment submitted by: **Lei**

Wang

Member

2002/02/25

Comment Type **Technical, Non-binding**

Starting Page # **144**

Starting Line # **60**

Section

The PHY control and the FCH are the same??

Suggested Remedy

Change all the occurrences of "PHY Control" to "Frame Control Header (FCH)", in the paragraph in line 60, page 144.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Change all the occurrences of "PHY Control" to "Frame Control Header (FCH)", in the paragraph in line 60, page 144.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1048**

Comment submitted by: Panyuh

Joo

Member

2002/02/25

Comment	Type Editorial	Starting Page # 145	Starting Line # 15	Section
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Need clarification:

- I. What does the symbol n means?
- II. What does "their average energy" means?
- III. The spectral lines $-n/2$ and $+n/2$, are included in both cases. But which case on earth do they apply to, the first case or the second case?

Suggested Remedy

Additional text needs to insert in this paragraph to explain n.

Proposed Resolution	Recommendation:	Recommendation by
----------------------------	------------------------	--------------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Accepted-Modified
----------------------------	--

replace n with $N_{used} / 2$ in table 201.
 add after energy: "measured over all N_{used} active tones"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes	Editor's Actions k) done
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Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1049**

Comment submitted by: Hai

Wang

Other

2002/02/21

Comment Type **Technical, Non-binding**

Starting Page # **145**

Starting Line # **15**

Section **8.3.5.2.6.2**

The parameter "n" needs clarification.

In addition, in the Table 201, the spectral lines $-n/2$ and $+n/2$ are included in both cases. But which Spectral Flatness do they comply with, ± 2 dB or ± 4 dB?

Suggested Remedy

Change "no more than the following:"

to "no more than Table 201. n denotes the number of used carriers."

Change "Spectral lines from -n to $-n/2$ and $+n/2$ to n" in line 28 in Table 201

to "Spectral lines from -n to $-n/2-1$ and $+n/2+1$ to n"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Duplicate

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1050**

Comment submitted by: Jerome

Krinoch

Member

2002/02/25

Comment Type **Editorial**Starting Page # **146**Starting Line # **16**Section **8.3.5.2.6.3**

In specifying OFDM and OFDMA, we sometimes use the word "carrier" and "subcarrier" to mean the same thing. We should use the same word consistently.

Although some textbooks use "subcarrier", I prefer "carrier" since, to me, a subcarrier is something which is modulated onto a main carrier, such as the 38 KHz stereo subcarrier which is modulated onto a 100 MHz main carrier in USA FM audio broadcasting. The tones in OFDM and OFDMA are not modulated onto a main carrier. If you mute all the tones, no signal remains. Therefore they should be called "carriers".

Suggested Remedy

Search for all occurrences of "subcarrier(s)" and change to "carrier(s)".

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1051**

Comment submitted by: **Anader**

Benyamin-Seeyar

Member

2002/02/22

Comment Type **Editorial**

Starting Page # **146**

Starting Line # **23**

Section **8.3.5.2.6.3**

Given Equation (19) is a complex equation and there should be a reference provided for derivation of Error (rms).

Suggested Remedy

Add a reference for Equation (19) to the Bibliography Section .

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Insert [B47] on page 156, line 6

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1052**

Comment submitted by: **Jiacheng**

Wang

Other

2002/02/20

Comment Type **Editorial**

Starting Page # **146**

Starting Line # **40**

Section **8.3.5.2.6.3**

"0" should be subscript.

Suggested Remedy

Change

"(l 0 (i,j,k), Q 0 (i,j,k))"

to

"(l₀ (i,j,k), Q₀ (i,j,k))"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change

"(l 0 (i,j,k), Q 0 (i,j,k))"

to

"(l₀ (i,j,k), Q₀ (i,j,k))"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1053**

Comment submitted by: Gordon

Antonello

Member

2002/02/25

Comment Type **Technical, Non-binding** Starting Page # **147** Starting Line # **3** Section **8.3.5.2.7.1**
Section on OFDM Receiver Sensitivity needs to be completed.

Suggested Remedy

Contribution to section 8.3.5.2.7.1 Receiver Sensitivity is being sent. Contribution adds information in table 203 and test message contents and format.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group**Decision of Group: **Accepted-Modified**

use

BER: 10^{-6}

PDU length: unspecified

measurement: after the decoder.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Gordon to provide text and table to editor, no later than March 22.

Editor's Notes**Editor's Actions** k) done

Text as provided by Gordon (heavily modified editorially by editor in draft):

3 Suggested Text for Section 8.3.5.2.7.1**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1054**

Comment submitted by: Jerome

Krinoock

Member

2002/02/25

Comment	Type	Technical, Satisfied (was	Starting Page #	148	Starting Line #	60	Section	8.3.5.2.8.2
---------	------	---------------------------	-----------------	-----	-----------------	----	---------	-------------

Clause 8.3.5.2.8.2 unnecessarily specifies an implementation method.

It refers to a SS as a "modem", and the term "lose synchronization" is not defined.

The intended requirement is adequately stated in the last paragraph of the previous clause, 8.3.5.2.8.1.

Suggested Remedy

Delete clause 8.3.5.8.2.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation**Resolution of Group**

Decision of Group: **Accepted**

Delete clause 8.3.5.8.2.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes**

Editor's Actions k) done

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **1055**Comment submitted by: [Anader](#)[Benyamin-Seeyar](#)

Member

2002/02/22

Comment Type [Editorial](#)Starting Page # **149**Starting Line # **32**Section **8.3.5.2.10**

The text provided in Clause 8.3.5.2.10 is for an optional antenna technology which is an informative material and it is directly applicable to all PHY modes.

Suggested Remedy

Move Clause 8.3.5.2.10 material to the common PHY / MAC area of this document and it will prevent repeating the same text in each PHY mode.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: [Accepted](#)**

[move first 4 paragraphs to 8.3.3.x Multiple antenna technology](#)

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** [k\) done](#)

[Collapsed these four paragraphs into the first paragraph of 6.2.7.7.1 instead.](#)

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1056**

Comment submitted by: Panyuh

Joo

Member

2002/02/25

Comment Type **Editorial**Starting Page # **151**Starting Line # **41**Section **Figure 205**

There is an absolute confusion in the figure if the mistake "even/odd carrier" exists.

Suggested Remedy

change

"even carrier" and "odd carrier"

to

"even symbol" and "odd symbol"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

change

"even carrier" and "odd carrier"

to

"even symbol" and "odd symbol"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1057**

Comment submitted by: Hai

Wang

Other

2002/02/21

Comment Type **Editorial**

Starting Page # **151**

Starting Line # **41**

Section **Figure 205**

Typo.
There is confusion in the figure 205 when "even carrier" is adopted.
Modulated data include even/odd symbols.

Also in Line 42 of Page 151.

Suggested Remedy

Change "modulated data (even carrier)"
to "modulated data (even symbol)"

Change "modulated data (odd carrier)"
to "modulated data (odd symbol)"

Proposed Resolution Recommendation: **Recommendation by**

Reason for Recommendation

Resolution of Group Decision of Group: Accepted-Duplicate

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1058**

Comment submitted by: Rémi

Chayer

Member

2002/02/22

Comment Type **Technical, Non-binding**

Starting Page # **152**

Starting Line # **1**

Section **8.3.5.4**

Throughout the document, mainly in the PHY section, there is some wording specifying certain PHY modes that are applicable to licensed and/or license-exempt bands only.

Suggested Remedy

Modify as follows:

8.3.5.4 License-exempt band applicability

A license-exempt band compliant device shall implement the 256-FFT OFDM mode. It may optionally implement the 2048-FFT OFDMA mode. The system shall only support TDD operation. An compliant device must implement 10 MHz and/or 20 MHz channelization and may implement 5MHz channelization. Specifications unique to license-exempt operation are detailed in clause ~~8.3.5.8XXXX~~.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1059**

Comment submitted by: **Avraham**

Freedman

Member

2002/02/20

Comment Type **Editorial**

Starting Page # **152**

Starting Line # **4**

Section **8.3.5.4**

Typo

Suggested Remedy

change "an compliant" to "a compliant"

Proposed Resolution

Recommendation: **Accepted**

Recommendation by **Avraham Freedman**

change "an compliant" to "a compliant"

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

change "an compliant" to "a compliant"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1060**

Comment submitted by: Naftali

Chayat

Member

2002/02/25

Comment Type Technical, Satisfied (was Starting Page # 152 Starting Line # 6 Section 8.3.5.4

Per Nokia's presentations at least 3 channels are needed to deploy a mesh network, and at least 6 channels + guard band are needed for two operators in same area.

The 20 MHz channel spacing does not meet this requirement, while 10 MHz channel spacing does.

Moreover, statement like "An compliant device must implement 10 MHz and/or 20 MHz channelization" allows noninteroperable standard compliant devices (one with 10 MHz bandwidth only. other with 20 MHz bandwidth only).

Suggested Remedy

Change:

"An compliant device must implement 10 MHz and/or 20 MHz channelization and may implement 5MHz channelization".

to

"An compliant device must implement 10 MHz channelization and may implement 5MHz and/or 20 MHz channelization".

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Change:

"An compliant device must implement 10 MHz and/or 20 MHz channelization and may implement 5MHz channelization".

to

"A compliant device must implement 10 MHz channelization and may implement 5MHz and/or 20 MHz channelization".

Reason for Group's Decision/Resolution

wider channels more efficient, especially with TDD

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **1061**Comment submitted by: [Marianna](#)[Goldhammer](#)

Member

[2002/02/22](#)Comment Type [Technical, Satisfied \(was](#)Starting Page # [152](#)Starting Line # [6](#)Section [8.3.5.4](#)

Make the 20MHz channel spacing optional.

In US are only 7 channels available, that are not enough even for 2 operators, using P-MP
Besides, other systems, like P-P or WLAN might be active in the same area, reducing even more the number of available channels.

In Europe were requested 150MHz of spectrum, from which 120MHz usable. This gives 6 channels of 20MHz, also not enough.

Suggested Remedy

Modify:

A compliant device must implement 10 MHz channelization and may implement 5MHz or 20MHz channelization.
Specifications unique to license-exempt operation are detailed in clause 8.3.5.8.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group:** [Rejected-Duplicate](#)**Reason for Group's Decision/Resolution**[see 1060](#)**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1062**

Comment submitted by: Nico

van Waes

Member

2002/02/25

Comment Type **Technical, Non-binding** Starting Page # **154** Starting Line # **1** Section **multiple**

For high modulation orders, granularity may become an issue. Option subchannelization, in an interoperable fashion, may be beneficial.

Since it was briefly addressed at the last meeting, I'm mainly providing some tangible text for discussion.

Suggested Remedy

Consider OFDM subchannelization as defined in C80216a-02/30.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group**Decision of Group: **Rejected**

1) adopt 02/30r1 -> vote: in favor 3, opposed 16

2) adopt 02/37 -> vote: in favor 11, opposed 20

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes**

Editor's Actions |) none needed

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1063**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment Type **Technical, Non-binding**

Starting Page # **154**

Starting Line # **8**

Section **8.3.5.5.1**

Gaps also are present

Suggested Remedy

Change

"The frame interval contains both transmissions (PHY PDUs) of BS and SSs and guard intervals."

to

"The frame interval contains transmissions (PHY PDUs) of BS and SSs, gaps and guard intervals."

Proposed Resolution

Recommendation: **Accepted**

Recommendation by Vladimir Yanover

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change

"The frame interval contains both transmissions (PHY PDUs) of BS and SSs and guard intervals."

to

"The frame interval contains transmissions (PHY PDUs) of BS and SSs, gaps and guard intervals."

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1064**

Comment submitted by: Yigal

Leiba

Member

2002/02/25

Comment Type **Technical, Non-binding**Starting Page # **154**Starting Line # **43**Section **8.3.5.5.1**

The location of the contention slots is not necessarily at the start of the UL-subframe

Suggested Remedy

Change the figure title to read

"Figure 206—An example of OFDM frame structure with TDD"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Change the figure title to read

"Figure 206—An example of OFDM frame structure with TDD"

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1065**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment Type **Technical, Non-binding** Starting Page # **154** Starting Line # **45** Section **8.3.5.5.1**
 DL transmission can contain several bursts with different PHY parameters (modulation, FEC type)

Suggested Remedy
 Change

" A DL sub-frame consists of only one DL PHY transmission burst. An UL sub-frame consists of contention intervals scheduled for initial ranging and band-width request purposes and one or multiple UL PHY transmission bursts, each transmitted from a different SS."

to

Proposed Resolution Recommendation: **Accepted**

Recommendation by Vladimir Yanover

Reason for Recommendation

Answer to Yigal:

DL subframe is constructed of one or several PHY bursts; only the first PHY burst is preceded by a preamble (OFDM)

Resolution of Group Decision of Group: **Accepted-Modified**

add on page 154, line 55:

Note the difference between a PHY Transmission Burst and a Burst.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1066**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment Type **Editorial**

Starting Page # **154**

Starting Line # **58**

Section **8.3.5.5.1**

FCH specifies both the burst profile (rate) and length of the DL burst #1

Suggested Remedy

Change

"The FCH uses the 4-bit Rate_ID to specify the burst profiles of the DL burst-1. "

to

"The FCH contains DL_Frame_Prefix to specify the burst profile and length of the DL burst #1. "

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change

"The FCH uses the 4-bit Rate_ID to specify the burst profiles of the DL burst-1. "

to

"The FCH contains DL_Frame_Prefix to specify the burst profile and length of the DL burst #1. "

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1067**

Comment submitted by: Tal

Kaitz

Member

2002/02/25

Comment Type **Technical, Non-binding**

Starting Page # **154**

Starting Line # **59**

Section **8.3.5.5.1**

The FCH is transmitted in a well known profile. The text specifies the modulation and code rate AND also the guard interval duration. The specified guard length (1/4) may not be the same as the rest of the down link, thus the receiver will have to handle various guard intervals. This would increase the implementation complexity greatly.
Also the specification of the RS parameters is redundant since the QPSK 1/2 modulation implies the use of a specific RS (32,24,4) and a specific CC (rate 2/3)

Suggested Remedy

Change "well known burst profile {QPSK 1/2 (32,24,4)}, T_g=T_b/4"
to
"QPSK rate 1/2 with the mandatory coding scheme"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Change "well known burst profile {QPSK 1/2 (32,24,4)}, T_g=T_b/4"
to
"QPSK rate 1/2 with the mandatory coding scheme"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1068**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment Type **Technical, Non-binding** Starting Page # **154** Starting Line # **59** Section **8.3.5.5.1**

The FCH should be transmitted using a well known modulation/FEC pair, but the Guard Interval can differ from BS to BS.
Seems that nobody in 802.16 considers the GI as something that can be changed on fly.

Suggested Remedy

Delete specification of the Guard Interval in the burst profile: mention just QPSK-1/2 with a note that usage of RS (32,24,4) is an implication.

Proposed ResolutionRecommendation: **Accepted**

Recommendation by Vladimir Yanover

Reason for Recommendation**Resolution of Group**Decision of Group: **Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes**

Editor's Actions |) none needed

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: [4b](#)

Comment Date

Comment # [1069](#)Comment submitted by: [Lars](#)[Lindh](#)

Member

[2002/02/25](#)

Comment	Type	Starting Page #	Starting Line #	Section
---------	------	-----------------	-----------------	---------

	Technical, Binding			
--	------------------------------------	--	--	--

		155		
--	--	---------------------	--	--

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--	--	--	--	--

In WG letter ballot I submitted a technically binding comment 535 regarding the DL Frame Prefix. The comment was rejected by the group but did not contain any justification for the rejection. As I consider that the comment was not solved in satisfactory way I still have to disapprove of the DL Frame Prefix.

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: [Rejected](#)

Reason for Group's Decision/Resolution

[See Comment 0535.](#)

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [|\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1070**

Comment submitted by: Shawn

Taylor

Member

2002/02/25

Comment	Type	Starting Page #	Starting Line #	Section
	Editorial	155		

Caption for Figure 207 should read "OFDM frame structure with FDD"

Suggested Remedy

Change TDD to FDD

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

Change TDD to FDD in figure 207

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1071**

Comment submitted by: Jerome

Krinoock

Member

2002/02/25

Comment	Type	Starting Page #	Starting Line #	Section
	Editorial	155	44	8.3.5.5.1

Figure 207 is described in the text as being applicable to FDD, and is apparently applicable to FDD, but its title says TDD.

Suggested Remedy

In the title of Figure 207, change "TDD" to "FDD".

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions l) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **1072**

Comment submitted by: Yigal

Leiba

Member

2002/02/25

Comment Type [Technical, Non-binding](#) Starting Page # **155** Starting Line # **44** Section **8.3.5.5.1**

The location of the contention slots is not necessarily at the start of the UL-subframe , also the title of the figure is wrong

Suggested Remedy

[Change the figure title to read
"Figure 207—An example of OFDM frame structure with FDD"](#)

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: [Accepted-Duplicate](#)****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **1073**

Comment submitted by: Lei

Wang

Member

2002/02/25

Comment Type [Editorial](#) Starting Page # **155** Starting Line # **44** Section

[typo](#)**Suggested Remedy**

[Change "TDD" to "FDD"](#)

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: [Accepted-Duplicate](#)****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1074**

Comment submitted by: **Fengming**

Cao

Other

2002/02/20

Comment Type **Editorial**

Starting Page # **155**

Starting Line # **45**

Section **8.3.5.5.1**

typo.

Figure 207 is for FDD mode.

Suggested Remedy

change
"Figure 207---FDM frame structure with TDD"
to
"Figure 207---FDM frame structure with FDD"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Duplicate

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1075**

Comment submitted by: **Vladimir**

Yanover

Member

2002/02/25

Comment Type **Editorial**

Starting Page # **155**

Starting Line # **45**

Section **8.3.5.5.1**

Typo

Suggested Remedy

Change the title of Fig. 207 to
"Figure 207—OFDM frame structure with FDD"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1076**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment Type **Technical (was Editorial)**Starting Page # **155**Starting Line # **47**Section **8.3.5.5.1**

There is no place in FCH burst even for a single message of mentioned types

Suggested Remedy

[Delete](#)

"The FCH burst may also contain short MAC control messages, such as, DCD and/or UCD. It may also contain (partial) MAP messages. "

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1077**

Comment submitted by: Jerome

Krinock

Member

2002/02/25

Comment Type **Editorial**Starting Page # **155**Starting Line # **60**Section **8.3.5.5.1**

In the OFDMA section, the DL Frame Prefix is described in a table (Table 217). In the OFDM section, the DL Frame Prefix is described without a table. The table is consistent with descriptions of other fields in this document and in the base document.

Suggested Remedy

Change the OFDM "DL Frame Prefix" to be a table like Table 217.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Change the OFDM "DL Frame Prefix" to be a table like Table 217.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1078**

Comment submitted by: **Lei**

Wang

Member

2002/02/25

Comment Type **Technical, Non-binding**

Starting Page # **156**

Starting Line # **11**

Section

needs a precise description.

Suggested Remedy

replace "three OFDM symbols" with "a preamble and one OFDM symbol".

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

replace "three OFDM symbols" with "a long preamble and one OFDM symbol".

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1079**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment Type **Technical, Non-binding**Starting Page # **157**Starting Line # **4**Section **8.3.5.5.1**

Correction

Suggested Remedy
Change

"A Burst Descriptor shall be included into DCD Message for each Interval Usage Code that is to be used in the UL-MAP."

to

"A Burst Descriptor shall be included into DCD Message for each Downlink Interval Usage Code used in the DL-MAP except those associated with Gap, End of Map, Extended"

Proposed Resolution Recommendation: **Accepted**

Recommendation by Vladimir Yanover

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**

Change

"A Burst Descriptor shall be included into DCD Message for each Interval Usage Code that is to be used in the UL-MAP."

to

"A Burst Descriptor shall be included into DCD Message for each Downlink Interval Usage Code used in the DL-MAP except those associated with Gap, End of Map, Extended"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1080**

Comment submitted by: Panyuh

Joo

Member

2002/02/25

Comment Type **Technical, Non-binding** Starting Page # **159** Starting Line # **26** Section **8.3.5.3**

Add Subsection 8.3.5.3.1 256 FFT OFDMA mode 256 FFT has better spectral efficiency for short packets.

Suggested Remedy

[Refer to coming contribution](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

[There is no subchannelization defined for OFDM.](#)

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1081**

Comment submitted by: Naftali

Chayat

Member

2002/02/25

Comment Type **Technical, Non-binding** Starting Page # **159** Starting Line # **27** Section **8.3.5.5.3**
 Consider increasing the number of pilots in OFDM FFT=256 mode.

This will result in

* better phase tracking

* ability to adjust the channel estimate within packet, and to support limited mobility.

Given that the sampling rate is adjusted to $8/7$ BW. 8 more pilots can be added (4 pilots can be added at current sampling rate) without violating the**Suggested Remedy**

Add 8 more pilots

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Rejected**

Add 8 more pilots according to 37/r1.

vote: 13 in favor, 8 against

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1082**

Comment submitted by: [Jon](#)

[Labs](#)

[Member](#)

Comment Type [Editorial](#)

Starting Page # **160**

Starting Line # **9**

Section **8.3.5.5.4.2.2**

In Table 214, it is not clear to me what I_x , I_y and B represent.

Suggested Remedy

[Ask the AHA guys to add some text to clarify this notation.](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

[Accept text as proposed in C802.16a-02/39?](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1083**

Comment submitted by: Tal

Kaitz

Member

2002/02/25

Comment Type **Technical, Non-binding**

Starting Page # **161**

Starting Line # **44**

Section **8.3.5.5.4.3**

The interleaver defined is just fine. However the dimension of matrix , currently 16, may not be optimal for the 802.16 parameters. Some other vaules may give slightly better results

Suggested Remedy

Change the factor of 16 in eq. 22- 25 from 16 to TBD.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Rejected

withdrawn

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1084**

Comment submitted by: **Anader**

Benyamin-Seeyar

Member

2002/02/22

Comment Type **Technical, Non-binding**

Starting Page # **162**

Starting Line # **12**

Section **8.3.5.5.1**

The following subclause says too little and there is no text explaining the ranging process here.

8.3.5.5.1 Ranging

There are two types of ranging processes, initial ranging and maintenance ranging. The initial ranging is used by a new SS to join the system. It uses the initial ranging contention-based interval, which requires a long preamble. The maintenance ranging uses the regular UL burst.

Suggested Remedy

Ranging process as a control mechanism can borrow text from Base 802.16 standard document.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

8.3.5.5.1 Ranging

There are two types of ranging processes, initial ranging (see clause 6.2.9.5) and periodic ranging (see clause 6.2.11) . The initial ranging is used by a new SS to join the system. It uses the initial ranging contention-based interval, which requires a long preamble. The periodic ranging uses the regular UL burst.

change all "maintenance ranging" to "periodic ranging"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1085**

Comment submitted by: Lei

Wang

Member

2002/02/25

Comment	Type	Technical, Satisfied (was	Starting Page #	162	Starting Line #	21	Section
---------	------	---------------------------	-----------------	-----	-----------------	----	---------

The piggybacking bandwidth request mechanism should be described in the bandwidth requesting section. Also, the full contention and the focused contention shall be clearly described.

Suggested Remedy

Replace line 22, page 162 by the following:

The OFDM PHY supports two types of bandwidth requesting mechanism for a SS to request UL bandwidth allocations. One is the piggybacking mechanism, which uses the Grant Management sub-header for a UL transmission to convey a bandwidth request of the SS to the BS, as described in Section 6.2.2.2.2. The other is the contention based bandwidth requesting mechanism, in which bandwidth requesting contention slots are allocated in the UL for the SS's to transmit their bandwidth requests.

Proposed Resolution	Recommendation:	Recommendation by
----------------------------	------------------------	--------------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Accepted-Modified
----------------------------	--

Insert the following as 6.2.6.5 (renumber succeeding sections)

6.2.6.5 OFDM Focused Bandwidth Requests

For systems using the OFDM PHY, there are two contention request mechanisms: the bandwidth contention mechanism defined in section 6.2.6.1, and the optional focused contention mechanism defined in this section.

With the Focused Contention Transmission, the bandwidth requesting contention slot is called a REQ Region-Focused, which consists of multiple OFDM symbols, divided into sub-channels (see section 8.xxx).

An SS requiring UL bandwidth uses a CDMA-like mechanism to send a signal to the BS on one of the sub-channels. If the BS successfully receives a bandwidth request signal from an SS, the BS shall allocate a UL burst on which the SS shall send a bandwidth request MAC PDU. With the REQ Region-Focused, a collision occurs when more than one SSs have attempted to use the same contention-code on the same sub-channel. In case of

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

MAC

Editor's Notes**Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1086**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment Type **Technical, Non-binding** Starting Page # **162** Starting Line # **28** Section **8.3.5.5.2**

This condition based on bit 2 is senseless (what is the bit 2 of a message? 2-nd bit of MAC Header?)

The regular way to specify BS/SS capability to support focused contention is to have one more capability parameter

Suggested Remedy

1. replace

"If the BS returned "on" in bit 2 of its SBC-RSP message during SS initialization,"

with

"If Focused Contention Supported = 1 was returned by the BS in SBC-RSP message during SS initialization,"

Proposed Resolution**Recommendation: Accepted****Recommendation by** Vladimir Yanover**Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

1. replace

"If the BS returned "on" in bit 2 of its SBC-RSP message during SS initialization,"

with

"If Focused Contention Supported = 1 was returned by the BS in SBC-RSP message during SS initialization,"

2. In 11.4.1.2 add one more parameter under a new section 11.4.1.2.5 "2-11 GHz Focused Contention Support"

with

Type = TBD

Length = 1

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1087**

Comment submitted by: Yigal

Leiba

Member

2002/02/25

Comment Type **Editorial**Starting Page # **162**Starting Line # **62**Section **8.3.5.5.2.1**

Contention code index '0' appears twice in table 215

Suggested Remedy

Delete the last line of table 215

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Delete the last line of table 215

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1088**

Comment submitted by: Jerome

Krinoock

Member

2002/02/25

Comment Type

Starting Page # **162**Starting Line # **63**Section **8.3.5.5.2.1**

In Table 215, the line for code 0 is repeated twice

Suggested Remedy

delete the bottom line in Table 215

Proposed Resolution

Recommendation: **Accepted-Duplicate**

Recommendation by Jerry Krinoock

Reason for Recommendation

This is a duplicate of 1087, which is included in Nico's motion accepting the list of editorial comments.

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1090**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment Type **Editorial**

Starting Page # **163**

Starting Line # **3**

Section **8.3.5.5.2.1**

Typo

Suggested Remedy

Change the title

"Table 216—Contention codes"

to

"Table 216—Contention Channels"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change the title

"Table 216—Contention codes"

to

"Table 216—Contention Channels"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1091**

Comment submitted by: **Anader**

Benyamin-Seeyar

Member

2002/02/22

Comment Type **Editorial**

Starting Page # **163**

Starting Line # **4**

Section **8.3.5.5.2**

The title of the table 216 is wrong!

Suggested Remedy

The title of Table 216 should change to :

Table 216—Contention channels

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1092**

Comment submitted by: Yigal

Leiba

Member

2002/02/25

Comment Type **Editorial**Starting Page # **163**Starting Line # **4**Section **8.3.5.5.2.1**

- 1) The title of table 216 seems wrong
- 2) The titles 'bit 0' ... 'bit 3' seem wrong

Suggested Remedy

- 1) Change the title of table 216 to read: "Table 216—Contention channels"
- 2) Change 'bit 0' to 'subcarr0 index', 'bit 1' to 'subcarr1 index', etc.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

- 1) Change the title of table 216 to read: "Table 216—Contention channels"
- 2) Change 'bit 0' to 'subcarr0 index', 'bit 1' to 'subcarr1 index', etc.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1093**

Comment submitted by: **Lei**

Wang

Member

2002/02/25

Comment Type **Editorial**

Starting Page # **163**

Starting Line # **4**

Section

typo

Suggested Remedy

Change "Contention Codes" to "Contention Channels" in the title of Table 216.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change "Contention Codes" to "Contention Channels" in the title of Table 216.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1094**

Comment submitted by: Jerome

Krinock

Member

2002/02/25

Comment Type

Starting Page # **163**Starting Line # **8**Section **8.3.3.5.5.2.1**

The title of Table 216 is "Contention Codes", however it contains Contention Channels. Also, the heading refers to bit numbers but the table contains carrier indices.

Suggested Remedy

Change the title of Table 216 to "Contention Channels".

In the heading line, change:

"bit 0" to "carr0"

"bit 1" to "carr1"

"bit 2" to "carr2"

"bit 3" to "carr3"

Proposed ResolutionRecommendation: **Accepted**

Recommendation by Jerry Krinock

This comment should be accepted and 1092 should be resolved as "duplicate".

Reason for Recommendation

This comment is a duplicate of 1092, except that the wording in the suggested remedy of this comment is better, because it is consistent with comment 1050, changing "subcarrier" to "carrier", or in this case "subcarr" to "carr". Comment 1050 is included in Nico's motion accepting the list of editorial comments

Resolution of GroupDecision of Group: **Accepted-Duplicate****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes**

Editor's Actions k) done

Changed it to "carrier offset index #"

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1095**

Comment submitted by: Apurva

Mody

Member

2002/02/21

Comment Type **Technical, Satisfied (was**

Starting Page # **164**

Starting Line # **29**

Section **8.3.5.5.6**

Add the following lines to the document -

The CP+4X64 portion of the downlink long preamble shall be constructed by taking a 256-point IFFT of the following sequence and adding a suitable cyclic prefix to it.

$S1 = \sqrt{2} * \{ [28 \text{ 0's}] -1+j \ 0 \ 0 \ 0 \ -1-j \ 0 \ 0 \ 0 \ 1-j \ 0 \ 0 \ 0 \ 1-j \ 0 \ 0 \ 0 \ -1+j \ 0 \ 0 \ 0 \ 1+j \ 0 \ 0 \ 0 \ -1-j \ 0 \ 0 \ 0 \ 1+j \ 0 \ 0 \ 0 \ -1+j \ 0 \ 0 \ 0 \ 1+i \ 0 \ 0 \ 0 \ 1+i \ 0 \ 0 \ 0 \ -1+i \ 0 \ 0 \ 0 \ 1-i \ 0 \ 0 \ 0 \ 1-i \ 0 \ 0 \ 0 \ 1-i \ 0 \ 0 \ 0 \ -1-i \ 0 \ 0 \ 0 \ -1-i \ 0 \ 0 \ 0 \ 1-i \ 0 \ 0 \ 0 \ -1-i \ 0 \ 0 \ 0 \ 1-i \ 0 \ 0 \ 0 \}$

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Motion: approve text from 36r1 for [4x64] vote 1: 13-7
vote 2: 17-7

Reason for Group's Decision/Resolution

insufficient consensus in group

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1096**

Comment submitted by: **Anader**

Benyamin-Seeyar

Member

2002/02/22

Comment Type **Editorial**

Starting Page # **166**

Starting Line # **37**

Section **8.3.5.6.1.1**

The following text is a trivial material and it is already given in the preceding paragraph.

"The SS's transmission of a data region is called UL PHY Burst. The BS's transmission of a data region is called DL PHY Burst."

Suggested Remedy

Delete the following text:

~~The SS's transmission of a data region is called UL PHY Burst. The BS's transmission of a data region is called DL PHY Burst.~~

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Delete the following text:

~~The SS's transmission of a data region is called UL PHY Burst. The BS's transmission of a data region is called DL PHY Burst.~~

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **1097**

Comment submitted by: Tal

Kaitz

Member

2002/02/25

Comment Type [Technical, Non-binding](#) Starting Page # **167** Starting Line # **47** Section **8.3.5.6.2**

The DL frame prefix should be transmitted in a well known profile. This is not specified.

Suggested Remedy

Add the sentence

"The DL Frame prefix is always transmitted at a well known burst profile: {QPSK rate 1/2} with the mandatory coding scheme."

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: [Accepted](#)****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** [k\) done](#)**Editor's Questions and Concerns****Editor's Action Items**Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **1098**

Comment submitted by: Yigal

Leiba

Member

2002/02/25

Comment Type [Technical, Non-binding](#) Starting Page # **168** Starting Line # **7** Section **8.3.5.6.2**

'Rate_ID' field only requires 4 bits (just like in OFDM)

Suggested Remedy

Change 'Rate_ID' field size to 4 bits

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: [Accepted](#)****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** [k\) done](#)

Inserted 4 reserved bit for byte alignment

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1099**

Comment submitted by: Yigal

Leiba

Member

2002/02/25

Comment Type **Technical, Non-binding**Starting Page # **168**Starting Line # **40**Section **8.3.5.6.2**

DL frame prefix modulation and coding is unspecified

Suggested Remedy

Add the following sentence:

"The DL frame prefix shall always be modulated at QPSK with code rate 1/2"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Duplicate****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1100**

Comment submitted by: **Anader**

Benyamin-Seeyar

Member

2002/02/22

Comment Type **Editorial**

Starting Page # **169**

Starting Line # **26**

Section **8.3.5.6.2**

The Figure 214 has repeated DL

Figure 214—Example of OFDMA DL DL+UL Map Location

Suggested Remedy

Delete first DL in the Figure 214 caption.

Figure 214—Example of OFDMA ~~DL~~ DL+UL Map Location

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

Also change "DL+UL MAP Location" to "DL-MAP and UL-MAP Location" in both figure 214 and 215

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1101**

Comment submitted by: Yigal

Leiba

Member

2002/02/25

Comment Type **Technical, Non-binding** Starting Page # **170** Starting Line # **51** Section **8.3.5.6.2.2**

In table 219, only 6 bits are required for the 'Sub-channel Offset' parameter (see table 220 for instance, that has it right)

Suggested Remedy

Change the size of the 'Sub-channel Offset' parameter to 6 bits, and eliminate the 'padding nibble' field

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Change the size of the 'Sub-channel Offset' parameter to 6 bits, and eliminate the 'padding nibble' field

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1102**

Comment submitted by: Yigal

Leiba

Member

2002/02/25

Comment Type **Technical, Non-binding**Starting Page # **173**Starting Line # **37**Section **8.3.5.6.2.5**

The 'empty' UIUC is not required, as empty is the default result when nothing is allocated in the maps. It is better to utilize this UIUC to distinguish between initial (long CDMA code) ranging to maintenance ranging/BW request (short CDMA code)

Suggested Remedy

Change UIUC 11 'Usage' field to read 'maintenance ranging/BW request'

Change UIUC 12 'Usage' field to read 'initial ranging'

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Change UIUC 11 'Usage' field to read 'periodic ranging/BW request'

Change UIUC 12 'Usage' field to read 'initial ranging'

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1103**

Comment submitted by: Yigal

Leiba

Member

2002/02/25

Comment Type **Editorial**

Starting Page # **174**

Starting Line # **1**

Section **8.3.5.6.2.5**

The sentence is a superfluous repetition of the preceding paragraph

Suggested Remedy

Delete lines 1 and 2

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Delete lines 1 and 2

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1104**

Comment submitted by: Tal

Kaitz

Member

2002/02/25

Comment Type **Technical, Non-binding** Starting Page # **174** Starting Line # **22** Section **8.3.5.6.3.1.2**

ID_cel is defined without any refernce. It is not clear how it is set and how does it relate to MAC parameters. Is it the Base-station ID ?

Suggested Remedy

Add the reference to the ID_cel definition in the MAC section,
or alteratnitvely add in line 22

"The IDcel is definbe as the 16 LSB of the Basestaion ID parameter defined in 6.2.2.3.2"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

The ID_{cell} is a 5 bit positive integer assigned to a sector by the operator. (on page 176)

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1105**

Comment submitted by: Panyuh

Joo

Member

2002/02/25

Comment Type **Technical, Non-binding**

Starting Page # **174**

Starting Line # **40**

Section **8.3.5.6.3**

256 FFT is necessary for OFDMA, 256 FFT has better spectral efficiency for short packets

Suggested Remedy

[refer to coming contribution](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected-Duplicate**

Reason for Group's Decision/Resolution

[see 1080](#)

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) [none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1106**

Comment submitted by: Jerome

Krinock

Member

2002/02/25

Comment Type **Editorial**

Starting Page # **177**

Starting Line # **44**

Section

In the note at the bottom of Table 225, the total number of pilot carriers is noted as "(*)not counting Variable Location Pilots which coincide with Constant Location Pilots". This is not quite correct, because, taken literally, it says that coinciding pilots are not counted at all.

Suggested Remedy

Change the note at the bottom of Table 225 to read "(*) Variable Location Pilots which coincide with a Constant Location Pilots are counted only once in this value".

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Change the note at the bottom of Table 225 to read "(*) Variable Location Pilots which coincide with a Constant Location Pilots are counted only once in this value".

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1107**Comment submitted by: **Anader****Benyamin-Seeyar**

Member

2002/02/22

Comment Type **Editorial**Starting Page # **178**Starting Line # **25**Section **8.3.5.6.3.1.2**

The word Constant-Location is not appropriate.

Suggested Remedy

Change the word **Constant-Location** with **Fixed-Location** through the whole subcaluse and in Figure 227.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**Change the word **Constant-Location** , **Constant Location**, **ConstLoc**, etc. with **Fixed-Location**, etc. throughout the whole document

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1108**

Comment submitted by: Panyuh

Joo

Member

2002/02/25

Comment Type **Technical, Binding**Starting Page # **179**Starting Line # **48**Section **8.3.5.6.3.2**

Add subsection 8.3.5.6.3.2.1 assignment of pilots.

The Nused used carriers in the UL are partitioned into constant-location pilots, variable location pilots, and data subchannels like those in the DL, However, because a subchannel in th UL has the number of pilots which is much smaller than those in the DL, they are not enough to do fuctions of pilots such as phase estimation and frequency offset estimation.

Suggested Remedy**8.3.5.6.3.2.1 Assignment of Pilots**

In addition to Permutaion base algorithm, Pilot's sharing algorithm among users are suggested.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group**Decision of Group: **Rejected****Reason for Group's Decision/Resolution**

The entire structure of the design would need to be redone to accomodate this request.

The pilots for each uplink user are used to estimate the channel parameters for that user alone. Note also that there is an uplink preamble (not like in the downlink).

Group's Notes**Group's Action Items****Editor's Notes**

Editor's Actions |) none needed

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1109**

Comment submitted by: Jerome

Krinock

Member

2002/02/25

Comment Type **Editorial** Starting Page # **180** Starting Line # **43** Section **8.3.5.6.4.1**

Fig 227 shows an OFDMA "slot offset value" which is, more specifically, a symbol offset in OFDMA symbols. Since we have previously defined an OFDMA "slot" to be a two-dimensional "data region" consisting of both symbols and subchannels, the "slot offset" does not make sense.

Suggested Remedy

In Fig. 227, change "Slot Offset" to "OFDM Symbol Offset"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

In Fig. 227, change "Slot Offset" to "OFDM Symbol Offset"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1110**

Comment submitted by: Yigal

Leiba

Member

2002/02/25

Comment Type **Technical, Non-binding** Starting Page # **180** Starting Line # **43** Section **8.3.5.6.4.1**

Randomizer initialization should account for the fact that the sub-channel index may be as short as 5 bits. Also it is not clear what bits from the OFDMA symbol offset should be taken

Suggested Remedy

Replace figure 227 with the drawing called figure-227 from contribution IEEE C802.16a-02/23

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Replace figure 227 with the drawing called figure-227 from contribution IEEE C802.16a-02/23

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1111**

Comment submitted by: Yigal

Leiba

Member

2002/02/25

Comment Type **Editorial**Starting Page # **182**Starting Line # **40**Section **8.3.5.6.5.1.1**

Figure 228 is not clear enough

Suggested Remedy

Replace figure 228 with the drawing called figure-228 from contribution IEEE 802.16a-02/23

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

copy back of the second CP, and change "guard interval" to CP in current figure 228

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1112**

Comment submitted by: Yigal

Leiba

Member

2002/02/25

Comment Type **Editorial**Starting Page # **183**Starting Line # **5**Section **8.3.5.6.5.1.2**

The sentence "This may occur on any OFDM symbol out of the six available ranging symbols." is no longer correct

Suggested Remedy

Replace this sentence by the following:

"Ranging sub-channels are dynamically allocated by the MAC and indicated in the UL-MAP"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Replace this sentence by the following:

"Ranging sub-channels are dynamically allocated by the MAC and indicated in the UL-MAP"

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1113**

Comment submitted by: Jerome

Krinock

Member

2002/02/25

Comment Type **Editorial**

Starting Page # **183**

Starting Line # **51**

Section **8.3.5.6.5.1.3**

The " $N_{FFT} = 2048$ mode" is deprecated since this is now the only mode.

Suggested Remedy

In the subject line, delete the words "for the $N_{FFT} = 2048$ mode".

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

In the subject line, delete the words "for the $N_{FFT} = 2048$ mode".

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1114**

Comment submitted by: Jiacheng

Wang

Other

2002/02/20

Comment Type **Technical, Non-binding** Starting Page # **184** Starting Line # **2**Section **8.3.5.6.5.1.3**

The boundary index of the ranging code group is not exact, also a redundant ")" at the end of the line.

Also in Line 5 and Line 9 of Page 184.

Suggested Remedy

Change

"clock the PRBS 0 times to 106 x N times".

to

"clock the PRBS 1 times to 106 x N times".

Change

"clock the PRBS 106 x (N + 1) times to 106 x (N + M) times".

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

On page 183 line 49, replace the first sentence of the paragraph with the following more general statement, which is carefully crafted so as to not contradict later specifics:

"The binary ranging codes are subsequences of the pseudonoise sequence appearing at its output Ck."

On page 184 line 2, replace the formula "106xN" with "106xN-1".

On page 184 line 5, replace the formula "106x(N+1)" with "106xN".

Replace the formula "106x(N+M)" with "106x(N+M)-1".

On page 184 line 9, replace the formula "106x(N+M+1)" with "106x(N+M)".

Replace the formula "106x(N+M+L)" with "106x(N+M+L)-1".

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes**

Editor's Actions k) done

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1115**

Comment submitted by: **Jiacheng**

Wang

Other

2002/02/20

Comment Type **Editorial**

Starting Page # **184**

Starting Line # **28**

Section **8.3.5.6.5.1.4**

type error

Suggested Remedy

Change

"clause 8.3.5.6.5.1.1"

to

"clause 8.3.5.6.5.1.3."

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change

"clause 8.3.5.6.5.1.1"

to

"clause 8.3.5.6.5.1.3."

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1116**

Comment submitted by: Naftali

Chayat

Member

2002/02/25

Comment Type **Technical, Satisfied (was** Starting Page # **185** Starting Line # Section **8.3.5.7**

The section lacks description of preambles (or sets of preambles for spatial processing) , of framing, of usage of the control frames, meaning of maps etc etc etc etc etc

Suggested Remedy

Provide details or delete the mode.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Rejected**

accept text 40r1 with modifications as proposed during session: 17 in favor, 13 against

delete OFDMA2 mode: 24 against, 0 in favor

Reason for Group's Decision/Resolution

text as provided not considered adequate, but OFDMA2 to be retained

Group's Notes**Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1117**Comment submitted by: **Anader****Benyamin-Seeyar**

Member

2002/02/22

Comment Type **Technical, Non-binding** Starting Page # **185** Starting Line # **31** Section **8.3.5.7**

The optional PHY mode in clause 8.3.5.7 OFDMA2 PHY has little differences with the original OFDMA mode.

Suggested Remedy

It is important to come up with a merged OFDMA 1 and OFDMA 2 into a single OFDMA .

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Rejected****withdrawn****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1118**

Comment submitted by: Naftali

Chayat

Member

2002/02/25

Comment	Type	Starting Page #	Starting Line #	Section
	Technical, Non-binding	187	8	8.3.5.7

Figure 232 exemplifies payloads which look like (1 training + 4 data) OFDM symbols. However the beginning of the subclause says that parameters of OFDMA clause will be used. the OFDMA clause (8.3.5.6) uses coding with a 3 * 48 subcarrier payload granularity and not 4 * 48 subcarrier granularity

Either adjust the drawing or recommend that the coding of the OFDM mode (4*48 subcarrier quantum) will be used for OFDMA2 mode.

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

[commenter misunderstood drawing](#)

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1119**

Comment submitted by: Anader

Benyamin-Seeyar

Member

2002/02/22

Comment Type **Technical, Non-binding** Starting Page # **188** Starting Line # **1** Section **8.3.5.8**

The whole Clause 8.3.5.8 (License-exempt specific components) belongs to Clause 8.3.2.3. It is all informative data.

Suggested Remedy

Move the whole Clause 8.3.5.8 and add to Clause 8.3.2.3 in common PHY area.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Rejected****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1120**

Comment submitted by: Rémi

Chayer

Member

2002/02/22

Comment Type **Technical, Non-binding** Starting Page # **188** Starting Line # **1** Section **8.3.5.8**

Throughout the document, mainly in the PHY section, there is some wording specifying certain PHY modes that are applicable to licensed and/or license-exempt bands only.

Suggested Remedy

Move the whole section into the common part of the document and renumber.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Rejected****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1121**

Comment submitted by: Nico

van Waes

Member

2002/02/25

Comment	Type	Technical, Non-binding	Starting Page #	188	Starting Line #	6	Section	8.3.5.8.1.1
---------	------	------------------------	-----------------	-----	-----------------	---	---------	-------------

9 bit specification is annoying. Since the lower part of the band is indoor only or very low power , there's no point in allocating channels there. Also updated the numbers to reflect the current RA UK consultation and removed some errors.

Suggested Remedy

Update license-exempt channel allocation as suggested in C80216a-02/30.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Rejected**

Update license-exempt channel allocation as suggested in C80216a-02/30r1.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1122**

Comment submitted by: Tal

Kaitz

Member

2002/02/25

Comment	Type	Technical, Non-binding	Starting Page #	191	Starting Line #	62	Section	8.3.5.8.2.1
---------	------	------------------------	-----------------	-----	-----------------	----	---------	-------------

The FCH is transmitted in a well known profile. The text specifies the modulation and code rate AND also the guard interval duration. The specified guard length (1/4) may not be the same as the rest of the down link, thus the receiver will have to handle various guard intervals. This would increase the implementation complexity greatly.

Also the specification of the RS parameters is redundant since the QPSK 1/2 modulation implies the use of a specific RS (32,24,4) and a specific CC (rate 2/3)

Suggested Remedy

Change " ...well known burst profile {QPSK 1/2 (32,24,4)}, $T_g=T_b/4$ "
to
"QPSK rate 1/2 with the mandatory coding scheme"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1123**

Comment submitted by: Marianna

Goldhammer

Member

2002/02/22

Comment Type **Technical, Satisfied (was** Starting Page # **194** Starting Line # **1** Section

Allow more 802.16a systems operate in the same frequency bands and enable the 802.16a market in license-exempt bands

Suggested Remedy

Insert new section:

10. Spectrum sharing in license-exempt bands

The 802.16 systems operating in License-exempt band shall be able to efficiently share the spectrum.

A spectrum etichette should be defined between 802.16 systems, that will permit high frequency reuse and sharing of the same bandwidth by

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Rejected****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1124**

Comment submitted by: Yigal

Leiba

Member

2002/02/25

Comment Type **Technical, Non-binding** Starting Page # **194** Starting Line # **49** Section **10.3.3.3**
 Timing adjust unit is undefined

Suggested Remedy

Fix the sentence to read:

"The timing adjust units shall be 1 · Sample Time."

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Fix the sentence to read:

"The timing adjust units shall be a single Sample Time."

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1125**

Comment submitted by: Nico

van Waes

Member

2002/02/25

Comment Type **Editorial** Starting Page # **194** Starting Line # **62** Section **10.3.4.3**
 I'm not clear on what "sample time" here means.

Suggested Remedy

Specify "sample time".

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** l) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1126**

Comment submitted by: Yigal

Leiba

Member

2002/02/25

Comment Type **Technical, Non-binding**Starting Page # **195**Starting Line # **3**Section **10.3.4.3**

Timing adjust unit is undefined

Suggested Remedy

Fix the sentence to read:

"The timing adjust units shall be 1 · Sample Time."

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Fix the sentence to read:

"The timing adjust units shall be a single Sample Time."

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1127**

Comment submitted by: Vladimir

Yanover

Member

2002/02/25

Comment Type **Technical, Non-binding** Starting Page # **195** Starting Line # **5** Section **10.4**

This comment requests a change in the base 802.16-D5 document. A motive is to add a possibility for the data broadcast . In the current 802.16-D5 document there is no possibility for network data transmission at broadcast connection with CID = 0xFFFF (just management messages)

Suggested Remedy

Add a section 10.4 with changes in Table 121 as specified by the document "Broadcast Data in 802.16 MAC" by V.Yanover

Proposed ResolutionRecommendation: **Accepted**

Recommendation by Vladimir Yanover

Reason for Recommendation**Resolution of Group**Decision of Group: **Rejected****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes**

Editor's Actions |) none needed

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1128**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Technical, Satisfied (was** Starting Page # **196** Starting Line # **9** Section **11.1.1.1**

Since it was probably borrowed from TG1, the definition of the STG includes the ramp down but does not include the delay spread clearing interval (RxDS) in its description.

Suggested Remedy

Modify the last sentence of the description, which says:

"That is, UL-MAP entries include the time for a burst's ramp down."

to

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Modified**

copy SS Transition Gap, applicable only to SC2
Modify the last sentence of the description, which says:

"That is, UL-MAP entries include the time for a burst's ramp down."

to

"That is, UL-MAP entries accommodate the RxDS burst element, which includes time for both ramp down and delay spread to clear the receiver."

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1129**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Technical, Non-binding** Starting Page # **196** Starting Line # **20** Section **11.1.1.1**

Is a power adjustment rule needed on the UL, since no direct transitions from one modulation to another occur within a TDMA burst? One would think that the BS would expect the same average power from the SS, even if it requested an adaptive modulation change. The spectral mask should govern the backoff at peak power.

Suggested Remedy

If unnecessary, remove the power adjustment rule setting for the UCD channel encoding.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

change PHY scope from "All" to "SC, OFDM, OFDMA, OFDMA2"

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** e) editor disagrees

changed it to "SC" only , since we deleted the peak power column in the PHY common elements.

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1130**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Technical, Satisfied (was** Starting Page # **197** Starting Line # **14** Section **11.1.1.2**
 Modulation specification for SC2 in Table 234 should also specify whether byte interleaving is used or not.

Suggested Remedy

Revise Modulation Table entry to read:

4 msb bits:

1=QPSK, 2=16-QAM, 3=64-QAM

4=256-QAM, 5=BPSK

5-15 Reserved

4 lsb bits:

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Revise Modulation Table entry to read:

4 msb bits:

1=QPSK, 2=16-QAM, 3=64-QAM

4=256-QAM, 5=BPSK

5-15 Reserved

4 lsb bits:

1 = CC+ RS without byte interleaving

2 = CC + RS with byte interleaving

3 =no FEC

4 = BTC

5-15=reserved

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1131**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment	Type	Editorial	Starting Page #	197	Starting Line #	15	Section	11.1.1.2
---------	------	-----------	-----------------	-----	-----------------	----	---------	----------

(optional) indicators in burst profile encodings for UCD (Table 234) and DCD (Table 236) not necessary. Discussion/resolution regarding this occurred at Levi meeting, but the editorial notes must not have captured this point when the comment resolution was recorded

Suggested Remedy

Do word search and remove "(optional)" designators located beside some of the entries found in Tables 234 and 236.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Do word search and remove "(optional)" designators located beside some of the entries found in Tables 234 and 236.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1132**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Technical, Satisfied (was** Starting Page # **197** Starting Line # **23** Section **11.1.1.2**
 type = 4 of UCD Burst Profile encodings should be merged with type = 19, since they have the same title and describe the same thing. type 4 is for SC and type=19 is for SC2.

Suggested Remedy

Delete type = 19
 Revise type = 4 entry so it reads

Name	Type	Scope
------	------	-------

Preamble	4 1	The number of symbols in the preamble pattern. The preamble	SC
----------	-----	---	----

Proposed Resolution	Recommendation:	Recommendation by
----------------------------	------------------------	--------------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Accepted
----------------------------	---

Delete type = 19
 Revise type = 4 entry so it reads

Name	Type	Scope
------	------	-------

Preamble Length	4 1	The number of symbols in the preamble pattern. The preamble consumes the first n PS of the intervals allocated in the ULMAP. That is, UL-MAP entries include the bandwidth for a burst's preamble	SC
-----------------	-----	---	----

msb 4 bits:

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes	Editor's Actions k) done
-----------------------	---------------------------------

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1133**

Comment submitted by: **Brian**

Eidson

Member

2002/02/25

Comment Type **Editorial**

Starting Page # **197**

Starting Line # **55**

Section **11.1.1.2**

Since msb 6 bits are used for R in RS Parity Description for SC2 in Table 234,
R= 17-63 should be reserved

Suggested Remedy

Change R = 17-31 reserved to

R = 17-63 reserved.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Change R = 17-31 reserved to

R = 17-63 reserved.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1134**Comment submitted by: **Anader****Benyamin-Seeyar**

Member

2002/02/22

Comment Type **Editorial**Starting Page # **197**Starting Line # **60**Section **11.1.1.1**

In Tables 234 and 236, there are multiple places using BTC and BCC acronymes!

Suggested Remedy

Replace BTC with TPC code in both Tables 234 + 236.

In addition, remove BCC code type from both tables.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Rejected****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** l) none needed**Editor's Questions and Concerns****Editor's Action Items**Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1135**Comment submitted by: **Brian****Eidson**

Member

2002/02/25

Comment Type **Technical, Satisfied (was**Starting Page # **197**Starting Line # **62**Section **11.1.1.2**

Remove SC2 from scope of BCC, since the BCC not supported in SC2.

Suggested Remedy

See comment.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Remove SC2 from scope of BCC, since the BCC not supported in SC2.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1136**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Technical, Satisfied (was**

Starting Page # **198**

Starting Line # **4**

Section **11.1.1.2**

Need Burst Profile encoding entry in Table 234 for Number of rows (i.e., number of RS codewords) in Reed-Solomon + Conv Code Byte Interleaver for SC2.

Suggested Remedy

Add table entry

Number of rows in byte interleaver between Reed-Solomon + Convolutional Code

Name = Byte Interleaver Depth

type = ?

length = 1

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Add table entry

Number of rows in byte interleaver between Reed-Solomon + Convolutional Code

Name = Byte Interleaver Depth

type = ?

length = 1

Value = Number of rows (Reed Solomon code words) used in byte interleaver between Reed Solomon and CC:

rows = 2-66

67-255 = reserved

Scope = SC2

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **1137**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Technical, Non-binding**Starting Page # **198**Starting Line # **14**Section **11.1.1.2**

Is the scrambler seed ever reset to anything other than the default setting in SC2?

Suggested Remedy

If not, remove SC2 from the PHY scope for the type = 12 entry of Table 234.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

remove SC2 from the PHY scope for the type = 12 entry of Table 234.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **1138**

Comment submitted by: Anader

Benyamin-Seeyar

Member

2002/02/22

Comment Type **Editorial**Starting Page # **198**Starting Line # **16**Section **11.1.1.1**

In Table 234 and Table 236, there are lsb and msb that should be changed to upper case.

Suggested Remedy

Replace all **lsb** with **LSB** and **msb** with **MSB** in Table 234 and table 236.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

see 0959

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions l) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1139**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Technical, Satisfied (was** Starting Page # **198** Starting Line # **18** Section **11.1.1.2**
Remove SC2 scope from type = 13 (Last Codeword Length), because last codeword shortening is specified for SC2 scope in type = 7 (RS parity bytes).

Suggested Remedy[Follow comment recommendation](#)**Proposed Resolution****Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Remove SC2 scope from type = 13 (Last Codeword Length), because last codeword shortening is specified for SC2 scope in type = 7 (RS parity bytes).

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** [k\) done](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1140**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Technical, Satisfied (was** Starting Page # **198** Starting Line # **41** Section **11.1.1.2**

"Rolloff and Ramp-Up" (type=20) in Table 234 seems repetitious since "Rolloff" already appears in channel encodings. Ramp up was merged into preamble length spec found in last comment.

Suggested Remedy

Remove "Rolloff and Ramp-Up" entry from Table 234.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Remove "Rolloff and Ramp-Up" entry from Table 234.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1141**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type Technical, Satisfied (was Starting Page # **198** Starting Line # **50** Section **11.1.1.2**

Modify Pilot Word Interval entry (type=22) of Table 234 to encapsulate all Pilot Word parameters together.
(Such tight granularities on Pilot Word Intervals are not necessary.)

Suggested Remedy

Modify type = 22 to read

Name = Pilot Word Parameters

Type = 22

length = 1

value = msb 4 bits: Pilot Word Interval (Pilot word's length included in interval). 1= no pilot words,
2 = 16 symbols, 3 = 32 symbols, 4 = 64 symbols, 5 = 128 symbols, ... , 10 = 4096 symbols, 11-15 reserved

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Modify type = 22 to read

Name = Pilot Word Parameters

Type = 22

length = 1

value = msb 4 bits: Pilot Word Interval (Pilot word's length included in interval). 1= no pilot words,
2 = 16 symbols, 3 = 32 symbols, 4 = 64 symbols, 5 = 128 symbols, ... , 10 = 4096 symbols, 11-15 reserved
lsb 4 bits: number of contiguous Unique Words composing a Pilot Word (1-15)

scope = SC2

Also, modify type = 21 (which previously included number of contiguous UWs in Pilot Word), to eliminate that part of its entrv. New type = 21 would be

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1142**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Technical, Satisfied (was** Starting Page # **198** Starting Line # **57** Section **11.1.1.2**
 Modify "Alamouti parameters" type of Table 234 to include all Alamouti parameters.
 Reduce number of bytes to 1.

Suggested Remedy

Replace entry with

Name = Alamouti parameters

type = 24

length = 1

value = msb 4 bits: block length (segments are paired), in symbols

1 = 64 syms, 2 = 128, 3 = 256, 4 = 512, ..., 7 = 4096 syms, 8-15 reserved

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Replace entry with

Name = Alamouti parameters

type = 24

length = 1

value = msb 4 bits: block length (segments are paired), in symbols

1 = 64 syms, 2 = 128, 3 = 256, 4 = 512, ..., 7 = 4096 syms, 8-15 reserved

lsb 4 bits: Block burst profile type

0 = Cyclic prefix derived from data and no UWs embedded within block

1 = Cyclic prefix derived from data an additional UW as first payload data element in block

2 = Cyclic prefix derived from UWs at beginning and end of segment

3-15 = reserved

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1143**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type Technical, Satisfied (was Starting Page # 200 Starting Line # 7 Section 11.1.2.2
 Need Burst Profile encoding entry in Table 236 for Number of rows
 (i.e., number of RS codewords) in Reed-Solomon + Conv Code Byte Interleaver for SC2.

Suggested Remedy

Add table entry

Number of rows in byte interleaver between Reed-Solomon + Convolutional Code

Name = Byte Interleaver Depth

type = ?

length = 1

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Add table entry

Number of rows in byte interleaver between Reed-Solomon + Convolutional Code

Name = Byte Interleaver Depth

type = ?

length = 1

Value = Number of rows (Reed Solomon code words) used in byte interleaver between Reed Solomon and CC:

rows = 2-66

67-255 = reserved

Scope = SC2

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1144**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Technical, Satisfied (was** Starting Page # **200** Starting Line # **8** Section **11.1.2.2**

Incorporate a DL Burst Transition Gap TLV entry in Table 236, for the case where multiple BS bursts occur during a MAC frame interval. This isn't as ridiculous as it sounds, because if a system mixes regular (non-Alamouti-encoded) with Alamouti-encoded packets, then the bursts must be segregated, so the SSs not supporting Alamouti will not get confused. Multiple bursts might also be sent when adaptive antennas are used.

Suggested Remedy

Name = DL Burst Transition Gap (DL-BTG)

type = ?

length = 1

msb 1 bit: 0 = no DL-BTG; 1 = use DL-BTG.

lsb 7 bits: The time, expressed in PSs, between the end of an BS burst and the beginning of a another burst with the same MAC frame.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

Name = DL Burst Transition Gap (DL-BTG)

type = ?

length = 1

msb 1 bit: 0 = no DL-BTG; 1 = use DL-BTG.

lsb 7 bits: The time, expressed in PSs, between the end of an BS burst and the beginning of a another burst with the same MAC frame.

The DL Transition Gap consumes the last n PS of the intervals allocated in the DL-MAP. The minimum length of the DL Burst Transition Gap must be at least one RxDS interval, so that ramp down can occur and delay spread can clear receivers.
scope: SC2

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1145**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Technical, Satisfied (was** Starting Page # **200** Starting Line # **11** Section **11.1.2.2**

Revise DCD burst profile encoding for Modulation in Table 236 so that it has consistent format as the UCD Modulation burst profile encoding in Table 234.

Suggested Remedy

See UCD burst profile table for format reference. Revise Modulation Table entry for SC2 (which is split off from SC) to read:

Name = Modulation type

Type = 1

Length = 1

Value =

4 msb bits:

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted-Modified**

See UCD burst profile table for format reference. Revise Modulation Table entry for SC2 (which is split off from SC) to read:

Name = Modulation type

Type = 1

Length = 1

Value =

4 msb bits:

1=QPSK, 2=16-QAM, 3=64-QAM

4=256-QAM, 5=BPSK

5-15 Reserved

4 lsb bits:

1 = CC+RS without bvte interleaving

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1146**

Comment submitted by: **Brian**

Eidson

Member

2002/02/25

Comment Type **Editorial**

Starting Page # **200**

Starting Line # **42**

Section **11.1.2.2**

Since msb 6 bits are used for R in RS Parity Description for SC2 in Table 236,
R= 17-63 should be reserved

Suggested Remedy

Change R = 17-31 reserved to

R = 17-63 reserved.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change R = 17-31 reserved to

R = 17-63 reserved.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **1147**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type [Editorial](#)Starting Page # **200**Starting Line # **47**Section **11.1.2.2**[Remove SC2 from scope of BCC in Table 236, since BCC not used in SC2.](#)

Suggested Remedy

[See comment.](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**[Remove SC2 from scope of BCC in Table 236, since BCC not used in SC2.](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **1148**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type [Editorial](#)Starting Page # **200**Starting Line # **60**Section **11.1.2.2**[Scope of last codeword length entry \(type = 12\) in Table 236 does not include SC2 \(note that this is a subelement of type=4 for SC2\)](#)

Suggested Remedy

[Remove SC2 scope from type=12 entry of Table 236](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**[Remove SC2 scope from type=12 entry of Table 236](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **1149**Comment submitted by: [Brian](#)[Eidson](#)

Member

[2002/02/25](#)Comment Type [Editorial](#) Starting Page # [200](#) Starting Line # [60](#) Section [11.1.2.2](#)[Remove SC2 from scope of "Last codeword length" since this is specified for SC2 in the RS Parity Bytes type.](#)

Suggested Remedy

[See comment.](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**[Remove SC2 from scope of "Last codeword length" since this is specified for SC2 in the RS Parity Bytes type.](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)[duplicate with 1148](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1150**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Technical, Satisfied (was** Starting Page # **201** Starting Line # **18**Section **11.1.2.2**

Remove SC2 from scope of Preamble Presence, since it uses type 19 for its Preamble Length.

Modify Preamble length so that Pilot Word specification is removed.

Suggested Remedy

Revise type = 19

Name	Type	Length	Scope
------	------	--------	-------

Preamble Length	19	1	msb 4 bits: Number of (whole) Unique Words in Preamble (mU= 0-15) SC2
-----------------	----	---	---

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for RecommendationResolution of Group Decision of Group: **Accepted-Modified**

Remove SC2 from scope of Preamble Presence (type 15), since it uses type 19 for its Preamble Length

Revise type = 19

Name	Type	Length	Scope
------	------	--------	-------

Preamble Length	19	1	msb 4 bits: Number of (whole) Unique Words in Preamble (mU= 0-15) lsb 4 bits: number of PSs (4 x number of symbols) in ramp-up SC2
-----------------	----	---	---

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**Editor's Notes Editor's Actions **k) done****Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1151**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Technical, Non-binding**

Starting Page # **201**

Starting Line # **36**

Section **11.1.2.2**

Rename rolloff and rampup entry from Table 236 (not necessary) just rolloff since ramp-up in Preamble spec.

Suggested Remedy

Make entry

Name = Rolloff

type = 20

length = 1

1 = 0.25, 2 = 0.18, 3 = .15, 4-255 = reserved

scope = SC2

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Make entry

Name = Rolloff

type = 20

length = 1

1 = 0.25, 2 = 0.18, 3 = .15, 4-255 = reserved

scope = SC2

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1152**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Technical, Satisfied (was**

Starting Page # **201**

Starting Line # **45**

Section **11.1.2.2**

Align DCD burst encoding for Pilot Word Parameters to be consistent with that used for UCD burst encoding.

Suggested Remedy

Modify type = 22 to read

Name = Pilot Word Parameters

Type = 22

length = 1

value = msb 4 bits: Pilot Word Interval (Pilot word's length included in interval). 1= no pilot words,
2 = 16 symbols, 3 = 32 symbols, 4 = 64 symbols, 5 = 128 symbols, ... , 10 = 4096 symbols, 11-15 reserved

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Modify type = 22 to read

Name = Pilot Word Parameters

Type = 22

length = 1

value = msb 4 bits: Pilot Word Interval (Pilot word's length included in interval). 1= no pilot words,
2 = 16 symbols, 3 = 32 symbols, 4 = 64 symbols, 5 = 128 symbols, ... , 10 = 4096 symbols, 11-15 reserved
lsb 4 bits: number of contiguous Unique Words composing a Pilot Word (1-15)

scope = SC2

Also, modify type = 21 (which previously included number of contiguous UWs in Pilot Word), to eliminate that part of its entrv. New type = 21 would be

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1153**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Technical, Satisfied (was** Starting Page # **201** Starting Line # **53** Section **11.1.2.2**
 Modify "Alamouti parameters" type of Table 236 to include all Alamouti parameters.
 Reduce number of bytes to 1.

Suggested Remedy

Replace entry with

Name = Alamouti parameters
 type = 24
 length = 1
 length = 1
 value = msb 4 bits: block length (segments are paired), in symbols

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Replace entry with

Name = Alamouti parameters
 type = 24
 length = 1
 length = 1
 value = msb 4 bits: block length (segments are paired), in symbols
 1 = 64 syms, 2 = 128, 3 = 256, 4 = 512, ..., 7 = 4096 syms, 8-15 reserved
 lsb 4 bits: Block burst profile type
 0 = Cyclic prefix derived from data and no UWs embedded within block
 1 = Cyclic prefix derived from data an additional UW as first payload data element in block
 2 = Cyclic prefix derived from UWs at beainning and end of segment

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1154**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type Technical, Satisfied (was Starting Page # 201 Starting Line # 57 Section 11.1.2.2
 Need Burst Profile encoding entry in Table 236 for Number of rows
 (i.e., number of RS codewords) in Reed-Solomon + Conv Code Byte Interleaver for SC2.

Suggested Remedy

Add table entry

Number of rows in byte interleaver between Reed-Solomon + Convolutional Code

Name = Byte Interleaver Depth

type = ?

length = 1

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Add table entry

Number of rows in byte interleaver between Reed-Solomon + Convolutional Code

Name = Byte Interleaver Depth

type = ?

length = 1

Value = Number of rows (Reed Solomon code words) used in byte interleaver between Reed Solomon and CC:

rows = 2-66

67-255 = reserved

Scope = SC2

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1155**Comment submitted by: **Lei****Wang**

Member

2002/02/25

Comment	Type	Starting Page #	Starting Line #	Section
	Technical, Non-binding	202	16	

Table 18 in TG1 D5 already has the "Downlink Channel ID" in the RNG_REQ message format. So, it is a duplicate info in the TLVs defined in Table 237 in TGa D2.

Suggested Remedy

Remove the row of "Downlink Channel ID" in Table 237.

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Accepted
---------------------	------------------------------------

Remove the row of "Downlink Channel ID" in Table 237.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes	Editor's Actions
	k) done

Editor's Questions and Concerns**Editor's Action Items**Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1156**Comment submitted by: **Itzik****Kitrosor**

Member

2002/02/25

Comment	Type	Starting Page #	Starting Line #	Section
	Editorial	203	14	11.1.4

Extra repetition of similar text in multiple fields.

Suggested Remedy

Move the text: "Note: This encoding is applicable only when using OFDMA PHYs" to a foot note

Proposed Resolution	Recommendation:	Recommendation by
---------------------	-----------------	-------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Accepted
---------------------	------------------------------------

Move the text: "Note: This encoding is applicable only when using OFDMA PHYs" to a foot note

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items**

Editor's Notes	Editor's Actions
	k) done

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1157**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Technical, Satisfied (was** Starting Page # **205** Starting Line # **49** Section **11.4**

Create section 11.4.1.2.1 for SC2 PHY to replace the clauses in 11.4.1.2 in D5 for 10-60 GHz SC PHY. This and other sections in 11.4.1 will be used for encoding the capabilities of a SS, which can be used in a capabilities exchange process with the BS.

Suggested Remedy

Use format found in D5 document in 11.4.1.2.

Text to be included (very long):

11.4.1.2.1 Wireless-MAN SC2 PHY

The following descriptions are solely for the Wireless-MAN SC2 PHY.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group**Decision of Group: **Accepted**

Use format found in D5 document in 11.4.1.2.

Text to be included (very long):

11.4.1.2.1 Wireless-MAN SC2 PHY

The following descriptions are solely for the Wireless-MAN SC2 PHY.

11.4.1.2.1.1 SS Demodulator

11.4.1.2.1.1.1 SS Demodulation Types

This field indicates the optional modulation (and FEC) types supported by a SS for DL reception.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes**

Editor's Actions k) done

changed the heading levels in accordance with base doc

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1158**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Technical, Non-binding**

Starting Page # **205**

Starting Line # **50**

Section **11.4**

Should we include some additional SBC-related settings for max and min channel widths?

Suggested Remedy

If so, include the below text:

11.4.1.2.1.1.8 Max DL channel width

This field indicates the maximum DL channel width that the SS can demodulate.

Type=?

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

include the below text for SC2:

11.4.1.2.1.1.8 Max DL channel width

This field indicates the maximum DL channel width that the SS can demodulate.

Type=?

Length=2

Value =

Bits 0-15: Channel Width, in 10 kHz increments.

Scope = SBC-REQ, SBC-RSP (clause references = ?)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1159**

Comment submitted by: Brian

Eidson

Member

2002/02/25

Comment Type **Technical, Non-binding** Starting Page # **205** Starting Line # **50** Section **11.4**

Should we include some additional SBC-related settings for max power and power control? (So that the BS is aware of the SS capabilities?)

Suggested Remedy

11.4.1.2.1.2.10 Power Control Limits

This field indicates the maximum transmit power, power control range, and power control stepsize that a SS can deliver to the transmit antenna over the given UL channel.

Type=?

Length=2

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

insert for SC2

11.4.1.2.1.2.10 Power Control Limits

This field indicates the maximum transmit power, power control range, and power control stepsize that a SS can deliver to the transmit antenna over the given UL channel.

Type=?

Length=2

Value =

Bits 0-5: Max output power in dBm, from 0 to 63 dBm

Bits 6-12: Power control range, in dB, from 0 to 127 dB

Bits 13-17: Power control stepsize in 0.25 dB increments. from 0.25 to 8 dB

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done

Modified to 3 bytes, since 17 bits don't fit in 2 bytes

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **1160**

Comment submitted by: Yigal

Leiba

Member

2002/02/25

Comment Type [Editorial](#)Starting Page # **205**Starting Line # **50**Section **11.4.1.2.5**

The section seems superfluous, as FFT sizes are indicated in the UCD message

Suggested Remedy

[Delete section 11.4.1.2.5](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**[Scope = SBC-REQ,](#)
[Type = 5.12.?](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **1161**

Comment submitted by: Nico

van Waes

Member

2002/02/25

Comment Type [Editorial](#)Starting Page # **205**Starting Line # **56**Section **11.4.1.2.5**

typo

Suggested Remedy

[Add title "FFT_SIZE TLV"](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**[Add title "FFT_SIZE TLV"](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)[made table headerless, consistent with base document](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1162**

Comment submitted by: **Lei**

Wang

Member

2002/02/25

Starting Page # **206**

Starting Line # **17**

Section

Comment Type **Editorial**
should use a clear term.

Suggested Remedy

Change "2-11 GHz Systems" to "ARQ connections".

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Change "2-11 GHz Systems" to "ARQ connections".

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1163**

Comment submitted by: Nico

van Waes

Member

2002/02/25

Comment Type **Technical, Satisfied (was**Starting Page # **208**Starting Line # **38**Section **12.2**

Mesh really requires its own system profile.

The new PAR for 10-66 GHz adds interoperability profiles, we ought to add such profiles for 2-11 GHz systems also. A mesh profile ought to be one of them.

Suggested Remedy

insert mesh system profile as described in C80216a-02/30

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Rejected****Reason for Group's Decision/Resolution**

the proposed profile is not interoperable with mandatory PMP topology

Group's Notes**Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1164**

Comment submitted by: Avraham

Freedman

Member

2002/02/20

Comment Type **Editorial**

Starting Page # **215**

Starting Line # **43**

Section **B.1.1.2**

The sentence is not complete

Suggested Remedy

Change "This is then repeated as many times as."
to
This is then repeated as many times as needed.

Proposed Resolution Recommendation: Accepted-Modified

Recommendation by Avraham Freedman

Change "This is then repeated as many times as."
to
This is then repeated as many times as desired

Reason for Recommendation

Resolution of Group Decision of Group: Accepted-Modified

Change "This is then repeated as many times as."
to
This is then repeated as many times as desired.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **1165**

Comment submitted by: Jerome

Krinock

Member

2002/02/25

Comment Type **Editorial**Starting Page # **217**Starting Line # **7**Section **B.1.2.1**

This section refers to "subchannel number", but this is for OFDM and there are no subchannels. From the context, the reference is obviously to the frequency offset index of the carrier.

Suggested Remedy

In B.1.2.1, pg. 217 line 7 change "subchannel number" to "frequency offset index of the carrier".

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

In B.1.2.1, pg. 217 line 7 change "subchannel number" to "frequency offset index of the carrier".

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**Document under Review: [802.16a/D2 \[D1<770\]](#)Ballot Number: **4b**

Comment Date

Comment # **1166**

Comment submitted by: Yigal

Leiba

Member

2002/02/25

Comment Type **Technical, Non-binding**Starting Page # **218**Starting Line # **55**Section **B.2.1**

Section B.2.1, B.2.2 and B.2.3 all seem to deal with interference analysis, and therefore belong to Tg2 recommended practice, and not as an annex to the standard

Suggested Remedy

Remove sections B.2.1, B.2.2 and B.2.3 (these should be submitted to Tg2)

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Rejected****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** l) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1167**

Comment submitted by: **Anader**

Benyamin-Seeyar

Member

2002/02/22

Comment Type **Editorial**

Starting Page # **219**

Starting Line # **1**

Section **B.2.1**

Missing reference!

which is mandated by the standard **[REF????]** and by some regulatory regions such as ERC [B53];

Suggested Remedy

Please add an appropriate reference to the Bibliography.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

Suggestion is to copy 8.2.8.3 to 8.3 somewhere, modify the numbers appropriately and refer back to that

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Made the numbers TBD

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1168**

Comment submitted by: **Anader**

Benyamin-Seeyar

Member

2002/02/22

Comment Type **Technical, Non-binding**

Starting Page # **219**

Starting Line # **26**

Section **B.2.1.2**

The value " n" in the sentence is an unknown parameter.

"within the footprint could be as much as 'n' dB below the reference value."

Suggested Remedy

There should be a reference from where one can estimate the value of "n".

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

Delete sentence

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1169**

Comment submitted by: Anader

Benyamin-Seeyar

Member

2002/02/22

Comment Type **Editorial**

Starting Page # **219**

Starting Line # **63**

Section **B.2.1.6**

The subclause B.2.1.6 is redundant since the whole paragraph is repeated on Page 222 under subclause B.2.1.8.2 Mandatory mode Radio parameters

B.2.1.6 Services in the 5 GHz band

In this clause, a short description of the systems and services in the 5GHz bands is given together with the necessary parameters for the subsequent interference analysis. This includes assumptions on parameters of

Suggested Remedy

Delete the B.2.1.6 subclause without loss of information.

~~**B.2.1.6 Services in the 5 GHz band**~~

~~In this clause, a short description of the systems and services in the 5GHz bands is given together with the necessary parameters for the subsequent interference analysis. This includes assumptions on parameters of WirelessHUMAN compliant systems that are beyond the scope of this standard.~~

The paramters are given in B.2.1.8.2

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Delete "It is important .." paragraph.
Increase depth of B.2.1.7 through B.2.1.12 to B.2.1.6.x

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**Ballot Number: **4b**

Comment Date

Comment # **1170**

Comment submitted by: Rémi

Chayer

Member

2002/02/22

Comment	Type	Starting Page #	Starting Line #	Section
	Technical, Non-binding	220	6	8.2.1.6

Throughout the document, mainly in the PHY section, there is some wording specifying certain PHY modes that are applicable to licensed and/or license-exempt bands only.

Suggested Remedy

Modify as follows:

It is important to note that, throughout this study, the use of 6 dBW max. EIRP is assumed for all parts of the spectrum with a backoff of only 3 dB for WLAN type devices. ~~It should be understood that this study errs on the side of caution in how much interference can be tolerated; as an example, in a practical OFDM system, the backoff is in the order of at least 6 dB minimum, whereas the rules commonly specify at most 0 dBW maximum mean EIRP [B54] or 6dBW maximum peak EIRP [B19] for fractions of the band. It should hence be understood that this study errs on the side of caution in how much interference can be tolerated.~~

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

It is important to note that, throughout this study, the use of 6 dBW max. EIRP is assumed for all parts of the spectrum with a backoff of only 3 dB for WLAN type devices. ~~It should be understood that this study errs on the side of caution in how much interference can be tolerated; as an example, in a practical OFDM system, the backoff is in the order of at least 6 dB minimum, whereas the rules commonly specify at most 0 dBW maximum mean EIRP [B54] or 6dBW maximum peak EIRP [B19] for fractions of the band. It should hence be understood that this study errs on the side of caution in how much interference can be tolerated.~~

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done

updated this in B.2.1.6.2.2, since this instance was deleted by the previous comment

Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1171**

Comment submitted by: **Anader**

Benyamin-Seeyar

Member

2002/02/22

Comment Type **Editorial**

Starting Page # **242**

Starting Line # **46**

Section **B.3.1**

Table 270 has a erroneous equation and it has to be corrected.

Suggested Remedy

The Symbol Rate (Msymbol/s) $R = (1+\acute{a}) W$ is wrong and it has to be changed to $R = W / (1+\acute{a})$.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

The Symbol Rate (Msymbol/s) $R = (1+\acute{a}) W$ is wrong and it has to be changed to $R = W / (1+\acute{a})$.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1172**

Comment submitted by: **Anader**

Benyamin-Seeyar

Member

2002/02/22

Comment Type **Editorial**

Starting Page # **243**

Starting Line # **55**

Section **B.3.1**

Replace Gamma with Alpha symbol in Gamma = 0.18.

Suggested Remedy

At the end of line, replace Gamma with Alpha symbol in Gamma = 0.18.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

At the end of line, replace Gamma with Alpha symbol in Gamma = 0.18.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: 802.16a/D2 [D1<770]

Ballot Number: 4b

Comment Date

Comment # 1173

Comment submitted by: Anader

Benyamin-Seeyar

Member

2002/02/22

Comment Type Editorial

Starting Page # 249

Starting Line # 15

Section B.3.2

Table 274 was imported incorrectly from the contributions on Link budget for SC2 PHY to Session#17, IEEE C802.16a-06r2.

The following elements within the table 274 has to change.

Line 15 - "Target gain with FEC"

Line 27 - Pathloss [B61]	-138.2 dB	-120.2dB	-138.2 dB	-120.2dB
--------------------------	-----------	----------	-----------	----------

Suggested Remedy

The above mentioned elements within Table 274 has to be changed to accommodate the following:

Line 15 - "Target gain with FEC" should change to "Target SNR gain with FEC"

Line 27 - Pathloss [B61]	-150.5 dB	-120.2 dB	-150.5 dB	-120.2 dB
--------------------------	-----------	-----------	-----------	-----------

Line 30 - Power at input to receiver	-89.5 dBm	-59.2 dBm	-98.5 dBm	-68.2 dBm
--------------------------------------	-----------	-----------	-----------	-----------

Proposed Resolution	Recommendation:	Recommendation by
----------------------------	------------------------	--------------------------

Reason for Recommendation

Resolution of Group	Decision of Group: Accepted-Modified
----------------------------	---

The above mentioned elements within Table 274 have to be changed to accommodate the following:

Line 10 -	Downstream	Upstream
-----------	------------	----------

Line 15 - "Target gain with FEC" should change to "Target SNR gain with FEC"

Line 19 - Tx Antenna gain (including losses)	13 dB	18 dB
--	-------	-------

Line 23 - P1dB	38 dBm	21 dBm
----------------	--------	--------

Line 25 - Cell radius for target SNR	7.0 km	7.0 km
--------------------------------------	--------	--------

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes	Editor's Actions k) done
-----------------------	---------------------------------

Editor's Questions and Concerns

Editor's Action Items

Document under Review: [802.16a/D2 \[D1<770\]](#)

Ballot Number: **4b**

Comment Date

Comment # **1174**

Comment submitted by: Nico

van Waes

Member

[2002/02/25](#)

Comment Type [Editorial](#)

Starting Page # **249**

Starting Line # **250**

Section **B.3.2**

In both DL and UL, the TX and RX antenna gains are the same. Shouldn't they be switched in the UL ?

Suggested Remedy

[Verify.](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

[see 1173,1175,1176](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [l\) none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: 802.16a/D2 [D1<770]

Ballot Number: 4b

Comment Date

Comment # 1175

Comment submitted by: Anader

Benyamin-Seeyar

Member

2002/02/22

Comment Type Editorial

Starting Page # 250

Starting Line # 15

Section B.3.2

Table 275 was imported incorrectly from the contributions on Link budget for SC2 PHY to Session#17, IEEE C802.16a-06r2.

The following elements within the table 275 has to change.

Line 15 - "Target gain with FEC"

Line 25 - Cell radius for target SNR 3.5 km 3.5 km

Suggested Remedy

The above mentioned elements within Table 275 has to be changed to accommodate the following:

Line 15 - "Target gain with FEC" should change to "Target SNR gain with FEC"

Line 25 - Cell radius for target SNR 7.0 km 7.0 km

Line 27 - Pathloss [B61] -138.2 dB -120.2 dB -138.2 dB -120.2 dB

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted-Modified

The above mentioned elements within Table 275 have to be changed to accommodate the following:

Line 10- DownStream UpStream

Line 15 - "Target gain with FEC" should change to "Target SNR gain with FEC"

Line 19 - Tx Antenna gain (including losses) 13 dB 18 dB

Line 23 - P1dB 38 dBm 21 dBm

Line 25 - Cell radius for target SNR 7.0 km 7.0 km

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: 802.16a/D2 [D1<770]

Ballot Number: 4b

Comment Date

Comment # 1176

Comment submitted by: Anader

Benyamin-Seeyar

Member

2002/02/22

Comment Type Editorial

Starting Page # 251

Starting Line # 15

Section B.3.2

Table 276 was imported incorrectly from the contributions on Link budget for SC2 PHY to Session#17, IEEE C802.16a-06r2.

The following elements within the table 276 has to change.

Line 15 - "Target gain with FEC"

Line 25 - Cell radius for target SNR 7 km 7 km

Suggested Remedy

The above mentioned elements within Table 276 has to be changed to accommodate the following:

Line 15 - "Target gain with FEC" should change to "Target SNR gain with FEC"

Line 25 - Cell radius for target SNR 3.5 km 3.5 km

Line 27 - Pathloss [B61] -138.1 dB -114.2 dB -138.1 dB -114.2 dB

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted-Modified

The above mentioned elements within Table 276 has to be changed to accommodate the following:

Line 10- DownStream UpStream

Line 15 - "Target gain with FEC" should change to "Target SNR gain with FEC"

Line 19 - Tx Antenna gain (including losses) 13 dB 18 dB

Line 23 - P1dB 38 dBm 21 dBm

Line 25 - Cell radius for target SNR 3.5 km 3.5 km

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1177**

Comment submitted by: **Anader**

Benyamin-Seeyar

Member

2002/02/22

Comment Type **Editorial**

Starting Page # **251**

Starting Line # **49**

Section **B.3.2**

The sentence "Antenna gain in included in the previous two figures includes -1.5 dB RF loss" to be corrected.

Suggested Remedy

Exchange the sentence "Antenna gain in included in the previous two figures includes -1.5 dB RF loss." with the following:

-Tx Antenna gain in the previous three Tables include -1.5 dB RF loss.

- Link budget evaluations provided in Tables 274 to 276 are for Median path loss cases. That is, the effect of Shadow Fading (e.g., S = 9.4 dB) is NOT included.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Exchange the sentence "Antenna gain in included in the previous two figures includes -1.5 dB RF loss." with the following:

- Tx Antenna gain in the previous three Tables include -1.5 dB RF loss.

- Link budget evaluations provided in Tables 274 to 276 are for Median path loss cases. That is, the effect of Shadow Fading (e.g., S = 9.4 dB) is NOT included.

fix table headers as in table 276 (i.e. add NLOS and LOS)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16a/D2 [D1<770]**

Ballot Number: **4b**

Comment Date

Comment # **1178**

Comment submitted by: Yigal

Leiba

Comment Type **Technical, Non-binding**

Starting Page # **163**

Starting Line # **3**

Section **8.3.5.5.6**

n the OFDM preamble no tone loading is defined.

The suggested remedy below Suggests sequences with low PAPR. (2.9dB for the 64 point and 3.6 dB for the 256 section)

In addition power boosting of 3dB is used.

Suggested Remedy

Add

The frequency domain sequence for the 4 times 64 sequence is defined by:

$S(-200:200)=+1+j,0,0,0,+1+j,0,0,0,+1+j,0,0,0,-1+j,0,0,0,$

$+1+j,0,0,0,-1-j,0,0,0,-1+j,0,0,0,-1-j,0,0,0,$

$-1-j,0,0,0,-1-j,0,0,0,+1+j,0,0,0,-1+j,0,0,0,$

$+1+j,0,0,0,-1-j,0,0,0,+1-j,0,0,0,+1+j,0,0,0,$

$+1+j,0,0,0,+1+j,0,0,0,-1-j,0,0,0,+1-j,0,0,0,$

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

vote: 20 in favor, 1 opposed

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions [k\) done](#)

Editor's Questions and Concerns

Editor's Action Items