

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by:

Mathilde Benveniste

Membership Status: Member

Date: 7/9/2010

Comment # 005

Document under Review: P802.16m/D6

Ballot ID: sb\_16m

Comment    Type General    Part of Dis  Satisfied     Page 808    Line 1    Fig/Table#

Subclause 16.6

End-to-end multi-hop latency is too long (aprox #of hops x frame duration).

Suggested Remedy

Facilitate reduction of end-to-end latency.

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

D6 supports only 2 hops. Latency in this case is equal to 10ms

Group's Notes

Clause 16.6: AAI Support for Relay

Editor's Notes

Editor's Actions    b) none needed

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by: Nancy Bravin

Membership Status:

Date: 27-Aug-2010

Comment # **B001**

Document under Review: **P802.16m/D8**

Ballot ID: **sb\_16m**

Comment    Type Technical    Part of Dis  Satisfied     Page 856    Line 56    Fig/Table#    Subclause 16.5.1.3.1

To improve the multi-BS MIMO sounding phase calibration scheme for DL/UL mismtach, Please use the phase differetial approach which is proposed to reduce calibration overhead.

Suggested Remedy

Adopt contribution C80216m-10\_0985.doc or its latest revision

GroupResolution

Decision of Group: **Principle**

Resolved by comment B187:

Adopt the text proposal in C80216m-10/1136r4

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.5; Other Mutli-BS MIMO

Editor's Notes

Editor's Actions

Comment by: Nancy Bravin

Membership Status:

Date: 10/16/2010

Comment # **C001**

Document under Review: **P80216m/D9**

Ballot ID: **sb\_16m**

Comment    Type General    Part of Dis  Satisfied     Page 883    Line 60    Fig/Table#    Subclause 16.3.12

IN ref to Comment # 315, and other related comments: response by team should be as clear as possible when rejecting a comment. If the group wants to have a separate document for a PICS and/or a MIB, it should have stated so in the response. instead of purely rejecting it as no solution offered.

**Suggested Remedy**

Please confirm that a MIB and a PICS will either be incorporated within this draft or handled as separate documents so a very important part of this process is answered clearly...in the draft or as separate documents.

**GroupResolution**

Decision of Group: **Disagree**

**Reason for Group's Decision/Resolution**

While the comment may have merit, that the addition of PICS and/or MIB provides additional utility to the draft amendment, the ballot resolution group does not agree that inclusion in this amendment of PICS and/or MIB are required and necessary for successful implementation of the specification. Further, the ballot resolution group is substantially concerned that any effort to develop such additional material as part of this project could substantially delay the development, approval and publication of this amendment specification jeopardizing one of the primary PAR objectives of this work: to develop and publish for inclusion as part of the ITU IMT-Advanced process. The ballot resolution group does note that a new project to undertake PICS development or similarly scoped work is under consideration by the Sponsor, but the ballot resolution group can not attest as to the suitability of such a project in addressing the commenters concerns, nor can the ballot resolution group give assurances that such proposed project will be approved to undertake the contemplated work.

**Group's Notes**

Clause 16.3.12; PHY Error vector magnitude (EVM) and requirements

**Editor's Notes**

**Editor's Actions**

Comment by:

Naftali Chayat

Membership Status: MemberDate: 7/9/2010Comment # 605Document under Review: P802.16m/D6Ballot ID: sb\_16mComment      Type Technical      Part of Dis  Satisfied       Page 41      Line 22      Fig/Table#      Subclause 11.1.3

The 16j specification is not widely supported by the industry. Moreover, 802.16m has a standalone specification of relay operation. Therefore an option is needed to describe a capability in which conformance with IEEE Std 802.16-2009 and IEEE Std 802.16m-2010 are indicated, without supporting , IEEE Std 802.16j-2009.

**Suggested Remedy**

Add value "11: Indicates conformance with IEEE Std 802.16-2009 and IEEE Std 802.16m-2010

**GroupResolution****Decision of Group: Principle**

P41, L21 change the sentence to read:

10: Indicates conformance with IEEE Std 802.16-2009, IEEE Std 802.16j-2009, IEEE Std 802.16h-2010 and IEEE Std 802.16m-2010

**Reason for Group's Decision/Resolution**

IEEE-SA bylaws required recognition of all approved amendments to be part of the base standard.

**Group's Notes**

Clause 10 - 11: WirelessMAN OFDMA Parameters and Constants, TLV Encodings

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

Comment by: Naftali Chayat

Membership Status: Member

Date: 7/9/2010

Comment # 606

Document under Review: P802.16m/D6

Ballot ID: sb\_16m

Comment      Type Technical      Part of Dis  Satisfied       Page 415      Line      Fig/Table#      Subclause

The calculation of resource metric assumes that the metric of lower power partitions is always lower than either reuse-1 partition or the high-power partition. This is not necessarily always correct. A way is needed to indicate the Resource\_Metric for each partition independently.

Suggested Remedy

Change the table to reflect that there are as many 4-bit fields as active partitions, and that the Resource Metric is interpreted identically for each partition.

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

In simulation, the metric of lower power partitions is lower than either reuse-1 partition or the high-power partition.

Group's Notes

16.2.21 Interference Mitigation Mechanism

Editor's Notes

Editor's Actions    b) none needed

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by: Naftali Chayat

Membership Status: Member

Date: 7/9/2010

Comment # 607

Document under Review: P802.16m/D6

Ballot ID: sb\_16m

Comment      Type Technical      Part of Dis  Satisfied       Page 498      Line      Fig/Table#      Subclause 16.3.6.1.1

The Primary Preamble, as it appears now, suffers from PAPR degraded by 3 dB when two channels are transmitted through same power amplifier, introducing additional distortion or necessitating additional backoff

Suggested Remedy

Adopt the solution for Primary Preamble as provided in C80216m-09/3094 or its latest revision

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

The contribution is incomplete and is over six months old, referring do Draft 3 of 802.16m. It only covers one example bandwidth.

Group's Notes

Clause 16.3: AAI PHY

Editor's Notes

Editor's Actions b) none needed

2010/10/12

IEEE 802.16-10/0040r3

Comment by: Naftali Chayat

Membership Status: Member

Date: 7/9/2010

Comment # 608

Document under Review: P802.16m/D6

Ballot ID: sb\_16m

Comment      Type Technical      Part of Dis  Satisfied       Page 500      Line      Fig/Table#      Subclause 16.3.6.1.2

The Secondary Preamble, as it appears now, suffers from substantial PAPR when less than 8 antennas are used

Suggested Remedy

Adopt the solution for Secondary Preamble as provided in C80216m-09/3094 or its latest revision

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

The contribution is incomplete and is over six months old, referring do Draft 3 of 802.16m. It only covers one example bandwidth.

Group's Notes

Clause 16.3: AAI PHY

Editor's Notes

Editor's Actions b) none needed

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by:

Carl Eklund

Membership Status: Member

Date: 7/9/2010

Comment # 308

Document under Review: P802.16m/D6

Ballot ID: sb\_16m

Comment    Type Technical    Part of Dis  Satisfied     Page 11    Line 20    Fig/Table#    Subclause

IPCS is a bad design that unfortunately I have made a significant contribution to. I should not not be perpetuated and mandating it over GPCS that is a clean design is absolute lunacy

Suggested Remedy

delete line 20

GroupResolution

Decision of Group: Agree

same resolution as comment #8  
Remove statement in line 20

Reason for Group's Decision/Resolution

Group's Notes

Clause 5-6: Service Specific CS, MAC Common Part Sublayer

Editor's Notes

Editor's Actions    a) done

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by:

Carl Eklund

Membership Status: Member

Date: 7/9/2010

Comment # 309

Document under Review: P802.16m/D6

Ballot ID: sb\_16m

Comment    Type Technical    Part of Dis  Satisfied     Page 11    Line 22    Fig/Table#    Subclause

GPCS needed for backwards compatibility

Suggested Remedy

delete line 22

GroupResolution

Decision of Group: Agree

same resolution as comment #6

delete line22

Reason for Group's Decision/Resolution

Group's Notes

Clause 5-6: Service Specific CS, MAC Common Part Sublayer

Editor's Notes

Editor's Actions    a) done

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by:

Carl Eklund

Membership Status: Member

Date: 7/9/2010

Comment # 311

Document under Review: P802.16m/D6

Ballot ID: sb\_16m

Comment      Type Technical      Part of Dis  Satisfied       Page 56      Line 18      Fig/Table#      Subclause

The AMS Battery Level Report header is badly designed and no protocol is associated with it. Relative battery levels make little sense to report as battery capacity may hugely differ between terminals.

Suggested Remedy

Delete the AMS Battery Level Report header

GroupResolution

Decision of Group: Disagree

Vote: 4-11-0.

Comment is rejected.

Reason for Group's Decision/Resolution

Battery level report is beneficial for power saving

Group's Notes

16.2.2.1 MAC header formats

Editor's Notes

Editor's Actions    b) none needed

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by:

Carl Eklund

Membership Status: Member

Date: 7/9/2010

Comment # 310

Document under Review: P802.16m/D6

Ballot ID: sb\_16m

<u>Comment</u>	<u>Type</u>	<u>Part of Dis</u>	<u>Satisfied</u>	<u>Page</u>	<u>Line</u>	<u>Fig/Table#</u>	<u>Subclause</u>
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The ASN.1 message definition must be made normative

Suggested Remedy

add ASN.1 code definition for all MAC control messages, delete Annex P.2

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

No specific remedy is proposed.

Group's Notes

16.2.3 MAC Control messages

Editor's Notes

Editor's Actions b) none needed

Comment by:

Dan Gal

Membership Status:Date:Comment # **A207**Document under Review: **P802.16m/D7**Ballot ID: **sb\_16m**Comment    Type Technical    Part of Dis  Satisfied     Page 43    Line 28    Fig/Table#    Subclause 16.2.1.2.3

A separate ID called DID is not needed in the MS Idle Mode. A Psuedo MSID, MSID\* can be used and that is better. 12bit DID makes the current 16e (legacy) Network implementations of Paging Controller and ASN-GW which uses a 48bit MSID in network 24bits over the air, incompatible with DID approach. The complexity of implementation and inter-working of 16e and 16m MS and ASN-GWs need to be considered. Hence replace all DID with MSID\*(24bits). Please change all occurrences of DID to MSID\* globally.

Suggested Remedy

Change the text of this sub-clause to:

"An MSID\* (24bits) shall provide the DID functionality and uniquely identify the AMS within a Paging Group. If the AMS changes Paging Group, a fresh MSID\* may be allocated during the Location Update procedure."

GroupResolutionDecision of Group: **Disagree**Reason for Group's Decision/Resolution

The DID can save significant message overhead.

Group's Notes

Clause 16.2.1, MAC: Addressing

Editor's NotesEditor's Actions    b) none needed

Comment by:

Dan Gal

Membership Status:Date: 10/25/2010Comment # **C082**Document under Review: **P80216m/D9**Ballot ID: **sb\_16m**Comment    Type Technical    Part of Dis  Satisfied     Page 58    Line 1    Fig/Table#    Subclause 16.2.1.2.3

A 12bit DID is not sufficient to cover the total MSs in Idle state in Paging Group. To avoid the collisions, the Paging Cycle and Paging Offset values were proposed. This has adverse impact on the ABS scheduling and effective use of air interface frames. ABS would have to reserve all possible combinations of 'Paging Cycle+ Paging Offsets' frames for Paging messages, since ABS has no prior idea of the distribution of DID+Paging Cycle+ Paging Offset within a PG. This complicates the BS implementation and these Paging Frames have to be assigned for Paging messages by the scheduler, in case there are no Paging messages they can be filled or re-used only in the last minute. Also this scheme would ultimately increase the number of Paging frames over the air, effectively reducing the bit savings from MAC ID reduction DID. Hence it is concluded that the DID scheme is not a good one.

**Suggested Remedy**

Change to:

16.2.1.2.3 Deregistration Identifier (DID)

The network shall assign a 48-bit DID to each AMS during Idle Mode initiation. The DID shall be either 48bit MSID or MSID\*, if identity privacy was invoked by AMS. The network shall use a 24bit hash value of the DID in AAI-PAG-ADV message while paging the AMS and in MOB-PAG-ADV while paging legacy MS. An Idle AMS or MS shall decode the DID hash value, to determine whether it is being paged.

**GroupResolution****Decision of Group: Disagree**

Vote: 4-14-1

**Reason for Group's Decision/Resolution**

AMSID\* is randomly generated by AMS, which hashed value may not be unique within a Paging Controller. It is improper to be used for AMS identification in idle mode

**Group's Notes**

Clause 16.2.1; MAC Addressing

**Editor's Notes****Editor's Actions**

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by: Dan Gal

Membership Status: Member

Date: 7/9/2010

Comment # 035

Document under Review: P802.16m/D6

Ballot ID: sb\_16m

Comment    Type Technical    Part of Dis  Satisfied     Page 75    Line 22    Fig/Table#    Subclause Table 679  
Eliminate DID, replace with MSID

Suggested Remedy

change "STID/DID" to: "STID/MSID/AMSID"

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

[straw vote in the Idle Mode Ad-hoc: 2 votes in favor, 12 votes in against]

[alcatel-lucent has serious concerns on backward compatible]

Current DID has less control message overhead than MSID/MAC Address does.

Group's Notes

16.2.3 MAC Control messages

Editor's Notes

Editor's Actions    b) none needed

Comment by:

Dan Gal

Membership Status: MemberDate: 7/9/2010Comment # 034Document under Review: P802.16m/D6Ballot ID: sb\_16mComment      Type Technical      Part of Dis  Satisfied       Page 81      Line 42      Fig/Table#      Subclause 16.2.3.2

The table entry "Deregistration Identifier (DID)" refers to section 16.2.1.2.3 that another SB comment recommends deleting. Here is the rationale:

Adding - in this 16m amendment - a 12bit DID, makes the current WiMAX network implementations (consistent with IEEE 802.16-2009) of Paging Controller and ASN-GW (that use a 48bit MSID), incompatible with this new DID identifier. The complexity of implementation and the adverse impact on inter-working of "16m" mobiles with current systems based on IEEE-Std-802.16-2009 (and prior versions) must be avoided. Therefore, we propose that the DID identifier be substituted with a 24bit MSID.

**Suggested Remedy**

1. change "Deregistration Identifier (DID)" to "AMS/MSID"
2. change "12" to "24"
3. change "The new DID which the AMS shall maintain in idle mode" to "The identifier that MS/AMS shall maintain in idle mode."

**GroupResolution****Decision of Group: Disagree****Reason for Group's Decision/Resolution**

[straw vote in the Idle Mode Ad-hoc: 2 votes in favor, 12 votes in against]

[alcatel-lucent has serious concerns on backward compatible]

Current DID has less control message overhead than MSID/MAC Address does.

**Group's Notes**

16.2.3 MAC Control messages

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

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by:

Dan Gal

Membership Status: Member

Date: 7/9/2010

Comment # 611

Document under Review: P802.16m/D6

Ballot ID: sb\_16m

Comment    Type Technical    Part of Dis  Satisfied     Page 798    Line 58    Fig/Table#    Subclause 16.4.11

The sentence "While using the TDM manner, Femto ABS may disable some of its subframes and announce the disabled subframes via AAI\_SON-ADV." is inconsistent with table 686 that contains no fields to announce disabled subframes

Suggested Remedy

add the required fields to the AAI\_SON-ADV message definition

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

Start and Interval of unavailable time are specified in Table 686.

Group's Notes

Clause 16.4: AAI Femto

Editor's Notes

Editor's Actions    b) none needed

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by:

Dan Gal

Membership Status: Member

Date: 7/9/2010

Comment # 444

Document under Review: P802.16m/D6

Ballot ID: sb\_16m

Comment    Type Technical    Part of Dis  Satisfied     Page 862    Line 19    Fig/Table#    Subclause

opposition to using DID

Suggested Remedy

change "DID ::= BIT STRING (SIZE(10))" to:  
AMSID\* ::= BIT STRING (SIZE(24))

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

[straw vote in the Idle Mode Ad-hoc: 2 votes in favor, 12 votes in against]  
[alcatel-lucent has serious concerns on backward compatible]

Current DID has less control message overhead than MSID/MAC Address does.

Group's Notes

Annex P

Editor's Notes

Editor's Actions    b) none needed

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by: Reinhard Gloger

Membership Status: Member

Date: 7/9/2010

Comment # 374

Document under Review: P802.16m/D6

Ballot ID: sb\_16m

<u>Comment</u>	<u>Type</u>	<u>Part of Dis</u>	<input checked="" type="checkbox"/> <u>Satisfied</u>	<input type="checkbox"/>	<u>Page</u>	<u>Line</u>	<u>Fig/Table#</u>	<u>Subclause</u>
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Don't limit scope to IP CS only

Suggested Remedy

Delete

GroupResolution

Decision of Group: Agree

same resolution as comment #8

delete line 20

Reason for Group's Decision/Resolution

Group's Notes

Clause 5-6: Service Specific CS, MAC Common Part Sublayer

Editor's Notes

Editor's Actions a) done

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by: Reinhard Gloger

Membership Status: Member

Date: 7/9/2010

Comment # 375

Document under Review: P802.16m/D6

Ballot ID: sb\_16m

<u>Comment</u>	<u>Type</u>	<u>Part of Dis</u>	<input checked="" type="checkbox"/> <u>Satisfied</u>	<input type="checkbox"/>	<u>Page</u>	<u>Line</u>	<u>Fig/Table#</u>	<u>Subclause</u>
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don't break backward compatibility with GPCS

Suggested Remedy

Delete

GroupResolution

Decision of Group: Agree

same resolution as comment #6

delete line 22

Reason for Group's Decision/Resolution

Group's Notes

Clause 5-6: Service Specific CS, MAC Common Part Sublayer

Editor's Notes

Editor's Actions a) done

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by:

Mariana Goldhamer

Membership Status: Member

Date: 7/9/2010

Comment # 159

Document under Review: P802.16m/D6

Ballot ID: sb\_16m

Comment

Type Technical

Part of Dis



Satisfied



Page 34

Line 50

Fig/Table#

Subclause 8.4.14.4

This clause, in 802.16-2009, defines the maximum tolerable levels for MS and BS. A special case is the FBS, for which these levels are too high.

Suggested Remedy

Amend the receiver max. tolerable levels for ABS and FBS.

GroupResolution

Decision of Group: Principle

*Insert the following new clause:*

16.3.15 Receiver requirements

The ABS and AMS receiver requirements are the same as those listed in 8.4.14

Reason for Group's Decision/Resolution

Group's Notes

Clause 8.4: WirelessMAN OFDMA PHY

Editor's Notes

Editor's Actions

a) done

Comment by:

Mariana Goldhamer

Membership Status: MemberDate: 7/9/2010Comment # 158Document under Review: P802.16m/D6Ballot ID: sb\_16mCommentType TechnicalPart of DisSatisfiedPage 34Line 50Fig/Table#Subclause 8.4.14.3.2

This clause, in 802.16-2009, indicates the maximum input signal which can be decoded by a BS. The text says: "8.4.14.3.2 BS receiver maximum input signal The BS receiver shall be capable of decoding a maximum on-channel signal of --45 dBm." At 10cm from the AMS the level for a 25dBm eirp transmission by the FBS will be 5dBm, much too high for the FBS operation.

Suggested Remedy

Amend clause 8.4.14.3.2 such that the AMS will able to work in the Femto BS proximity

GroupResolutionDecision of Group: Principle

*Insert the following new clause:*

16.3.15 Receiver requirements

The ABS and AMS receiver requirements are the same as those listed in 8.4.14

Reason for Group's Decision/ResolutionGroup's Notes

Clause 8.4: WirelessMAN OFDMA PHY

Editor's NotesEditor's Actions a) done

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by: Mariana Goldhamer

Membership Status: Member

Date: 7/9/2010

Comment # 157

Document under Review: P802.16m/D6

Ballot ID: sb\_16m

Comment      Type Technical      Part of Dis  Satisfied       Page 34      Line 50      Fig/Table#      Subclause 8.4.14.3

This clause, in 802.16-2009, indicates the maximum input signal which can be decoded by an MS. The text says: "8.4.14.3 Receiver maximum input signal; 8.4.14.3.1 SS receiver maximum input signal; The SS receiver shall be capable of decoding a maximum on-channel signal of --30 dBm." At 10cm from the FBS the level for a 25dBm eirp transmission by the FBS will be 5dBm, much too high for the MS operation.

Suggested Remedy

Amend clause 8.4.14.13 such that the AMS will able to work in the Femto BS proximity

GroupResolution

Decision of Group: Principle

*Insert the following new clause:*

16.3.15 Receiver requirements

The ABS and AMS receiver requirements are the same as those listed in 8.4.14

Reason for Group's Decision/Resolution

Group's Notes

Clause 8.4: WirelessMAN OFDMA PHY

Editor's Notes

Editor's Actions a) done

Comment by: Mariana Goldhamer

Membership Status: Member

Date: 7/9/2010

Comment # 152

Document under Review: P802.16m/D6

Ballot ID: sb\_16m

Comment      Type Technical      Part of Dis  Satisfied       Page 445      Line 43      Fig/Table#      Subclause 16.3.3.5.1

The text between lines 43-48 indicates a fixed partition in the TDD frame between the legacy frame start and the 16m frame start. However the traffic to/from the terminals, supporting legacy only, can vary in time and this fixed split, indicated in the fig. 483 and 484, is reducing the spectral efficiency of the combined system and is increasing the delay.

#### Suggested Remedy

In order to support this traffic change it is necessary to replace one or more of the AAI sub-frames by legacy traffic bursts. This replacement is supported by the legacy DL MAP and UL MAP, because the legacy bursts can be not-contiguous, however more guidance for the implementer is required.

#### GroupResolution

Decision of Group: Disagree

#### Reason for Group's Decision/Resolution

The balance of resources between the legacy frame and the 16m frame is not determined by the offset.

#### Group's Notes

Clause 16.3: AAI PHY

#### Editor's Notes

Editor's Actions    b) none needed

Comment by:

Mariana Goldhamer

Membership Status: MemberDate: 7/9/2010Comment # 154Document under Review: P802.16m/D6Ballot ID: sb\_16mCommentType GeneralPart of DisSatisfiedPage 447Line 31Fig/Table#Subclause

16.3.3.5.1

Figure 483 indicated both DL TDM and UL FDM operation, however the title refers only to UL FDM operation. Note that no figure refers only to the DL TDM operation.

Suggested Remedy

Replace the title of fig. 483 with: " TDD frame configuration to support WirelessMAN-OFDMA DL TDM and UL FDM operation".

GroupResolutionDecision of Group: DisagreeReason for Group's Decision/Resolution

Because there is no WirelessMAN-OFDMA DL FDM operation, there is no need to highlight that this is DL TDM. Moreover, the term "DL TDM" is not defined in the Standar.d

Group's Notes

Clause 16.3: AAI PHY

Editor's NotesEditor's Actions b) none needed

Comment by:

Mariana Goldhamer

Membership Status: MemberDate: 7/9/2010Comment # 153Document under Review: P802.16m/D6Ballot ID: sb\_16mComment      Type Technical      Part of Dis  Satisfied       Page 448      Line 40      Fig/Table#      Subclause 16.3.3.5.2

The text between lines 40-43 indicates a fixed partition in the FDD frame between the legacy frame start and the 16m frame start. However the traffic to/from the terminals supporting legacy only can vary in time, and this fixed split, indicated in the fig. 485 , is reducing the spectral efficiency of the combined system and is increasing the delay.

**Suggested Remedy**

In order to support this traffic change it is necessary to replace one or more of the DL AAI sub-frames by legacy traffic bursts. This replacement is supported by the legacy DL MAP, because the legacy bursts can be not-contiguous, however more guidance for the implementer is required.

**GroupResolution****Decision of Group: Disagree****Reason for Group's Decision/Resolution**

The balance of resources between the legacy frame and the 16m frame is not determined by the offset and frame start. The balance of the resources is determined by the frame configuration index.

**Group's Notes**

Clause 16.3: AAI PHY

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

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by:

Mariana Goldhamer

Membership Status: Member

Date: 7/9/2010

Comment # 155

Document under Review: P802.16m/D6

Ballot ID: sb\_16m

Comment

Type Technical

Part of Dis



Satisfied



Page 788

Line 13

Fig/Table#

Subclause 16.4

The Femto definition does not exclude the operation in LE bands; the SRD says: "Femtocell BS's typically operate in licensed spectrum". LE operation is not excluded. The limitation to the licensed bands is in contradiction with the SRD.

Suggested Remedy

Delete "Femto ABSs operate in licensed spectrum and"

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

There no support in the Standard for unlicensed operation in Femto cells.

Group's Notes

Clause 16.4: AAI Femto

Editor's Notes

Editor's Actions

b) none needed

Comment by:

Mariana Goldhamer

Membership Status: MemberDate: 7/9/2010Comment # 156Document under Review: P802.16m/D6Ballot ID: sb\_16mComment      Type Technical      Part of Dis  Satisfied       Page 790      Line 45      Fig/Table#      Subclause 16.4.6

The following text says: "A Femto ABS should be synchronized with the overlay ABS network, where the synchronization means the aligned frame boundary, and the aligned DL / UL split in TDD systems." This text has no much value, because what matters is the synchronization with the superframe start. Having in mind that 16m supports different deployment categories, the multiframe start for Femto and Macro deployment categories shall be separated in time domain. Failing to do this for Femto BS will jeopardize the fulfilling of the requirement from SRD "The link level performance of the air interface in terms of packet error rate shall not be significantly degraded when the MS is within 10cm-30m from the femto-cell BS, which is typical for femto cell usage.", because a MS associated with a macro-BS will be simply saturated and will not be able to receive the Macro BS preambles and control information.

Suggested Remedy

Specify in a consistent mode in the entire document that the multi-frame start for Femto BS and Macro BS SHALL be placed in not-overlapping frames

GroupResolutionDecision of Group: DisagreeReason for Group's Decision/Resolution

Although the femto and macro are aligned in the time domain, there exists sufficient link margin to decode the preamble and control channels. There is no need to stagger the preamble and control. In extreme cases, subclause 16.4.11 describes procedures where the MS may inform the femto BS of severe interference and thus may communicate directly with the macro bs.

Clause 16.4.11 states:

If an AMS is placed into outage by an inaccessible ABS (e.g. the CSG-closed Femto ABS of which it is not a member) and only if the AMS has no connection with neighbor macro ABS, it may indicate this problem to that Femto ABS by sending an AAI\_RNG-REQ with the "Femto Interference" bit set to 1 based on configured trigger conditions.

Group's Notes

Clause 16.4: AAI Femto

Editor's NotesEditor's Actions    b) none needed

Comment by:

Mariana Goldhamer

Membership Status: MemberDate: 7/9/2010Comment # 165Document under Review: P802.16m/D6Ballot ID: sb\_16mComment    Type Technical    Part of Dis  Satisfied     Page 801    Line 1    Fig/Table#    Subclause 16.5

Inter BS-MIMO is consuming a frequency resource in each of the collaborating BSs, requires exchange of data and channel parameters through the back-haul, involving increased back-haul capacity, delays, low mobility support

Suggested Remedy

Use a different OFDMA partition in each of the collaborating BSs for increasing the traffic to/from AMS. This will not have the Inter-BS MIMO mentioned disadvantages.

GroupResolutionDecision of Group: DisagreeReason for Group's Decision/Resolution

The performance of Single BS precoding with Multi-BS coordination has been evaluated under realistic backbone latency assumptions in C802.16m-09/0023 and C802.16m-09/1675.

Group's Notes

Clause 16.5: AAI Multi-BS MIMO

Editor's NotesEditor's Actions    b) none needed

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by: Mariana Goldhamer

Membership Status: Member

Date: 7/9/2010

Comment # 164

Document under Review: P802.16m/D6

Ballot ID: sb\_16m

Comment    Type Technical    Part of Dis  Satisfied     Page 801    Line 1    Fig/Table#    Subclause 16.5

The title of this clause is too specific

Suggested Remedy

Change to "Multi-BS cooperation"

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

The title is appropriate for this section. The section describes procedures and MIMO related functionality.

Group's Notes

Clause 16.5: AAI Multi-BS MIMO

Editor's Notes

Editor's Actions    b) none needed

2010/10/12

IEEE 802.16-10/0040r3

Comment by: Mariana Goldhamer

Membership Status: Member

Date: 7/9/2010

Comment # 163

Document under Review: P802.16m/D6

Ballot ID: sb\_16m

Comment    Type Technical    Part of Dis  Satisfied     Page 828    Line 38    Fig/Table#    Subclause 16.6.3.2.1

The FDD frame structure is sub-optimal, because the Relay access and the ABS access are separated in the time domain.

Suggested Remedy

Provide a solution to avoid the time separation

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

ARS and ABS Access zones are time aligned.

Group's Notes

Clause 16.6: AAI Support for Relay

Editor's Notes

Editor's Actions    b) none needed

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by:

Mariana Goldhamer

Membership Status: Member

Date: 7/9/2010

Comment # 161

Document under Review: P802.16m/D6

Ballot ID: sb\_16m

Comment      Type Editorial      Part of Dis  Satisfied       Page 828      Line 51      Fig/Table#

Subclause 16.6.3.2.1

Appears that the FDD frame structure shall be according to 16h, contained in clause 15 ?!

Suggested Remedy

Replace with 16.3.3

GroupResolution

Decision of Group: Agree

Replace with 16.3.3

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.6: AAI Support for Relay

Editor's Notes

Editor's Actions a) done

2010/10/12

IEEE 802.16-10/0040r3

Comment by:

Mariana Goldhamer

Membership Status: Member

Date: 7/9/2010

Comment # 160

Document under Review: P802.16m/D6

Ballot ID: sb\_16m

Comment      Type Technical      Part of Dis  Satisfied       Page 830      Line 38      Fig/Table#

Subclause 16.6.3.2.2

The TDD frame structure is sub-optimal, because the Relay access and the ABS access are separated in the time domain.

Suggested Remedy

Provide a solution to avoid the time separation

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

ARS and ABS Access zones are time aligned.

Group's Notes

Clause 16.6: AAI Support for Relay

Editor's Notes

Editor's Actions b) none needed

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by:

Mariana Goldhamer

Membership Status: Member

Date: 7/9/2010

Comment # 162

Document under Review: P802.16m/D6

Ballot ID: sb\_16m

Comment    Type General    Part of Dis  Satisfied     Page 999    Line    Fig/Table#    Subclause

Make sure that the basic standard includes 16h, to avoid numbering overlapping (clause 11 and 8.4, etc.)

Suggested Remedy

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

802.16h is already included in base standard according to IEEE bylaws. nothing for group to do.

Group's Notes

General Comment

Editor's Notes

Editor's Actions    b) none needed

Comment by:

Michael Gundlach

Membership Status: MemberDate: 7/9/2010Comment # 135Document under Review: P802.16m/D6Ballot ID: sb\_16mCommentType GeneralPart of DisSatisfiedPage 11Line 19Fig/Table#Subclause 5.2

There is no reason for the restrictions made here.

**Suggested Remedy**

Delete lines 19 - 23 ("ABS and AMS shall use IP CS for all packet-based protocols. GPCS shall not be supported by AMS or ABS.")

Alternatively, lines 19 - 23 may be replaced by:

"ABS and AMS may use IP CS for packet-based protocols."

**GroupResolution****Decision of Group: Principle**

use resolution from comment #8:

Remove statement in line 20

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

Clause 5-6: Service Specific CS, MAC Common Part Sublayer

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

Comment by:

Michael Gundlach

Membership Status: MemberDate: 9/8/2010Comment # B10205Document under Review: P802.16m/D8Ballot ID: sb\_16mComment    Type Technical    Part of Dis  Satisfied     Page 886    Line 17    Fig/Table#    Subclause 16,7,2

The word "Femto" in this clause makes no sense

Suggested Remedy

Replace twice the words "ABS/Femto" by "ABS". Hence the paragraph will read:

Self configuration is the process executed by ABS at initialization, as well as during normal operation, whereby the ABS sets and modifies certain configurable parameters.

GroupResolutionDecision of Group: Principle

Sec 16.7.2 Page 886, Line 17

Self configuration is the process executed by ABS<del>/Femto</del> at initialization, as well as during normal operation, whereby the ABS<del>/Femto</del> sets and modifies certain configurable parameters.

Reason for Group's Decision/ResolutionGroup's Notes

Clause 16.7; Other SON

Editor's NotesEditor's Actions

Comment by: Michael Gundlach

Membership Status:

Date: 10/22/2010

Comment # C004

Document under Review: P80216m/D9

Ballot ID: sb\_16m

Comment      Type Technical      Part of Dis  Satisfied       Page 890      Line 39      Fig/Table#      Subclause 16.4.5.2

The sentence must be a requirement ("shall" instead of "should")

Suggested Remedy

Replace by: "When the backhaul link of the Femto ABS is down or the connection with the service provider network is lost for a configurable pre-defined time, the Femto ABS shall consider itself de-attached from the network."

GroupResolution

Decision of Group: Principle

Section 16.4.5.2, Page 890, Line 39

When the backhaul link of the Femto ABS is down or the connection with the service provider network is lost for a configurable pre-defined time, the Femto ABS <ins>shall</ins><del>should</del> consider itself de-attached from the network.

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.4; Other Femto

Editor's Notes

Editor's Actions

Comment by: Michael Gundlach

Membership Status:

Date: 10/22/2010

Comment # C005

Document under Review: P80216m/D9

Ballot ID: sb\_16m

Comment    Type Technical    Part of Dis  Satisfied     Page 890    Line 48    Fig/Table#    Subclause 16.4.6

The sentence "A Femto ABS should be synchronized with the overlay ABS network at least in all cases where (...)" is already weakened by "At least in all cases where (...)". "should" needs to be replaced by "shall".

Suggested Remedy

Replace by: "A Femto ABS shall be synchronized with the overlay ABS network at least in all cases where (...)"

GroupResolution

Decision of Group: Principle

Section 16.4.6, Page 890, Line 48

A Femto ABS <ins>shall</ins><del>should</del> be synchronized with the overlay ABS network at least in all cases where

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.4; Other Femto

Editor's Notes

Editor's Actions

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by: Michael Gundlach

Membership Status: Member

Date: 9/8/2010

Comment # B10214

Document under Review: P802.16m/D8

Ballot ID: sb\_16m

Comment    Type Technical    Part of Dis  Satisfied     Page 895    Line 49    Fig/Table#    Subclause 16,8,3,4

A decision needs to be made if an ABS shall or may trigger ...

Suggested Remedy

Delete the word "shall" in the first sentence of the paragraph.

GroupResolution

Decision of Group: Principle

Resolved by Comment #B10213:

Adopt the proposed AWD text changes in contribution C802.16m-10\_1108r1

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.8; Other LBS

Editor's Notes

Editor's Actions

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by: Michael Gundlach

Membership Status:

Date: 10/22/2010

Comment # C012

Document under Review: P80216m/D9

Ballot ID: sb\_16m

Comment      Type Technical      Part of Dis  Satisfied       Page 897      Line 12      Fig/Table#      Subclause 16.4.9

The sentence must be a requirement ("shall" instead of "should")

Suggested Remedy

Replace by "A CSG-Closed Femto ABS shall not broadcast paging for a non-member AMS."

GroupResolution

Decision of Group: Principle

Section 16.4.9, Page 897, Line 12

A CSG-Closed Femto ABS <ins>shall</ins><del>should</del> not broadcast paging for a non-member AMS.

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.4; Other Femto

Editor's Notes

Editor's Actions

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by: Michael Gundlach

Membership Status:

Date: 10/22/2010

Comment # C013

Document under Review: P80216m/D9

Ballot ID: sb\_16m

Comment    Type Technical    Part of Dis  Satisfied     Page 911    Line 60    Fig/Table#    Subclause 16.6.2.4

description needs to be replaced by requirement

Suggested Remedy

replace "uses" by "shall use"

GroupResolution

Decision of Group: Agree

replace "uses" by "shall use"

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.6; Other Relay

Editor's Notes

Editor's Actions

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by: Michael Gundlach

Membership Status:

Date: 10/22/2010

Comment # C014

Document under Review: P80216m/D9

Ballot ID: sb\_16m

Comment    Type Technical    Part of Dis  Satisfied     Page 911    Line 64    Fig/Table#

Subclause 16.6.2.4

An ARS is operating as distributed security mode.

Suggested Remedy

replace by "An ARS shall operate in distributed security mode."

GroupResolution

Decision of Group: Agree

Replace

"An ARS is operating as distributed security mode."

with

"An ARS shall operate in distributed security mode."

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.6; Other Relay

Editor's Notes

Editor's Actions

Comment by: Michael Gundlach

Membership Status:

Date: 10/22/2010

Comment # C015

Document under Review: P80216m/D9

Ballot ID: sb\_16m

Comment      Type Technical      Part of Dis  Satisfied       Page 925      Line 26      Fig/Table#      Subclause 16.6.2.12

The section title is "sleep mode", the text is on "idle mode".

Suggested Remedy

replace "idle mode operation" by "sleep mode operation"

GroupResolution

Decision of Group: Principle

Update the text and correct the references to other sections as follows:

16.6.2.12 Sleep Mode

When an AMS is attached to an ARS for <del>idle</del> <ins>sleep</ins>mode operation, procedures defined in section <del>16.2.16</del><ins>16.2.17</ins> where each instances of ABS is replaced by ARS.

16.6.2.13 Idle Mode

When an AMS is attached to an ARS for idle mode operation, procedures defined in section <del>16.2.17</del> <ins>16.2.18</ins>where each instances of ABS is replaced by ARS.

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.6; Other Relay

Editor's Notes

Editor's Actions

Comment by: Michael Gundlach

Membership Status:

Date: 10/22/2010

Comment # C017

Document under Review: P80216m/D9

Ballot ID: sb\_16m

Comment    Type Technical    Part of Dis  Satisfied     Page 932    Line 64    Fig/Table#    Subclause 16.6.3.2.3

The sentence "ABS or ARS informs sets of the frame configurations and indexing for AMS in S-SFH SP1 IE in Table 802, Table 803 and Table 804." is not understandable.

Suggested Remedy

modify

GroupResolution

Decision of Group: Principle

*[Modify the text in line 64 on the page 932 as below:]*

ABS or ARS informs sets of the frame configurations and indexing for AMS in S-SFH SP1 IE in ~~Table 802, Table 803 and Table 804~~ Table 799, Table 800 and Table 801.

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.6; Other Relay

Editor's Notes

Editor's Actions

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by: Zion Hadad

Membership Status: Member

Date: 7/9/2010

Comment # 032

Document under Review: P802.16m/D6

Ballot ID: sb\_16m

Comment    Type General    Part of Dis  Satisfied     Page 999    Line    Fig/Table#    Subclause

in general, backward compatibility or coexistence with 802.16e is not defined efficiently, and the MAC overhead is too high.

Suggested Remedy

Coexistence and backward compatibility with 802.16e should be defined in an optimize way with efficient MAC overhead.

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

No remedy available for the group to consider.

Group's Notes

General Comment

Editor's Notes

Editor's Actions    b) none needed

2010/10/12

IEEE 802.16-10/0040r3

Comment by: Junghoon Jee

Membership Status:

Date: 7-Sep-2010

Comment # B008

Document under Review: P802.16m/D8

Ballot ID: sb\_16m

Comment    Type Technical    Part of Dis  Satisfied     Page 172    Line 49    Fig/Table#    Subclause 16.2.3.30

802.21 renamed the "ES/CS MIH Capability Discovery" as "Service Management".

Suggested Remedy

Change "ES/CS MIH Capability Discovery" to "Service Management".

GroupResolution

Decision of Group: Agree

Change "ES/CS MIH Capability Discovery" to "Service Management".

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.2.3; MAC Control Messages; L2 Transfer message

Editor's Notes

Editor's Actions

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by: Junghoon Jee

Membership Status:

Date: 7-Sep-2010

Comment # **B009**

Document under Review: **P802.16m/D8**

Ballot ID: **sb\_16m**

Comment    Type Technical    Part of Dis  Satisfied     Page 173    Line 22    Fig/Table#    Subclause 16.2.3.30

802.21 renamed the "ES/CS MIH Capability Discovery" as "Service Management".

Suggested Remedy

Change "ES/CS MIH Capability Discovery" to "Service Management".

GroupResolution

Decision of Group: Agree

Change "ES/CS MIH Capability Discovery" to "Service Management".

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.2.3; MAC Control Messages; L2 Transfer message

Editor's Notes

Editor's Actions

2010/10/12

IEEE 802.16-10/0040r3

Comment by: Junghoon Jee

Membership Status:

Date: 10/20/2010

Comment # **C003**

Document under Review: **P80216m/D9**

Ballot ID: **sb\_16m**

Comment    Type Technical    Part of Dis  Satisfied     Page 183    Line 27    Fig/Table#    Subclause 16.2.3.30

AAI-L2-XFER does not need to directly encapsulate other RAT information because the MIH frame with the subtype, '7' already contains that information.

Suggested Remedy

Apply the changes by referring the attached file, "L2\_XFER\_16m.docx".

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

Reason: ORAT MSG, which is a bearer to carry other RAT's message, may be used in WiMAX NWG, instead of MIH frame.

Group's Notes

Clause 16.2.3; MAC Control Messages; L2-Transfer

Editor's Notes

Editor's Actions

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by: Junghoon Jee

Membership Status:

Date: 10/18/2010

Comment # C002

Document under Review: P80216m/D9

Ballot ID: sb\_16m

Comment Type Technical Part of Dis  Satisfied  Page 183 Line 27 Fig/Table# Subclause 16.2.3.30

AAI-L2-XFER does not need to directly encapsulate other RAT information because the MIH frame with the subtype, '7' already contains that information.

Suggested Remedy

Apply the changes by referring the attached file, "L2\_XFER\_16m".

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

Reason: ORAT MSG, which is a bearer to carry other RAT's message, may be used in WiMAX NWG, instead of MIH frame.

Group's Notes

Clause 16.2.3; MAC Control Messages; L2-Transfer

Editor's Notes

Editor's Actions

2010/10/12

IEEE 802.16-10/0040r3

Comment by: Junghoon Jee

Membership Status:

Date: 6-Sep-2010

Comment # B004

Document under Review: P802.16m/D8

Ballot ID: sb\_16m

Comment Type Editorial Part of Dis  Satisfied  Page 326 Line 37 Fig/Table# Subclause 16.2.6.5.2.1.1

Do not need capital letter for 'Payload'.

Suggested Remedy

s/Payload/payload

GroupResolution

Decision of Group: Agree

Replace "Payload" with "payload"

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.2.6; MAC HO procedures

Editor's Notes

Editor's Actions

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by: Junghoon Jee

Membership Status:

Date: 6-Sep-2010

Comment # B005

Document under Review: P802.16m/D8

Ballot ID: sb\_16m

Comment Type Editorial Part of Dis  Satisfied  Page 326 Line 43 Fig/Table# Subclause 16.2.6.5.2.1.1

Do not need a capital letter for 'Information'.

Suggested Remedy

s/RAN Information/RAN information

GroupResolution

Decision of Group: Agree

Replace "RAN Information" with "RAN information"

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.2.6; MAC HO procedures

Editor's Notes

Editor's Actions

2010/10/12

IEEE 802.16-10/0040r3

Comment by: Junghoon Jee

Membership Status:

Date: 6-Sep-2010

Comment # B007

Document under Review: P802.16m/D8

Ballot ID: sb\_16m

Comment Type Technical Part of Dis  Satisfied  Page 326 Line 47 Fig/Table# Subclause 16.2.6.5.2.1.1

'BSID' is not a general term to describe the identifiers of heterogeneous L2 entities over 802.16m, 802.11, 3GPP, etc.

Suggested Remedy

s/BSID/PoA(Point of Attachment) identifier

GroupResolution

Decision of Group: Principle

replace "BSID" with "PoA (Point of Attachment) identifier"

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.2.6; MAC HO procedures

Editor's Notes

Editor's Actions

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by: Junghoon Jee

Membership Status:

Date: 6-Sep-2010

Comment # B006

Document under Review: P802.16m/D8

Ballot ID: sb\_16m

Comment      Type Editorial      Part of Dis  Satisfied       Page 326      Line 47      Fig/Table#

Subclause 16.2.6.5.2.1.1

Do not need a capital letter for 'Information'.

Suggested Remedy

s/RAP Information/RAP information

GroupResolution

Decision of Group: Agree

Replace "RAP Information" with "RAP information"

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.2.6; MAC HO procedures

Editor's Notes

Editor's Actions

Comment by: Junghoon Jee

Membership Status:

Date: 7-Sep-2010

Comment # B011

Document under Review: P802.16m/D8

Ballot ID: sb\_16m

Comment      Type Technical      Part of Dis  Satisfied       Page 327      Line 24      Fig/Table#      Subclause 16.2652122

The other RAT discovery using scanning procedure is optional not mandatory because it's possible to discover other RAT information using AAI-L2-XFER or AAI-SII-ADV messages.

Suggested Remedy

s/shall/may

So the amended sentence would be the following.

"AMS may initiate other RAT discovery using scanning procedure. The AMS may negotiate scanning procedure before scanning commencement."

GroupResolution

Decision of Group: Agree

"AMS ~~shall~~ may initiate other RAT discovery using scanning procedure. The AMS ~~shal~~may negotiate scanning procedure before scanning commencement."

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.2.6; MAC HO procedures

Editor's Notes

Editor's Actions

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by: Junghoon Jee

Membership Status:

Date: 7-Sep-2010

Comment # B013

Document under Review: P802.16m/D8

Ballot ID: sb\_16m

Comment    Type Editorial    Part of Dis  Satisfied     Page 327    Line 37    Fig/Table#    Subclause 16.2652123

Error in the naming, AAI-L2-XFER

Suggested Remedy

s/"AAI-L2-xfer"/"AAI-L2-XFER"

GroupResolution

Decision of Group: Agree

Replace "AAI-L2-xfer" with "AAI-L2-XFER"

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.2.6; MAC HO procedures

Editor's Notes

Editor's Actions

2010/10/12

IEEE 802.16-10/0040r3

Comment by: Junghoon Jee

Membership Status:

Date: 7-Sep-2010

Comment # B014

Document under Review: P802.16m/D8

Ballot ID: sb\_16m

Comment    Type Technical    Part of Dis  Satisfied     Page 328    Line 46    Fig/Table#    Subclause 16.2652123

Do not need to separate the steps 3 and 6 in terms of delivering the Inter-RAT information from Information Repository to AMS.

Suggested Remedy

Merge steps 3 and 6 and amend the texts accordingly.

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

lack of proposed text

Group's Notes

Clause 16.2.6; MAC HO procedures

Editor's Notes

Editor's Actions

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by: Junghoon Jee

Membership Status:

Date: 8-Sep-2010

Comment # **B091**

Document under Review: **P802.16m/D8**

Ballot ID: **sb\_16m**

Comment    Type Technical    Part of Dis  Satisfied     Page 328    Line 55    Fig/Table#    Subclause 16.2652123

AMS having multiple radios is capable of transmitting in the serving access using the serving radio and conducting measurement on another potential target access using the other radio. Thus, the necessity of scan interval is not clear.

Suggested Remedy

Delete the step 8) if the right rationale regarding the necessity of scan interval for multi-radio MS is not provided

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

Step 8 addresses the case of single radio. Moreover, as per the definition of multi radio AMS, it could also work as a single radio AMS.

Group's Notes

Clause 16.2.6; MAC HO procedures

Editor's Notes

Editor's Actions

2010/10/12

IEEE 802.16-10/0040r3

Comment by: Junghoon Jee

Membership Status:

Date: 7-Sep-2010

Comment # **B020**

Document under Review: **P802.16m/D8**

Ballot ID: **sb\_16m**

Comment    Type Technical    Part of Dis  Satisfied     Page 328    Line 56    Fig/Table#    Subclause 16.2652123

The description about the usage and relationship with AAI-SCN-REQ, AAI-SCN-RSP and AAI-SCN-REP are missing.

Suggested Remedy

Provide the detailed description about the relationship with 802.16m scanning messages.

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

no proposed text for the group to consider

Group's Notes

Clause 16.2.6; MAC HO procedures

Editor's Notes

Editor's Actions

Comment by: Junghoon Jee

Membership Status:

Date: 7-Sep-2010

Comment # **B015**

Document under Review: **P802.16m/D8**

Ballot ID: **sb\_16m**

Comment    Type Technical    Part of Dis  Satisfied     Page 328    Line 56    Fig/Table#    Subclause 16.2652123

The term of "single radio" is not clear.

Suggested Remedy

Change "single radio case" to "When AMS performs single-radio operation" and add the definition of "single-radio operation" by referring the IEEE Std 802.21-2008.

FYI. The single-radio operation definition from the IEEE Std 802.21-2008 is the following.

"In this mode, a dual radio device can receive and transmit on only one radio at a time. This is usually the mode of operation when radio frequencies of the two radios are close to each other (e.g., in IMT 2000 bands). Since only one radio can be active at a time in these types of devices, the source radio uses the back-end connection of the source network with the target network to prepare the target network for handover while maintaining the client side connections. Once the target preparation is complete the device switches from source radio to target radio. Since all the target preparation has been completed a priori, the target radio quickly establishes connectivity with the target network and all the connections are then transferred from source network to target network."

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

incomplete remedy

Group's Notes

Clause 16.2.6; MAC HO procedures

Editor's Notes

Editor's Actions

Comment by: Junghoon Jee

Membership Status:

Date: 7-Sep-2010

Comment # **B018**

Document under Review: **P802.16m/D8**

Ballot ID: **sb\_16m**

Comment    Type Technical    Part of Dis  Satisfied     Page 328    Line 59    Fig/Table#    Subclause 16.2652123

This sentence assumes that other radios were turned off previously with regard to single-radio operation. It's not necessary true because multiple radio can receive simultaneously even in the case of single-radio operation. The main feature of the single-radio operation is that only one radio can transmit at a given time not turing down the other radios.

Suggested Remedy

Replace "turns on the other radios" in a more appropriate wordings or delete that part in the sentence.

GroupResolution

Decision of Group: Principle

Modify text in page 328 line 59 as following:

The device <del>turns on the other radios and </del>configures measurement reporting for target RATs.

[editor] also in Figure 414, box 9 should read "Configure measurement reporting for target RATs"

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.2.6; MAC HO procedures

Editor's Notes

Editor's Actions

Comment by: Junghoon Jee

Membership Status:

Date: 7-Sep-2010

Comment # **B018**

Document under Review: **P802.16m/D8**

Ballot ID: **sb\_16m**

Comment    Type Technical    Part of Dis  Satisfied     Page 328    Line 59    Fig/Table#    Subclause 16.2652123

This sentence assumes that other radios were turned off previously with regard to single-radio operation. It's not necessary true because multiple radio can receive simultaneously even in the case of single-radio operation. The main feature of the single-radio operation is that only one radio can transmit at a given time not turing down the other radios.

Suggested Remedy

Replace "turns on the other radios" in a more appropriate wordings or delete that part in the sentence.

GroupResolution

Decision of Group: Principle

Modify text in page 328 line 59 as following:

The device <del>turns on the other radios and </del>configures measurement reporting for target RATs.

[editor] also in Figure 414, box 9 should read "Configure measurement reporting for target RATs"

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.2.6; MAC HO procedures

Editor's Notes

Editor's Actions

Comment by: Junghoon Jee

Membership Status:

Date: 7-Sep-2010

Comment # **B017**

Document under Review: **P802.16m/D8**

Ballot ID: **sb\_16m**

Comment    Type Technical    Part of Dis  Satisfied     Page 328    Line 60    Fig/Table#    Subclause 16.2652123

This step, 10) assumes that AAI BS is the decision entity for Inter-RAT HO based on the phrase of "AAI ABS for evaluation".

Suggested Remedy

Change the step 10) like the following.

10) The AMS conducts measurements and report the results.

GroupResolution

Decision of Group: Agree

10) The ~~device~~AMS conducts measurements and ~~these~~ reports ~~are sent by the AMS to the AAI ABS for evaluation~~the results to the ABS.

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.2.6; MAC HO procedures

Editor's Notes

Editor's Actions

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by: Junghoon Jee

Membership Status:

Date: 7-Sep-2010

Comment # **B019**

Document under Review: **P802.16m/D8**

Ballot ID: **sb\_16m**

Comment    Type Technical    Part of Dis  Satisfied     Page 328    Line 63    Fig/Table#    Subclause 16.2652123

This step 11) does not correspond with the step 11 of Figure 414. Also, The description of step 12) is quite similar with the step 11)

Suggested Remedy

Delete step 11) in the line 63 of Page 328.

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

Vote: 0, 3, 0

original text is correct

Group's Notes

Clause 16.2.6; MAC HO procedures

Editor's Notes

Editor's Actions

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by: Junghoon Jee

Membership Status:

Date: 8-Sep-2010

Comment # B085

Document under Review: P802.16m/D8

Ballot ID: sb\_16m

Comment      Type Technical      Part of Dis  Satisfied       Page 329      Line 25      Fig/Table#      Subclause 16.2.6.5.2.2.2

The necessity of measurement gaps is optional according to the explanation from third paragraph of 16.2.6.5.2.2.2. Therefore, this needs to be clearly stated as optional feature.

**Suggested Remedy**

s/"are needed"/"may be needed".

Therefore, the amended texts would be the following.

"For single radio AMSs, measurement gaps may be needed to allow..."

**GroupResolution**

**Decision of Group: Agree**

s/"are needed"/"may be needed".

Therefore, the amended texts would be the following.

"For single radio AMSs, measurement gaps may be needed to allow..."

**Reason for Group's Decision/Resolution**

**Group's Notes**

Clause 16.2.6; MAC HO procedures

**Editor's Notes**

**Editor's Actions**

Comment by: Junghoon Jee

Membership Status:

Date: 8-Sep-2010

Comment # **B088**

Document under Review: **P802.16m/D8**

Ballot ID: **sb\_16m**

Comment    Type Technical    Part of Dis  Satisfied     Page 329    Line 36    Fig/Table#    Subclause 16.2.6.5.2.2.2

In general, a multi-radio mobile station is capable of simultaneous reception on the Multi-RAT frequency bands thus not requiring DL gap patterns. Moreover, even when the mobile station performs the Single-Radio operation the mobile is still capable of simultaneous transmission in one access and conducting measurement on another access thus not requiring the UL gap patterns. Therefore, the necessity of UL and DL gap patterns are not clear.

Suggested Remedy

Delete the third paragraph of 16.2.6.5.2.2.2 if the right rationale regarding the necessity of UL and DL is not provided.

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

Vote: 0, 2, 0,  
proposed change will break certain coexistence scenarios

Group's Notes

Clause 16.2.6; MAC HO procedures

Editor's Notes

Editor's Actions

Comment by: Junghoon Jee

Membership Status:

Date: 7-Sep-2010

Comment # B021

Document under Review: P802.16m/D8

Ballot ID: sb\_16m

Comment    Type Technical    Part of Dis  Satisfied     Page 329    Line 36    Fig/Table#    Subclause 16.2.6.5.2.2.2

The word of 'system's is unclear and needs to clarify which facility is used to inform the gab-related capabilities.

Suggested Remedy

1. s/system/ABS
2. Add the description how the AMS informs the ABS of the gab-related information. (e.g, through specific MAC control messages or something like that...)

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

proposed remedy is incomplete

Group's Notes

Clause 16.2.6; MAC HO procedures

Editor's Notes

Editor's Actions

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by: Junghoon Jee

Membership Status:

Date: 7-Sep-2010

Comment # B022

Document under Review: P802.16m/D8

Ballot ID: sb\_16m

Comment    Type Technical    Part of Dis  Satisfied     Page 330    Line 27    Fig/Table#

Subclause 16.2.6.5.2.3.2

The sentence, "Only one RAT is active at any time during handover" is not clear.

Suggested Remedy

s/RAT/"radio interface"

GroupResolution

Decision of Group: Principle

s/RAT/"radio access technology"

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.2.6; MAC HO procedures

Editor's Notes

Editor's Actions

2010/10/12

IEEE 802.16-10/0040r3

Comment by: Junghoon Jee

Membership Status:

Date: 7-Sep-2010

Comment # B023

Document under Review: P802.16m/D8

Ballot ID: sb\_16m

Comment    Type Editorial    Part of Dis  Satisfied     Page 330    Line 32    Fig/Table#

Subclause 16.2.6.5.2.3.2

Error in the naming, 'AAI-L2-XFER'

Suggested Remedy

s/AAI-L2-Xfer/AAI-L2-XFER

GroupResolution

Decision of Group: Agree

Replace "AAI-L2-Xfer" with "AAI-L2-XFER"

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.2.6; MAC HO procedures

Editor's Notes

Editor's Actions

Comment by: Junghoon Jee

Membership Status:

Date: 7-Sep-2010

Comment # **B024**

Document under Review: **P802.16m/D8**

Ballot ID: **sb\_16m**

Comment    Type Technical    Part of Dis  Satisfied     Page 330    Line 53    Fig/Table#    Subclause 16.2652321

SABS, an L2 PoA is not entity to be directly involved for Inter-RAT HO signaling.

Suggested Remedy

Change the description like the following.

Once a decision is made to perform Inter-RAT handover, AMS performs handover toward the decided target access network. After completing the handover toward target access network, AMS may turn off the previous serving radio.

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

Vote: 0, 2, 0

ABS shall control any HO, to some extent. The text suggest MS can do whatever it wants at whatever time.

Group's Notes

Clause 16.2.6; MAC HO procedures

Editor's Notes

Editor's Actions

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by: Junghoon Jee

Membership Status:

Date: 10/25/2010

Comment # C096

Document under Review: P80216m/D9

Ballot ID: sb\_16m

Comment      Type Technical      Part of Dis  Satisfied       Page 365      Line 56      Fig/Table#      Subclause 16.2652123

The description about the usage and relationship with AAI-SCN-REQ, AAI-SCN-RSP and AAI-SCN-REP are missing.

Suggested Remedy

Please add the detailed description about the relationship with 802.16m scanning messages.

GroupResolution

Decision of Group: Principle

Modify texts in page 365 line 56 as following :

8) In the single radio case, the AMS negotiates with the AAI ABS about scan intervals <ins> by exchanging AAI-SCN-REQ and AAI-SCN-RSP </ins> so that it can evaluate the link connections at target RATs.

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.2.6; MAC HO procedures

Editor's Notes

Editor's Actions

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by: Junghoon Jee

Membership Status:

Date: 10/25/2010

Comment # C097

Document under Review: P80216m/D9

Ballot ID: sb\_16m

Comment Type Technical Part of Dis  Satisfied  Page 365 Line 61 Fig/Table# Subclause 16.2652123

ABS does not need to gather other RAT measurement information directly.

Suggested Remedy

Change the step 10) like to following. "The AMS conducts measurements and reports the results to the AAI Access."

GroupResolution

Decision of Group: Agree

10)The AMS conducts measurements and reports the results to the <del>ABS</del><ins>AAI Access</ins>.

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.2.6; MAC HO procedures

Editor's Notes

Editor's Actions

2010/10/12

IEEE 802.16-10/0040r3

Comment by: Junghoon Jee

Membership Status:

Date: 10/25/2010

Comment # C095

Document under Review: P80216m/D9

Ballot ID: sb\_16m

Comment Type Technical Part of Dis  Satisfied  Page 366 Line 36 Fig/Table# Subclause 16.2.6.5.2.2.2

The notification of the gab related information is only required for single receiver MS.

Suggested Remedy

Change the first sentence like the following. "In order to assist the AAI ABS, the AMS may inform the system of its gap-related capabilities."

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

Base station may allocate scan interval in unsolicited manner. Thus the capability must be negotiated (cannot be optional).

Group's Notes

Clause 16.2.6; MAC HO procedures

Editor's Notes

Editor's Actions

Comment by: Junghoon Jee

Membership Status:

Date: 10/25/2010

Comment # **C094**

Document under Review: **P80216m/D9**

Ballot ID: **sb\_16m**

Comment    Type Technical    Part of Dis  Satisfied     Page 367    Line 53    Fig/Table#    Subclause 16.2652321

It's redundant to exchange signaling between AMS and ABS after the handover decision is already made on AMS.

Suggested Remedy

Change the texts like the following. "Once a decision is made to perform Inter-RAT handover, AMS performs handover toward the decided target access network. After completing the handover toward target access network, AMS may turn off the previous serving radio."

GroupResolution

Decision of Group: **Principle**

Once an AMS decides to perform other RAT handover, the AMS requests other RAT handover from the ~~S-ABS~~servicing access network. Upon receiving handover response from the ABS, the AMS switches its radio over to the target RAT and turns off the serving radio.

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.2.6; MAC HO procedures

Editor's Notes

Editor's Actions

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by: Junghoon Jee

Membership Status:

Date: 10/25/2010

Comment # **C084**

Document under Review: **P80216m/D9**

Ballot ID: **sb\_16m**

Comment    Type Technical    Part of Dis  Satisfied     Page ?    Line 13    Fig/Table#    Subclause R.2

AAI-L2-XFER does not need to directly encapsulate other RAT information because the MIH frame with the subtype, '7' already contains that information.

Apply the changes by referring the contribution, "C80216m-10\_1339".

Suggested Remedy

Apply the changes by referring the contribution, "C80216m-10\_1339".

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

Vote:

In favor: 3

Opposed: 7

Abstain: 0

Reason: ORAT MSG, which is a bearer to carry other RAT's message, may be used in WiMAX NWG, instead of MIH frame.

Group's Notes

Clause Annex R.2; Other Annex; ASN.1

Editor's Notes

Editor's Actions

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by:

Brian Kiernan

Membership Status:

Date: 1-Sep-2010

Comment # **B002**

Document under Review: **P802.16m/D8**

Ballot ID: **sb\_16m**

Comment

Type General

Part of Dis  Satisfied

Page 883

Line 60

Fig/Table#

Subclause 16.12

I disagree with the resolution of Comment #A315. While I agree that the references in the contribution were incorrect, nonetheless the contribution should have been incorporated into the draft as a placeholder which could have been updated during the recirc process. It is crucial that PICS information be included in the Standard.

Suggested Remedy

Adopt any subsequent updates to IEEE C802.16m-10/0409

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

no specific remedy provided

Group's Notes

Clause 16.12; General NEW

Editor's Notes

Editor's Actions

Comment by: Jonathan LabsMembership Status:Date:Comment # **A290**Document under Review: **P802.16m/D7**Ballot ID: **sb\_16m**

<u>Comment</u>	<u>Type</u>	<u>Technical</u>	<u>Part of Dis</u>	<input checked="" type="checkbox"/> <u>Satisfied</u>	<input type="checkbox"/>	<u>Page</u>	<u>Line</u>	<u>Fig/Table#</u>	<u>Subclause</u>
[Re: Maintenance Change Request 0042 in IEEE 802.16maint-09/0007r9] [Re: IEEE L802.16-10/0070r1, Annex B] There are already WiMAX deployments and mobiles having no support for NDnS. So any implementation must have this "backward compatibility" provisions. The standard does not contain a capability exchange for NDnS or guidance for this issue.									6.3.2.3.23

**Suggested Remedy**

[Insert the following change language text on page 19 of P802.16m/D7 after line 60:]:

[Modify the paragraph in section 6.3.2.3.23 on page 131 in 802.16-2009 as indicated]

6.3.2.3.23 SBC-REQ (SS basic capability request) message

An SS shall generate SBC-REQ messages including the following parameter:

Basic CID (in the MAC header)

The connection identifier in the MAC header is the Basic CID for this SS, as assigned in the RNG-RSP message.

All other parameters are coded as TLV tuples.

The Basic Capabilities Request contains the SS Capabilities Encodings (11.8) that are necessary to acquire NSP information and for effective communication with the SS during the remainder of the initialization protocols. NSP information is solicited in the SBC-REQ message when the SBC-REQ includes the SIQ TLV (11.8.9) with bit bit 0 set to 1.

<ins>The SS shall include the SIQ TLV in the Basic Capability Request if the SS received the NSP Change Count TLV as part of the DCD and</ins> <del>The following parameter shall be included in the Basic Capability Request</del> if the SS <del>is intended</del> <ins>intends</ins> to solicit NSP information:

Service Information Query (see 11.8.9)

The following parameter shall be included in the Basic Capabilities..

**GroupResolution****Decision of Group: Agree**

[Insert the following change language text on page 19 of P802.16m/D7 after line 60:]:

[Modify the paragraph in section 6.3.2.3.23 on page 131 in 802.16-2009 as indicated]

6.3.2.3.23 SBC-REQ (SS basic capability request) message

An SS shall generate SBC-REQ messages including the following parameter:

Basic CID (in the MAC header)

The connection identifier in the MAC header is the Basic CID for this SS, as assigned in the RNG-RSP message.

All other parameters are coded as TLV tuples.

The Basic Capabilities Request contains the SS Capabilities Encodings (11.8) that are necessary to acquire NSP information and for effective communication with the SS during the remainder of the initialization protocols. NSP information is solicited in the SBC-REQ message when the SBC-REQ includes the SIQ TLV (11.8.9) with bit bit 0 set to 1.

~~The SS shall include the SIQ TLV in the Basic Capability Request if the SS received the NSP Change Count TLV as part of the DCD and~~ ~~The following parameter shall be included in the Basic Capability Request~~ if the SS ~~is intended~~ intends to solicit NSP information:

Service Information Query (see 11.8.9)

The following parameter shall be included in the Basic Capabilities..

**Reason for Group's Decision/Resolution**

**Group's Notes**

Clause 6, MAINTENANCE: MAC common part sublayer

**Editor's Notes**

**Editor's Actions** a) done

**2010/10/12**

**IEEE 802.16-10/0040r3**

**Comment by:** Jonathan Labs

**Membership Status:**

**Date:**

**Comment #** A288

**Document under Review:** P802.16m/D7

**Ballot ID:** sb\_16m

**Comment**      **Type** Technical      **Part of Dis**  **Satisfied**       **Page** 14      **Line** 4      **Fig/Table#**      **Subclause** 5.2.3.2

[Re: Maintenance Change Request 0029 in IEEE 802.16maint-09/0007r9]

[Re: IEEE L802.16-10/0034, Annex D]

See problem statement in IEEE C802.16m-10/1065 on PHSI in an MS-initiated DSA REQ/DSC-REQ message

**Suggested Remedy**

Adopt contribution CIEEE 802.16m-10/1065

**GroupResolution**

**Decision of Group:** Agree

Adopt contribution CIEEE 802.16m-10/1065

**Reason for Group's Decision/Resolution**

**Group's Notes**

Clause 5, MAC: Service Specific CS

**Editor's Notes**

**Editor's Actions** a) done

Comment by: Jonathan Labs

Membership Status:

Date:

Comment # **A292**

Document under Review: **P802.16m/D7**

Ballot ID: **sb\_16m**

Comment    Type Technical    Part of Dis  Satisfied     Page 17    Line 49    Fig/Table#    Subclause 6.3.2.3

[Re: Maintenance Change Request 0044 in IEEE 802.16maint-09/0007r9]

[Re: IEEE L802.16-10/0070r1, Annex D]

In IEEE 802.16-2009, HARQ which brings benefits to extend downlink/uplink coverage can be applied for management messages as well as data. For coverage extension, HARQ is required for RNG-REQ, SBC-REQ and BRH messages.

However, HARQ can be used to transmit the management message only after exchanging the SBC-REQ/RSP messages because HARQ parameters are negotiated through the SBC-REQ/RSP messages.

Moreover, if the MS wants to receive uplink resources using existing HARQ UL-MAP IEs, it requires basic CID. But, during network (re)entry, the MS does not have any CID.

Even further, BS cannot distinguish between HARQ-applied burst and HARQ-non-applied bursts unless it allocates uplink resources using different MAP IE (i.e., using normal UL-MAP IE or HARQ UL-MAP IE).

**Suggested Remedy**

Adopt contribution IEEE C802.16m-10/1067

**GroupResolution**

**Decision of Group: Principle**

Adopt contribution IEEE C802.16m-10/1081

**Reason for Group's Decision/Resolution**

**Group's Notes**

Clause 6, MAINTENANCE: MAC common part sublayer

**Editor's Notes**

**Editor's Actions**    a) done

Comment by: Jonathan LabsMembership Status:Date:Comment # **A287**Document under Review: **P802.16m/D7**Ballot ID: **sb\_16m**

<u>Comment</u>	<u>Type</u> Technical	<u>Part of Dis</u> <input checked="" type="checkbox"/>	<u>Satisfied</u> <input type="checkbox"/>	<u>Page</u> 19	<u>Line</u> 14	<u>Fig/Table#</u>	<u>Subclause</u> 6.3.2.3.40
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[Re: Maintenance Change Request 0028 in IEEE 802.16maint-09/0007r9]

[Re: IEEE L802.16-10/0034, Annex C]

New PSC during Sleep mode may lead to IO problems.

Possible interoperability Issue:

The BS shall not send a MOB\_SLP-RSP message with a different PSC ID than the MS requested in MOB\_SLP-REQ message with Definition=1.

MOB\_SLP-REQ and --RSP can also contain more than one PSC. If the MS for example asks for a PSC with Id 1 and 2 and the BS response contains Id 3 and 4 then it might not be clear for the MS how to match with the PSC parameters.

**Suggested Remedy**

[Insert the following text on page 19 of P802.16m/D7 at line 14:]:

Power\_Saving\_Class\_ID

Assigned power saving class identifier. The ID shall be unique within the group of power saving classes ~~associated with~~ defined ~~the MS~~ by the MOB\_SLP-REQ/MOB\_SLP-RSP transaction. The MS and BS shall use the same Power Saving Class ID during the MOB\_SLP-REQ/MOB\_SLP-RSP transaction~~ins~~. This ID may be used in further MOB\_SLP-REQ/RSP messages for activation/deactivation of power saving class.

**GroupResolution****Decision of Group: Agree**

[Insert the following text on page 19 of P802.16m/D7 at line 14:]:

Power\_Saving\_Class\_ID

Assigned power saving class identifier. The ID shall be unique within the group of power saving classes ~~associated with~~ defined ~~the MS~~ by the MOB\_SLP-REQ/MOB\_SLP-RSP transaction. The MS and BS shall use the same Power Saving Class ID during the MOB\_SLP-REQ/MOB\_SLP-RSP transaction~~ins~~. This ID may be used in further MOB\_SLP-REQ/RSP messages for activation/deactivation of power saving class.

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

Clause 6, MAINTENANCE: MAC common part sublayer

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

Comment by: Jonathan Labs

Membership Status:

Date:

Comment # **A285**

Document under Review: **P802.16m/D7**

Ballot ID: **sb\_16m**

Comment    Type Technical    Part of Dis  Satisfied     Page 19    Line 60    Fig/Table#    Subclause 6.3.2.3.23

[Re: Maintenance Change Request 0026 in IEEE 802.16maint-09/0007r9]

[Re: IEEE L802.16-10/0034, Annex A]

802.16-2009 requires that the BS shall include Physical Parameters Supported in the SBC-RSP if found in the SBC-REQ. However, Physical Parameters Supported includes a number of TLVs and the standard is not clear on whether SBC-RSP shall include each TLV found in SBC-REQ. This introduces ambiguity on interpretation when TLV 204 OFDMA Parameters Sets is included in SBC-REQ. In addition, 802.16-2009 requires that the MS shall include Physical Parameters Supported if the MS is not intended to solicit NSP information. Since Physical Parameters Supported includes both TLV 204 which defines sets of parameters and a number of individual TLVs, the standard is not clear on when TLV 204 shall be included and when individual TLVs shall be included. These different interpretations of the standard lead to potential IOT problem. For example, the network entry procedure may fail as the MS may reject SBC-RSP if it does not include TLV 204. Since TLV 204 is designed in a way that the parameter sets cover most of the implementation cases, it is desired to include TLV 204 in SBC-REQ/RSP when possible instead of each individual TLV in order to reduce overhead.

Suggested Remedy

Adopt contribution IEEE C802.16m-10/1064

GroupResolution

Decision of Group: Agree

Adopt contribution IEEE C802.16m-10/1064

Reason for Group's Decision/Resolution

Group's Notes

Clause 6, MAINTENANCE: MAC common part sublayer

Editor's Notes

Editor's Actions a) done

Comment by: Jonathan LabsMembership Status:Date:Comment # **A289**Document under Review: **P802.16m/D7**Ballot ID: **sb\_16m**

<u>Comment</u>	<u>Type</u> Technical	<u>Part of Dis</u> <input checked="" type="checkbox"/>	<u>Satisfied</u> <input type="checkbox"/>	<u>Page</u> 22	<u>Line</u> 34	<u>Fig/Table#</u>	<u>Subclause</u> 6.3.2.3.47
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[Re: Maintenance Change Request 0041 in IEEE 802.16maint-09/0007r9]

[Re: IEEE L802.16-10/0070r1, Annex A]

Currently the IEEE802.16 standard draft does not limit the BS to send MOB-BSHO\_REQ message to the MS for initiating handover to a new candidate target BS without any scanning report.

If the BS sends MOB-BSHO\_REQ to the MS without any scan reports, this can cause possible performance degradation on the MS side, since the new target BS that has been selected by the previous serving BS without scan report can have worse channel conditions than the serving BS.

**Suggested Remedy**

[Insert the following change language text on page 22 of P802.16m/D7 after line 34:]

[Modify the paragraph in section 6.3.2.3.47 on page 221 in 802.16-2009 as indicated]

6.3.2.3.47 MOB\_BSHO-REQ (BS HO request) message

The BS may transmit a MOB\_BSHO-REQ message when it wants to initiate an HO. ~~An MS receiving this message may scan recommended neighbor BSs in this message.~~ When the BS indicates one or more possible target BSs in the recommended neighbor BS list of the MOB\_BSHO-REQ message, the BS should not include a neighbor BS if the BS did not receive at least one MOB\_SCN-REP message that includes the up-to-date scanning results of the neighbor BS. The determination of up-to-date is left to vendors' implementation and is out of scope of this standard. The message shall be transmitted on the Basic CID. See Table 150.

**Group Resolution****Decision of Group: Principle**

[Insert the following change language text on page 22 of P802.16m/D7 after line 34:]

[Modify the paragraph in section 6.3.2.3.47 on page 221 in 802.16-2009 as indicated]

6.3.2.3.47 MOB\_BSHO-REQ (BS HO request) message

The BS may transmit a MOB\_BSHO-REQ message when it wants to initiate an HO. ~~An MS receiving this message may scan recommended neighbor BSs in this message.~~ If the BS indicates one or more possible target BSs in the recommended neighbor BS list of the MOB\_BSHO-REQ message, the BS should not include a neighbor BS if the BS did not receive at least one MOB\_SCN-REP message that includes the up-to-date scanning results of the neighbor BS. The determination of up-to-date is left to vendors' implementation and is out of scope of this standard. The message shall be transmitted on the Basic CID. See Table 150.

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

Clause 6, MAINTENANCE: MAC common part sublayer

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

Comment by: Jonathan Labs

Membership Status:

Date:

Comment # **A291**

Document under Review: **P802.16m/D7**

Ballot ID: **sb\_16m**

Comment    Type Technical    Part of Dis  Satisfied     Page 37    Line 21    Fig/Table#    Subclause 11.3.1

[Re: Maintenance Change Request 0043 in IEEE 802.16maint-09/0007r9]

[Re: IEEE L802.16-10/0070r1, Annex C]

The purpose of this CR is to provide needed clarifications into the current release of the IEEE 802.16 standard with respect to sounding region TLV which is sent via UCD. Currently the definition of the region via TLV is missing information in compare to the definition via the map IE. The misalignment should be fixed by adding the missing information to the TLV in the UCD

Suggested Remedy

Adopt contribution IEEE C802.16m-10/1066

GroupResolution

Decision of Group: Agree

Adopt contribution IEEE C802.16m-10/1066

Reason for Group's Decision/Resolution

Group's Notes

Clause 11, MAINTENANCE: TLV encodings

Editor's Notes

Editor's Actions    a) done

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by: Jonathan Labs

Membership Status:

Date:

Comment # **A293**

Document under Review: **P802.16m/D7**

Ballot ID: **sb\_16m**

Comment    Type Technical    Part of Dis  Satisfied     Page 38    Line 1    Fig/Table#    Subclause 11.7.8.11

[Re: IEEE L802.16-10/0070r1, Annex E]

In case a BS use Preamble Index Override or Ranging Abort Timer in RNG-RSP message, the BS need to be sure the MS supports the feature. If the MS does not support the parameters, it will simply discard the parameters.

Suggested Remedy

Adopt contribution IEEE C802.16m-10/1068r1

GroupResolution

Decision of Group: Agree

Adopt contribution IEEE C802.16m-10/1068r1

Reason for Group's Decision/Resolution

Group's Notes

Clause 11, MAINTENANCE: TLV encodings

Editor's Notes

Editor's Actions a) done

Comment by: Jonathan LabsMembership Status:Date: 10/25/2010Comment # C056Document under Review: P80216m/D9Ballot ID: sb\_16m

<u>Comment</u>	<u>Type</u> Technical	<u>Part of Dis</u> <input checked="" type="checkbox"/>	<u>Satisfied</u> <input type="checkbox"/>	<u>Page</u> 44	<u>Line</u> 51	<u>Fig/Table#</u>	<u>Subclause</u> 8.4.5.6.1
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[Re: CR 0048, IEEE 802.16main-09/0007r10/ L802.16-10/0088r1, Annex C]

The standard lists the Sector ID as part of the compressed map. The intention behind is that the MS can easily identify that the decoded compressed map belongs to the current BS respective sector.

Unfortunately the std is not demanding the Sector ID to be unique within a coverage area.

**Suggested Remedy**

Insert the following change language on page 44, line 51:

[Change 8.4.5.6.1, "Compressed DL-MAP" on page 906 as indicated:]

...

Operator ID

This field holds the 8 LSBs of the 24 MSBs of the 48-bit Base Station ID parameter.

Sector ID

This field holds the 8 LSBs of the 48-bit Base Station ID parameter. <insert>Assignment of unique values for Sector ID for all BSs that are within interference coverage areas of each other ensures that the sectors are unambiguously identifiable by the MS.</insert>

**GroupResolution****Decision of Group: Agree**

Insert the following change language on page 44, line 51:

[Change 8.4.5.6.1, "Compressed DL-MAP" on page 906 as indicated:]

...

Operator ID

This field holds the 8 LSBs of the 24 MSBs of the 48-bit Base Station ID parameter.

Sector ID

This field holds the 8 LSBs of the 48-bit Base Station ID parameter. <insert>Assignment of unique values for Sector ID for all BSs that are within interference coverage areas of each other ensures that the sectors are unambiguously identifiable by the MS.</insert>

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

Clause 8; MAINTENANCE

**Editor's Notes****Editor's Actions**

Comment by: Jonathan LabsMembership Status:Date: 10/25/2010Comment # **C055**Document under Review: **P80216m/D9**Ballot ID: **sb\_16m**Comment    Type Technical    Part of Dis  Satisfied     Page 49    Line 31    Fig/Table#    Subclause 11.3.1

[Re: CR 0047, IEEE 802.16main-09/0007r10/ L802.16-10/0088r1, Annex B]

Currently, an MS that performs HO from a SBS with a sounding region defined via UCD (TLV 213) to a TBS with no sounding region at all, has no way to be informed that the TBS doesn't have sounding region defined in the UL sub-frame. In that case, according to the standard, the MS assumes that the above TLV exists also at the TBS, resulting MS possibly transmitting at wrong allocations.

**Suggested Remedy**

Modify the following change language in section 11.3.1 on page 49, line 31:

[Modify the contents of Table 571 as indicated:]

Table 571--UCS PHY-specific channel encodings-WirelessmanOFDMA

---

Name	Type (1 byte)	Length	Value
Sounding region	213	5/10	For 5 bytes per each sounding region
	Bits #0:	reserved	
	Bits #1-2:	PAPR Reduction/Safety zone	
	Bits #3-9:	num subchannels <insert>with subsequent indexes that are used for the PAPR reduction/safety zone. For Sounding Zone allocations this field defines the shift value (u) used for decimation offset and cycle shift index.</insert>	
	Bits #10-16:	num OFDMA symbols <insert>(A value of zero means no sounding region is defined)</insert>	
	Bits #17-23:	subchannel offset	
	Bits #24-31:	OFDMA symbol offset Bit #32~34, Parameter d that defines periodicity of 2 <sup>d</sup> frames	
	Bit #35~39,	Allocation phase expressed in frames, 0 <= Allocation Phase < periodicity (=2 <sup>d</sup> )	

**GroupResolution****Decision of Group: Agree**

Modify the following change language in section 11.3.1 on page 49, line 31:

[Modify the contents of Table 571 as indicated:]

Table 571--UCS PHY-specific channel encodings-WirelessmanOFDMA

---

Name	Type (1 byte)	Length	Value
Sounding region	213	5/10	For 5 bytes per each sounding region
	Bits #0:	reserved	
	Bits #1-2:	PAPR Reduction/Safety zone	
	Bits #3-9:	num subchannels <insert>with subsequent indexes that are used for the PAPR reduction/safety zone. For Sounding Zone allocations this field defines the shift value (u) used for decimation offset and cycle shift index.</insert>	

||| Bits #10-16: num OFDMA symbols <insert>(A value of zero means no sounding region is defined)</insert>  
||| Bits #17-23: subchannel offset  
||| Bits #24-31: OFDMA symbol offset Bit #32~34, Parameter d that defines periodicity of  $2^d$  frames  
||| Bit #35~39, Allocation phase expressed in frames,  $0 \leq \text{Allocation Phase} < \text{periodicity} (=2^d)$

IEEE 802.16-10/0059

**Reason for Group's Decision/Resolution**

**Group's Notes**

Clause 11; MAINTENANCE

**Editor's Notes**

**Editor's Actions**

Comment by: Jonathan LabsMembership Status:Date: 10/25/2010Comment # **C054**Document under Review: **P80216m/D9**Ballot ID: **sb\_16m**

<u>Comment</u>	<u>Type</u> Technical	<u>Part of Dis</u> <input checked="" type="checkbox"/>	<u>Satisfied</u> <input type="checkbox"/>	<u>Page</u> 52	<u>Line</u> 28	<u>Fig/Table#</u>	<u>Subclause</u> 11.8.3.5.10
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[Re: CR 0046, IEEE 802.16main-09/0007r10/ L802.16-10/0088r1, Annex A]

If there is no capability negotiation for persistent scheduling then this feature can not be deployed in the NW because it would cause interoperability problems for legacy MS that are not able to decode the Persistent HARQ UL and DL MAP IE.

Suggested Remedy

Insert the following change language on page 52, line 28:

[Change 11.8.3.5.10 "OFDMA MAP capability" on page 1233 as indicated:]

Bit 0: HARQ MAP Capability

Bit 1: Extended HARQ IE capability

Bit 2: Sub MAP capability for first zone

Bit 3: Sub MAP capability for other zones

Bit 4: DL region definition support

&lt;insert&gt;Bit 5: Persistent scheduling in UL

Bit 6: Persistent scheduling in DL&lt;/insert&gt;

Bit&lt;delete&gt;s 5-&lt;/delete&gt;7: Reserved

GroupResolutionDecision of Group: Agree

Insert the following change language on page 52, line 28:

[Change 11.8.3.5.10 "OFDMA MAP capability" on page 1233 as indicated:]

Bit 0: HARQ MAP Capability

Bit 1: Extended HARQ IE capability

Bit 2: Sub MAP capability for first zone

Bit 3: Sub MAP capability for other zones

Bit 4: DL region definition support

&lt;insert&gt;Bit 5: Persistent scheduling in UL

Bit 6: Persistent scheduling in DL&lt;/insert&gt;

Bit&lt;delete&gt;s 5-&lt;/delete&gt;7: Reserved

Reason for Group's Decision/ResolutionGroup's Notes

Editor's NotesEditor's Actions**2010/10/12****IEEE 802.16-10/0040r3**Comment by:

Maximilian Riegel

Membership Status: MemberDate: 7/9/2010Comment # **009**Document under Review: **P802.16m/D6**Ballot ID: **sb\_16m**Comment    Type **Technical**    Part of Dis  Satisfied     Page **11**    Line **15**    Fig/Table#    Subclause **5.2**

The reference to 11.13.18.3 does not provide a senseful list of protocols. It only provides a list of protocol elements and the encoding of the protocol elements.

Suggested Remedy

I would propose to remove the sentence, as it does not really contribute to the specification. The statement is obvious and therefore superfluous.

GroupResolutionDecision of Group: **Principle**

edit P11 L17:

The packet CS is used for transport for all packet-based protocols <del>as defined in 11.13.18.3</del>.

Reason for Group's Decision/ResolutionGroup's Notes

Clause 5-6: Service Specific CS, MAC Common Part Sublayer

Editor's NotesEditor's Actions    a) done

Comment by: Maximilian Riegel

Membership Status:

Date:

Comment # **A003**

Document under Review: **P802.16m/D7**

Ballot ID: **sb\_16m**

Comment    Type General    Part of Dis  Satisfied     Page 11    Line 18    Fig/Table#    Subclause 5.2

The statement 'The packet CS is used for transport for all packet-based protocols.' does not add any meaning to the specification as there is no other method than the packet CS anyhow.

Suggested Remedy

Delete statement, i.e. remove P11, line 18.

GroupResolution

Decision of Group: **Disagree**

Reason for Group's Decision/Resolution

sentence is needed to clarify that packet based protocols does not include ATM

Group's Notes

Clause 5, MAC: Service Specific CS

Editor's Notes

Editor's Actions    b) none needed

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by: Maximilian Riegel

Membership Status: Member

Date: 7/9/2010

Comment # 008

Document under Review: P802.16m/D6

Ballot ID: sb\_16m

Comment    Type Technical    Part of Dis  Satisfied     Page 11    Line 20    Fig/Table#    Subclause 5.2

Erroneous statement: "ABS and AMS shall use IP CS for all packet-based protocols."  
How should IP CS carry Ethernet, MPLS or PPP; all of them are packet based protocols

Suggested Remedy

Remove statement in line 20

GroupResolution

Decision of Group: Agree

Remove statement in line 20

Reason for Group's Decision/Resolution

Group's Notes

Clause 5-6: Service Specific CS, MAC Common Part Sublayer

Editor's Notes

Editor's Actions    a) done

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by: Maximilian Riegel

Membership Status: Member

Date: 7/9/2010

Comment # 006

Document under Review: P802.16m/D6

Ballot ID: sb\_16m

Comment    Type Technical    Part of Dis  Satisfied     Page 11    Line 22    Fig/Table#    Subclause 5.2

"GPCS shall not be supported by AMS or ABS.": Excluding GPCS for ABS/AMS breaks backward compatibility. There is no need to exclude support of GPCS for a particular PHY/MAC.

Suggested Remedy

Remove sentence.

GroupResolution

Decision of Group: Agree

Remove sentence.

Reason for Group's Decision/Resolution

Group's Notes

Clause 5-6: Service Specific CS, MAC Common Part Sublayer

Editor's Notes

Editor's Actions    a) done

Comment by: Maximilian Riegel

Membership Status:

Date:

Comment # **A004**

Document under Review: **P802.16m/D7**

Ballot ID: **sb\_16m**

Comment    Type General    Part of Dis  Satisfied     Page 14    Line 29    Fig/Table#    Subclause 5.2.5.2

Which parameters are referenced by the statement 'For AMS and ABS, the parameters may be used in IP classification rules.'

Suggested Remedy

Change paragraph to: "IP classification rules operate on the fields of the IP header and the transport protocol. The For SS/AMS and BS/ABS, the parameters (11.13.18.3.3.2 through 11.13.18.3.3.7 and 11.13.18.3.3.16) may be used in IP classification rules."

GroupResolution

Decision of Group: **Principle**

Resolved by comment #160.

Resolution:

P 14 L29:

For AMS and ABS, the <ins>Packet Classification Rule</ins> parameters <ins>(Table 740)</ins>may be used in IP classification <del>rules</del>.

Reason for Group's Decision/Resolution

Group's Notes

Clause 5, MAC: Service Specific CS

Editor's Notes

Editor's Actions    b) none needed

Comment by: Maximilian Riegel

Membership Status:

Date:

Comment # **A005**

Document under Review: **P802.16m/D7**

Ballot ID: **sb\_16m**

Comment      Type **Technical**      Part of Dis  Satisfied       Page **14**      Line **34**      Fig/Table#      Subclause **5.2.6**

Section 5.2.6 is incomplete and contradicts established networking design principles; proposed solution is not aligned to the rest of section 5.2 and misses essential specification text, if the intention is to define a further specific part of the packet CS. In particular, nothing is stated, how classification is applied in combination with multiprotocol flow, or how systems should react, when not all protocols are supported.

Suggested Remedy

Remove whole section 5.2.6

Remove page 11, line 30 -50

GroupResolution

Decision of Group: **Disagree**

Reason for Group's Decision/Resolution

removal of this section leaves not method for handling CS muxing

Group's Notes

Clause 5, MAC: Service Specific CS

Editor's Notes

Editor's Actions    b) none needed

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by: Maximilian Riegel

Membership Status: Member

Date: 7/9/2010

Comment # 007

Document under Review: P802.16m/D6

Ballot ID: sb\_16m

Comment      Type Technical      Part of Dis  Satisfied       Page 14      Line 38      Fig/Table#      Subclause 5.2.6

Section 5.2.6 is incomplete and redundant; proposed ??? (CS?, mode?) is not aligned to the rest of section 5.2 and misses essential specification text, if the intention is to define a further specific part of the packet CS. In particular, nothing is stated, how classification is applied in combination with multiprotocol flow.

Suggested Remedy

Remove section 5.2.6

Remove page 11, line 37 -53

GroupResolution

Decision of Group: Disagree

Vote: 4-5-0

Reason for Group's Decision/Resolution

General agreement that the functionality is missing, group prefers to keep the existing, incomplete text, and provide the missing functions.

Group's Notes

Clause 5-6: Service Specific CS, MAC Common Part Sublayer

Editor's Notes

Editor's Actions    b) none needed

Comment by: Maximilian Riegel

Membership Status:

Date: 10/25/2010

Comment # C058

Document under Review: P80216m/D9

Ballot ID: sb\_16m

Comment    Type Technical    Part of Dis  Satisfied     Page 17    Line 25    Fig/Table#    Subclause 5.2.6

Section 5.2.6 is redundant and contradicts established networking design principles by introducing dynamic layer violation in a service flow - no networking protocol stack is able to handle such dynamics. As IP CS as well as ETH CS are specified for AMS/ABS, there is no benefit at all by such a CS. Furthermore, classification of dynamic protocol switching is not defined in the specification.

Suggested Remedy

Remove whole section 5.2.6

Remove page 12 line 20-50 defining the packet format for section 5.2.6

GroupResolution

Decision of Group: Disagree

Vote: 4-3-1

Reason for Group's Decision/Resolution

Multiprotocol CS enables efficient usage of FIDs. There is limited set of FIDS, these must be conserved.

Group's Notes

Clause 5; MAC CS

Editor's Notes

Editor's Actions

Comment by: Maximilian Riegel

Membership Status:

Date: 10/25/2010

Comment # **C057**

Document under Review: **P80216m/D9**

Ballot ID: **sb\_16m**

Comment    Type Technical    Part of Dis  Satisfied     Page 17    Line 25    Fig/Table#    Subclause 5.2.6

Section 5.2.6 is redundant and contradicts established networking design principles by introducing dynamic layer violation in a service flow - no networking protocol stack is able to handle such dynamics. As IP CS as well as ETH CS are specified for AMS/ABS, there is no benefit at all by such a CS. Furthermore, classification of dynamic protocol switching is not defined in the specification.

Suggested Remedy

Remove whole section 5.2.6

Remove page 12 line 20-50 defining the packet format for section 5.2.6

GroupResolution

Decision of Group: Disagree

Vote: 4-3-1

Reason for Group's Decision/Resolution

Multiprotocol CS enables efficient usage of FIDs. There is limited set of FIDS, these must be conserved.

Group's Notes

Clause 5; MAC CS

Editor's Notes

Editor's Actions

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by: Peretz Shekalim

Membership Status: Member

Date: 7/9/2010

Comment # 031

Document under Review: P802.16m/D6

Ballot ID: sb\_16m

Comment    Type General    Part of Dis  Satisfied     Page 999    Line    Fig/Table#    Subclause

Lack of smooth and efficient backward compatibility or interoperating with 802.16 2009 standard.

Suggested Remedy

Coexistence and backward compatibility with 802.16e should be provided with efficient MAC overhead.

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

No remedy available for the group to consider.

Group's Notes

General Comment

Editor's Notes

Editor's Actions    b) none needed

2010/10/12

IEEE 802.16-10/0040r3

Comment by: Lei Wang

Membership Status: Member

Date: 7/9/2010

Comment # 600

Document under Review: P802.16m/D6

Ballot ID: sb\_16m

Comment    Type Technical    Part of Dis  Satisfied     Page 14    Line 33    Fig/Table#    Subclause 5.2.5.2

what parameters do "the parameters" mean in the sentence in line 33 on page 14?

Suggested Remedy

either clarify "the parameters" or delete the sentence.

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

The parameters should be specified but no text available to consider.

Group's Notes

Clause 5-6: Service Specific CS, MAC Common Part Sublayer

Editor's Notes

Editor's Actions    b) none needed

Comment by:

Lei Wang

Membership Status:Date:Comment # **A059**Document under Review: **P802.16m/D7**Ballot ID: **sb\_16m**Comment    Type Technical    Part of Dis  Satisfied     Page 66    Line 24    Fig/Table#    Subclause 16.2.3

For the MAC control messages, the current table format does not properly specify the all the needed information, e.g., the information about location of the information fields regarding the loops and if-condition statements is not shown in the current 16m MAC message specification table format.

Take an example, in Table 753 on page 217, in line 37, there is a comment that suggests the location of the "DL/UL indicator" field should be inside the for-loop. However, the same field in the new 16m table format, i.e., in Table 754, has no information about its location.

In order to properly specify the 16m MAC control messages, we strongly recommend using the 16e-style pseudo c-code to specify the MAC control messages, before converting them to ASN.1 code in the Annex section.

Suggested Remedy

Properly specify all the MAC control messages in 16e-like pseudo-C code style tables.

GroupResolutionDecision of Group: DisagreeReason for Group's Decision/Resolution

this comment has no remedy

Group's Notes

Clause 16.2.3, MAC: MAC Control messages

Editor's NotesEditor's Actions    b) none needed

Comment by:

Lei Wang

Membership Status:Date: 8-Sep-2010Comment # **B166**Document under Review: **P802.16m/D8**Ballot ID: **sb\_16m**CommentType

Technical

Part of DisSatisfiedPage 77Line 43Fig/Table#Subclause

16.2.3

This is a follow-up comment to comment A059 in 802.16-10/0045r2.

For the MAC control messages, the current table format does not properly specify the all the needed information, e.g., the information about location of the information fields regarding the loops and if-condition statements is not shown in the current 16m MAC message specification table format.

In order to properly specify the 16m MAC control messages, people participated in the the MAC message format discussion during session #68.5 agreed to use a new table format as shown in contribution C80216m-10\_1060r3 or its latest version, where the 16e-style pseudo c-code to specify the MAC control messages, before converting them to ASN.1 code in the Annex section.

**Suggested Remedy**

Properly specify all the MAC control messages in the Table format as shown by the examples given in contribution C80216m-10\_1060r3 or its latest version.

**GroupResolution****Decision of Group: Disagree****Reason for Group's Decision/Resolution**

no specific remedy is available

**Group's Notes**

Clause 16.2.3; MAC Control Messages

**Editor's Notes****Editor's Actions**

Comment by:

Lei Wang

Membership Status: MemberDate: 7/9/2010Comment # 582Document under Review: P802.16m/D6Ballot ID: sb\_16mCommentType TechnicalPart of DisSatisfiedPage 215Line 31Fig/Table#Subclause

16.2.3.52

The "DL/UL indicator" should be per carrier attribute, not per carrier group in the AAI\_MC-REQ message.

Suggested Remedy

move the row of "DL/UL indicator" to inside the "j" loop in Table 755.

GroupResolutionDecision of Group: Principle

Resolved by comment #339.

Resolution:

Adopt the proposed text modification in C802.16m-10/0867r1

Reason for Group's Decision/ResolutionGroup's Notes

16.2.3 MAC Control messages

Editor's NotesEditor's Actions b) none needed

Comment by:

Lei Wang

Membership Status:Date:Comment # **A049**Document under Review: **P802.16m/D7**Ballot ID: **sb\_16m**Comment    Type Technical    Part of Dis  Satisfied     Page 217    Line 37    Fig/Table#    Subclause 16.2.3.52

The "DL/UL indicator" should be per carrier attribute, not per carrier group in the AAI\_MC-REQ message. In addition, the above comment triggers a very critical issue to the 16m MAC control message specification, i.e., the current table format does not properly specify the location of the information fields regarding the loops and if-condition statements. If there were not Table 753 with the 16e-style pseudo c-code, we won't be able to identify the question of where the "DL/UL indicator" field should be. In order to properly specify the 16m MAC control messages, we strongly recommend using the 16e-style pseudo c-code to specify the MAC control messages, before converting them to ASN.1 code.

Suggested Remedy

move the row of "DL/UL indicator" to inside the "j" loop in Table 753.

GroupResolutionDecision of Group: **Disagree**Reason for Group's Decision/Resolution

DL/UL indicator is related to the capability that the combinations of carriers AMS can transmit and receive simultaneously. Though DL reception of multiple carriers doesn't require specific capability than RF bandwidth, UL transmission requires more tight capability on spectral mask shape. Thus, even for TDD AMS, DL and UL capability can be different. The field is defined for specific multicarrier combination.

Group's Notes

Clause 16.2.3, MAC: MAC Control messages; MAC MC (multicarrier)

Editor's NotesEditor's Actions    b) none needed

Comment by:

Lei Wang

Membership Status: MemberDate: 7/9/2010Comment # 580Document under Review: P802.16m/D6Ballot ID: sb\_16mComment    Type Technical    Part of Dis  Satisfied     Page 220    Line 20    Fig/Table#    Subclause 16.2.3.56

Why does the AAI\_MC-ADV have to be periodically broadcasted?

As shown in Section 16.2.8, the AAI\_MC-ADV is needed at the MC operation initialization which is after the AMS enters the "operational" status. Therefore, it would be much efficiently for the ABS to unicast the AAI\_MC-ADV message to the AMS who needs it either in a unsolicited way or upon requested from the AMS. Having said this, the ABS can broadcast it, not shall.

Note that periodic broadcasting is very expensive, particularly, with a potentially huge message with all the system configuration info, e.g., AAI\_SCD, SFH SPs, etc. for each of the carriers.

#### Suggested Remedy

Make the following changes:

1. on page 220, change the paragraph in line 20 as follows:

The MC ABS shall periodically broadcast AAI\_MC-ADV message is transmitted by the ABS to for the reception by all AMSs in an unicast manner and/or broadcast manner.

2. on page 307, change the paragraph in line 57 as follows:

The ABS will broadcast the SFH on each carrier with the format defined in 16.3.6.2.1. The ABS shall also provide the AMS with basic radio configuration for all available carriers in the ABS through the AAI\_MC-ADV message. This message is periodically broadcast by the ABS, which includes the multicarrier mode and the configurations supported by the ABS. It can be broadcasted by the ABS for the reception by all the AMSs and it can also be unicast by the ABS for the reception by a specific AMS with or without receiving a request from the AMS. The multicarrier configuration information is relevant to and shall be used by all AMSs in any of multicarrier modes or in single carrier mode.

#### GroupResolution

Decision of Group: Disagree

#### Reason for Group's Decision/Resolution

Unicasting the AAI\_MC-ADV message leads to more signaling overhead because it shall be transmisted to every AMSs whenever system information is upadted.

#### Group's Notes

16.2.3 MAC Control messages (Multicarrier)

#### Editor's Notes

Editor's Actions    b) none needed

Comment by:

Lei Wang

Membership Status:Date:Comment # **A048**Document under Review: **P802.16m/D7**Ballot ID: **sb\_16m**

<u>Comment</u>	<u>Type</u> Technical	<u>Part of Dis</u> <input checked="" type="checkbox"/>	<u>Satisfied</u> <input type="checkbox"/>	<u>Page</u> 222	<u>Line</u> 20	<u>Fig/Table#</u>	<u>Subclause</u> 16.2.3.56
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Why does the AAI\_MC-ADV have to be periodically broadcasted?

As shown in Section 16.2.8, the AAI\_MC-ADV is needed at the MC operation initialization which is after the AMS enters the "operational" status. Therefore, it would be much efficiently for the ABS to unicast the AAI\_MC-ADV message to the AMS who needs it either in a unsolicited way or upon requested from the AMS. Having said this, the ABS can broadcast it, not shall.

Note that periodic broadcasting is very expensive, particularly, with a potentially huge message with all the system configuration info, e.g., AAI\_SCD, SFH SPs, etc. for each of the carriers.

Suggested Remedy

Make the following changes:

1. on page 222, change the paragraph in line 20 as follows:

The ABS which supports multiple RF carriers shall ~~periodically broadcast~~ transmit AAI\_MC-ADV message ~~for the reception by all AMSs~~ to AMSs in an unicast manner and/or broadcast manner.

2. on page 309, change the paragraph in line 64 as follows:

The ABS will broadcast the SFH on each carrier with the format defined in 16.3.6.2.1. The ABS shall also provide the AMS with basic radio configuration for all available carriers in the ABS through the AAI\_MC-ADV message. This message ~~is periodically broadcast~~ by the ABS, which ~~includes the multicarrier mode and the configurations supported by the ABS.~~ It can be broadcasted by the ABS for the reception by all the AMSs and it can also be unicast by the ABS for the reception by a specific AMS with or without receiving a request from the AMS. ~~The multicarrier configuration information is relevant to and shall be used by all AMSs in any of multicarrier modes or in single carrier mode.~~

GroupResolutionDecision of Group: DisagreeReason for Group's Decision/Resolution

The information in an AAI\_MC-ADV message is necessary for any AMS in a system. The usage of AAI\_MC-ADV are same as that of an AAI\_NBR-ADV which is transmitted in a broadcast manner.

Group's Notes

Clause 16.2.3, MAC: MAC Control messages; MAC MC (multicarrier)

Editor's NotesEditor's Actions b) none needed

Comment by:

Lei Wang

Membership Status:Date: 10/25/2010Comment # C067Document under Review: P80216m/D9Ballot ID: sb\_16mComment      Type Technical      Part of Dis  Satisfied       Page 278      Line 27      Fig/Table#      Subclause 16.2.3.59

Not satisfied with the resolution to the comment #B172 in commentary database 80216-10\_0047r3. The trigger conditions for sending unsolicited AAI-E-MBS-RSP need to be specified, but it is not a "stopper" of allowing such a usage. In addition, the trigger conditions for the AAI-E-MAB-REQ are not specified in the current 16m spec.

The following is a follow-up comment to the comment #B172:

Based on 16m/D9, the AAI-E-MBS-RSP can only be sent as a response to a received AAI-E-MBS-REQ, which means only AMS can initiate carrier switching operation. Why cannot the ABS initiate it? Actually, do we think that the ABS may need more control on this carrier switching operation considering the scheduler is inside ABS.

#### Suggested Remedy

make the following changes:

1. page 278, line 27, change the paragraph as follows:

The AAI-E-MBS-RSP message shall be transmitted by the ABS ~~either~~ in response to an AAI-EMBS-REP message sent by the AMS or in an unsolicited manner.

2. page 278, line 51, insert the following row in Table 753:

Field Size Value/Notes Conditions  
(bits)

Report Mode 2 Indicates the AMS starts/changes/ends E-MBS

0b00: AMS requests ABS to assign a carrier switching start time

0b01: AMS updates E-MBS connection Bitmap

0b10:AMS ends E-MBS carrier switching

0b11: reserved

#### GroupResolution

Decision of Group: Disagree

#### Reason for Group's Decision/Resolution

Vote:

In favor: 0

Opposed: 6

Reason: The E-MBS response message is sent by the ABS in response to the E-MBS report message. It is not clear how the E-MBS response would be triggered without an E-MBS report.

**Group's Notes**

Clause 16.2.3; MAC Control Messages; E-MBS-RSP

IEEE 802.16-10/0059

**Editor's Notes**

**Editor's Actions**

Comment by:

Lei Wang

Membership Status: MemberDate: 7/9/2010Comment # 542Document under Review: P802.16m/D6Ballot ID: sb\_16mComment      Type Technical      Part of Dis  Satisfied       Page 301      Line 64      Fig/Table#      Subclause 16.2.7

The sentence in line 64 on page 301 raises a very basic issue for 16m UL PA allocations, i.e., a 16m PA allocation is per-connection, or per flow. We all understand that the PA is designed for the connections with periodic traffic patterns with relatively fixed payload sizes. The traffic patterns are application specific, i.e., service flow specific. Therefore, there are good reasons for the UL PA allocations for some specific service flows.

However, there is critical problem with UL PA allocation, i.e., the current 16m UL PA allocation mechanism does not support per-connection allocation, as there is no indications to tell the AMS which connection or flow a UL PA allocation is intended for.

In addition, although there are good reasons to have UL PA allocations for certain flows, it may not be a good idea to remove all the flexibility of the AMS to use UL PA allocations for other flows, e.g., use the leftover resources; or transmit other urgent data for control or other services, e.g., emergency services.

Therefore, we would propose:

- a) to fix the problem of lack of indications of the intended flow info for UL PA allocations; and
- b) to add a clarification allowing the AMS to use the UL PA allocations for other flows in some cases, e.g. use the leftover resources, or transmit other urgent data for other flows.

In this way, we can maximize the effectiveness of UL PA allocations while also keeping the flexibility of AMS's usage of the given UL allocations.

#### Suggested Remedy

discuss and adopt contribution C80216m-10\_0098r2 or its latest version.

#### GroupResolution

Decision of Group: Disagree

#### Reason for Group's Decision/Resolution

In the UL, HARQ transmission is synchronous. A HARQ retransmission may require the same allocation as a persistent allocation. In this case, HARQ retransmission is given higher priority and the persistent allocation is reallocated to a different resource. The proposed solution would work if the reallocation can be made in the same subframe. However, if there is insufficient resource, the reallocation would have to be made in a different subframe. The proposed solution is not viable since it ties a persistent allocation to a particular subframe. reallocation would require additional DSX messages which introduce overhead and delay.

#### Group's Notes

16.2.7 Persistent Scheduling in the Advanced Air Interface

#### Editor's Notes

Editor's Actions    b) none needed

Comment by:

Lei Wang

Membership Status:Date:Comment # **A033**Document under Review: **P802.16m/D7**Ballot ID: **sb\_16m**Comment    Type Technical    Part of Dis  Satisfied     Page 303    Line 61    Fig/Table#    Subclause 16.2.7

The sentence in line 61 on page 303 raises a very basic issue for 16m UL PA allocations, i.e., a 16m PA allocation is per-connection, or per flow. We all understand that the PA is designed for the connections with periodic traffic patterns with relatively fixed payload sizes. The traffic patterns are application specific, i.e., service flow specific. Therefore, there are good reasons for the UL PA allocations for some specific service flows.

However, there is critical problem with UL PA allocation, i.e., the current 16m UL PA allocation mechanism does not support per-connection allocation, as there is no indications to tell the AMS which connection or flow a UL PA allocation is intended for.

In addition, although there are good reasons to have UL PA allocations for certain flows, it may not be a good idea to remove all the flexibility of the AMS to use UL PA allocations for other flows, e.g., use the leftover resources; or transmit other urgent data for control or other services, e.g., emergency services.

Therefore, we would propose:

- a) to fix the problem of lack of indications of the intended flow info for UL PA allocations; and
- b) to add a clarification allowing the AMS to use the UL PA allocations for other flows in some cases, e.g. use the leftover resources, or transmit other urgent data for other flows.

In this way, we can maximize the effectiveness of UL PA allocations while also keeping the flexibility of AMS's usage of the given UL allocations.

**Suggested Remedy**

discuss and adopt contribution C80216m-10\_0098r3 or its latest version.

**GroupResolution****Decision of Group: Disagree****Reason for Group's Decision/Resolution**

To fix the subframe a flow can be scheduled during negotiation can make serious limitation for ABS's scheduling.

**Group's Notes**

Clause 16.2.7, MAC: Persistent Scheduling

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

Comment by:

Lei Wang

Membership Status:Date:Comment # **A050**Document under Review: **P802.16m/D7**Ballot ID: **sb\_16m**Comment    Type Technical    Part of Dis  Satisfied     Page 306    Line 22    Fig/Table#    Subclause 16.2.8.1

I completely don't agree with the resolution given to comment #582 in 80216-10\_0040r2. I don't think the reason given for "disagree" really address this comment. I re-submit this comment.

I think there is a problem with the mechanisms described in the paragraph in line 22 on page 304, i.e., transmitting an AAI\_SCD message on an unpaired DL carrier to specify where in the primary UL carrier the feedback region is.

Note that the concept of primary carrier is per AMS, and different AMS may have different fully configured carriers as their primary carriers. If an unpaired DL carrier is activated for two AMSs, AMS-1 and AMS-2, and those two AMSs have different UL primary carriers, e.g., UL-fc1 and UL-fc2, respectively, then an AAI\_SCD message transmitted on the unpaired DL carrier will be received by AMS-1 and AMS-2, but it means differently to the two AMSs, i.e., the same feedback region specification actually means on two regions on two different fully configured UL carriers. This will make fast feedback channel and HARQ feedback channel mapping very complicated.

One simple way to solve this problem is to put a constraint on the AMSs who can use an unpaired DL carrier for DL unicast traffic shall have the same UL primary carrier.

**Suggested Remedy**

Change the paragraph in line 22 on page 304 as follows:

If a partially configured carrier is used for DL unicast traffic, the required UL feedback channels are provided by the primary carrier.

<ins> All the AMSs that uses the same DL-only secondary carrier for DL unicast traffic shall use the same fully configured UL carrier as primary UL carrier. </ins> In multicarrier aggregation, the UL control channels corresponding to the secondary partially configured carriers i.e., DL only secondary carriers shall be located in distinct non-overlapping control regions in the UL of the primary carrier. The UL control regions for the DL only secondary carriers are behind the UL control region for the primary carrier. The location information of the UL control channels for the DL only secondary carriers are informed through the AAI\_SCD message which are transmitted on the secondary carriers. The AMS shall use the UL control channels on the primary carrier to feedback HARQ ACK/NACK and channel quality measurements corresponding to transmission over DL only secondary carrier. Only the FDD primary carriers may be used to provide UL feedback channels for DL partially configured carriers. A partially configured carrier may be optimized and used for E-MBS services only in which case it would not need UL feedback channel support on primary carrier.

**GroupResolution****Decision of Group: Disagree****Reason for Group's Decision/Resolution**

For distributing control channels over multiple carriers, the region can be defined at different carriers.

The primary carrier can be different for various AMSs.

**Group's Notes**

Clause 16.2.8, MAC: Multicarrier operation

2010/10/12

IEEE 802.16-10/0040r3

**Comment by:**

Lei Wang

**Membership Status:****Date:****Comment #** A051**Document under Review:** P802.16m/D7**Ballot ID:** sb\_16m**Comment**      **Type** Technical      **Part of Dis**  **Satisfied**       **Page** 315      **Line** 15      **Fig/Table#**      **Subclause** 16.2.8.2.9.2.2

One MC specific HO procedure allows the AMS performs network re-entry to the target ABS on one carrier and maintains normal communication with the serving ABS on another carrier. This seems a very good utilization of an AMS's capability of concurrently processing multiple radio carriers.

However, the current spec limits the utilization of such an AMS's capability to HO related optimizations, including scanning and network re-entry. Such a limitation seems unnecessary, and there are some obvious benefits and advantages to allow an AMS with the capability of concurrently processing multiple radio carriers to connect to multiple ABSs for normal communications, e.g., connect to both a Femto ABS and an overlay Macro ABS simultaneously to get best service from both.

**Suggested Remedy**

make the following changes:

1. change the sentence in line 15 on page 315 as follows:

In this case, Disconnect\_time should be long enough that network reentry procedure to target ABS can be completed prior to the expiration of Disconnect\_time <ins> or the Disconnect\_time should not be used. </ins>

2. change the paragraph in line 38 on page 316 as follows:

From AMS point of view, if network entry is completed (see 16.2.6), the AMS<ins>may </ins> <del>shall</del> stop communicating with the serving ABS. Then, the AMS may send UL data or BW-REQ message to the target ABS.

**GroupResolution****Decision of Group:** Disagree**Reason for Group's Decision/Resolution**

It is too complicated for AMSs and ABSs to manage different data paths simultaneously.

**Group's Notes**

Clause 16.2.8, MAC: Multicarrier operation

Comment by:

Lei Wang

Membership Status: MemberDate: 7/9/2010Comment # 594Document under Review: P802.16m/D6Ballot ID: sb\_16mComment    Type Technical    Part of Dis  Satisfied     Page 317    Line 11    Fig/Table#    Subclause 16.2.8.2.11

In the carrier management procedure, the AAI\_CM-CMD message is used for the ABS to instruct the AMS to perform certain actions, and the carrier management procedure is always initiated by the ABS. Then, the question is why the AMS is not allowed to initiate a carrier management procedure.

Note that in some cases it is useful and important that the AMS can also initiate carrier management processes. For example, based on the AMS's measurements and monitoring of its assigned multiple carriers, it may detect one of the fully configured secondary carrier is more suitable to be used as its primary carrier, in this case the AMS may want to initiate a carrier management process to make the primary carrier change. This is very similar to the use case of AMS-initiated HO, as the primary carrier is actually the anchor for the AMS to connect to the ABS in the multicarrier operation.

**Suggested Remedy**

discuss and adopt contribution C80216m-10\_0400r1 or its latest version.

**Group Resolution****Decision of Group: Disagree****Reason for Group's Decision/Resolution**

According to the current text, the ABS can direct to activate/deactivate the secondary carrier or change the primary carrier based on the QoS requirement, load condition of carriers, channel quality from CQI for active carrier or scan report for inactive carrier and other factors. So we don't need to define the MS-initiated carrier management. The AMS already reports the channel quality of the assigned carriers to the ABS.

Vote:

In favor: 1

Opposed: 3

Abstain:

**Group's Notes**

16.2.8 Multicarrier operation

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

Comment by:

Lei Wang

Membership Status: MemberDate: 7/9/2010Comment # 595Document under Review: P802.16m/D6Ballot ID: sb\_16mComment      Type Technical      Part of Dis  Satisfied       Page 318      Line 8      Fig/Table#      Subclause 16.2.8.2.11.2

what happens if the AMS could not conduct the primary change as instructed by the ABS even it correctly received and ack-ed the AAI\_CM-CMD message? There are reasons similar to HO failure that triggers this error condition.

The two primary carrier change cases as shown in Figure 424 and 425 have no means to handle such an error condition. Well, in the case of Figure 424, it actually causes disconnection of the AMS from the ABS, as there is no AAI\_CM-IND message for triggering the actual primary carrier change.

we suggest the following to handle this problem:

1. use AAI\_CM-IND sent on the target carrier to indicate a success of primary carrier change at AMS. only after receiving an AAI\_CM-IND sent on the target carrier, the ABS can use the target carrier as the new primary carrier for control channels;
2. use AAI\_CM-IND sent on the serving carrier at the action time to indicate a failure of primary carrier change.

#### Suggested Remedy

make the following changes:

1. in Figure 424 on page 319, add a line at the action time from AMS's T-carrier to ABS's T-carrier with the caption of "AAI\_CM-IND";
2. change the paragraph in line 25 on page 318 as follows:

If the AMS supports carrier aggregation mode and the target carrier is one of the active secondary carriers of the AMS, the AMS may receive data and control signal on the target carrier immediately after switching. Otherwise, the AMS first reconfigures its hardware setting (e.g. RF center frequency) and switches to target carrier. If Ranging indicator in the AAI\_CM-CMD message is set to '1', the AMS shall perform the periodic ranging procedure with the target carrier. After successfully completing this action, the AMS shall transmit an AAI\_CM-IND message on the target carrier to notify its readiness of the target carrier to the ABS; otherwise the AMS shall transmit an AAI\_CM-IND on the serving carrier to indicate a failure of the primary carrier change. If Ranging indicator in the AAI\_CM-CMD message is set to '0', at the action time, the AMS shall transmit an AAI\_CM-IND message to the ABS on the target carrier if it is ready to use the target carrier as its new primary carrier; otherwise it shall transmit the AAI\_CM-IND message on its serving carrier. The ABS shall use the target carrier as the primary carrier may transmit data and control signal after the AAI\_CM-IND message is received on the target carrier from the AMS through the target primary carrier. Given that a common MAC manages both serving and target primary carriers, network reentry procedures at the target primary carrier is not required. The ABS may direct an AMS to change the primary carrier without scanning. For the multi-carrier supported AMS, the logical carrier indices of the serving and target primary carrier are swapped after the primary carrier change.

3. insert the following new paragraph in line 39 on page 318:

At the action time of the primary carrier change as instructed by the ABS in a received AAI\_CM-CMD message, if the AMS is not ready to use the target carrier as the new primary carrier, i.e., a failure of primary carrier change, the AMS shall send an AAI\_CM-IND message on the serving primary carrier. When receiving an AAI\_CM-IND message on the serving carrier at or after the action time, the ABS considers the corresponding primary carrier change procedure is failed and it shall keep using the serving carrier as the primary carrier for the AMS.

GroupResolutionDecision of Group: Disagree

Reason for Group's Decision/Resolution

In figure 424, we don't need to transmit the AAI\_CM-IND message. Since the target carrier is one of already activated carrier, the AMS can change the primary carrier without any readiness time for activation. In this case, if the AAI\_CM-CMD message is successfully transmitted to the AMS, it means that the primary carrier is also successfully changed. So, we can confirm the successful primary carrier change through the exchange of AAI\_CM-CMD and MSG ACK. If the ABS doesn't receive the MSG\_ACK within the retransmission timer, then the ABS considers the primary carrier change as failed. The AAI\_CM-IND is only used as a readiness indication for the newly activated carrier.

Group's Notes

16.2.8 Multicarrier operation

Editor's NotesEditor's Actions b) none needed**2010/10/12****IEEE 802.16-10/0040r3**Comment by:

Lei Wang

Membership Status: MemberDate: 7/9/2010Comment # **593**Document under Review: **P802.16m/D6**Ballot ID: **sb\_16m**CommentType TechnicalPart of Dis Satisfied Page 319Line 36Fig/Table#Subclause 16.2.8.2.11.2

There are couple of issues with the Figure 425 on page 319, e.g.,

1. at the AMS side, the Common MAC box is missing;
2. at the AMS side, the S-carrier and T-carrier shall be shown.

Suggested Remedy

make the following changes in Figure 425 on page 319:

1. add the box at the AMS side with Common MAC with S-carrier and T-carrier i.e., (the same box at the ABS side);
2. show that all the messages before the action time are on S-carrier between the ABS and the AMS; also show that all the interactions after the action time are on T-carrier between the ABS and the AMS.

GroupResolutionDecision of Group: DisagreeReason for Group's Decision/Resolution

The primary carrier change can be performed for an AMS in basic MC mode, MC aggregation or switching mode. If the AMS is in basic MC mode, then such AMS doesn't have common MAC. In Figure 425, we should cover both single carrier supported AMSs and MC supported AMSs. So we don't need to add more modification in Figure 435.

Group's Notes

16.2.8 Multicarrier operation

Editor's NotesEditor's Actions b) none needed

Comment by:

Lei Wang

Membership Status: MemberDate: 7/9/2010Comment # 597Document under Review: P802.16m/D6Ballot ID: sb\_16mComment    Type Technical    Part of Dis  Satisfied     Page 320    Line 1    Fig/Table#    Subclause 16.2.8.2.11.3

Based on the current 16m/D6 spec, a lots of pieces about the carrier switching operation for the E-MBS, e.g., how, how long, what periodicity, what triggers for the carrier switching.It is not properly specified in the E-MBS section 16.9.2.1, nor in the DSA-REQ/RSP messages, nor MC scetion.

Suggested Remedy

Either complete the specification of the carrier switching operation or delete all relevant text / references.

GroupResolutionDecision of Group: DisagreeReason for Group's Decision/Resolution

Group would like to complete the specification of the carrier switching operation. However, commentor did not provide the specific resolution.

Group's Notes

16.2.8 Multicarrier operation

Editor's NotesEditor's Actions    b) none needed

Comment by: Lei Wang

Membership Status:

Date:

Comment # **A053**

Document under Review: **P802.16m/D7**

Ballot ID: **sb\_16m**

Comment    Type Technical    Part of Dis  Satisfied     Page 320    Line 26    Fig/Table#    Subclause 16.2.8.2.11.2

I don't agree with the reasons given to the comment resolution to comment #595 in 80216-10\_0040r2.

What happens if the AMS could not conduct the primary change as instructed by the ABS even it correctly received and ack-ed the AAI\_CM-CMD message? There are reasons similar to HO failure that triggers this error condition.

The two primary carrier change cases as shown in Figure 422 and 423 have no means to handle such an error condition. Well, in the case of Figure 422, it actually causes disconnection of the AMS from the ABS, as there is no AAI\_CM-IND message for triggering the actual primary carrier change.

we suggest the following to handle this problem:

1. use AAI\_CM-IND sent on the target carrier to indicate a success of primary carrier change at AMS. only after receiving an AAI\_CM-IND sent on the target carrier, the ABS can use the target carrier as the new primary carrier for control channels;
2. use AAI\_CM-IND sent on the serving carrier at the action time to indicate a failure of primary carrier change.

#### Suggested Remedy

make the following changes:

1. in Figure 422 on page 321, add a line at the action time from AMS's T-carrier to ABS's T-carrier with the caption of "AAI\_CM-IND";
2. change the paragraph in line 44 on page 320 as follows:

If the AMS supports carrier aggregation mode and the target carrier is one of the active secondary carriers of the AMS, the AMS may receive data and control signal on the target carrier immediately after switching. Otherwise, the AMS first reconfigures its hardware setting (e.g. RF center frequency) and switches to target carrier. If Ranging indicator in the AAI\_CM-CMD message is set to '1', the AMS shall perform the periodic ranging procedure with the target carrier. After successfully completing this action, the AMS shall transmit an AAI\_CM-IND message on the target carrier to notify its readiness of the target carrier to the ABS; <ins> otherwise the AMS shall transmit an AAI\_CM-IND on the serving carrier to indicate a failure of the primary carrier change. If Ranging indicator in the AAI\_CM-CMD message is set to '0', at the action time, the AMS shall transmit an AAI\_CM-IND message to the ABS on the target carrier if it is ready to use the target carrier as its new primary carrier; otherwise it shall transmit the AAI\_CM-IND message on its serving carrier. The ABS shall use the target carrier as the primary carrier </ins> <del>may transmit data and control signal </del> after the AAI\_CM-IND message is received from the AMS through the target primary carrier. Given that a common MAC manages both serving and target primary carriers, network reentry procedures at the target primary carrier is not required. The ABS may direct an AMS to change the primary carrier without scanning.

3. insert the following new paragraph in line 56 on page 320:

At the action time of the primary carrier change as instructed by the ABS in a received AAI\_CM-CMD message, if the AMS is not ready to use the target carrier as the new primary carrier, i.e., a failure of primary carrier change, the AMS shall send an AAI\_CM-IND message on the serving primary carrier. When receiving an AAI\_CM-IND message on the serving carrier at or after the action time, the ABS considers the corresponding primary carrier change procedure is failed and it shall keep using the serving carrier as the primary carrier for the AMS.

GroupResolution

Decision of Group: **Disagree**

**Reason for Group's Decision/Resolution**

The proposed remedy is incomplete.

**Group's Notes**

Clause 16.2.8, MAC: Multicarrier operation

**Editor's Notes**

**Editor's Actions**

b) none needed

Comment by:

Lei Wang

Membership Status:Date: 8-Sep-2010Comment # **B152**Document under Review: **P802.16m/D8**Ballot ID: **sb\_16m**

<u>Comment</u>	<u>Type</u> Technical	<u>Part of Dis</u> <input checked="" type="checkbox"/>	<u>Satisfied</u> <input type="checkbox"/>	<u>Page</u> 330	<u>Line</u> 61	<u>Fig/Table#</u>	<u>Subclause</u> 16.2.7
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I disagree with the comment resolution given to comment A033 in 802.16-10/0045r2.

The sentence in line 61 on page 330 raises a very basic issue for 16m UL PA allocations, i.e., a 16m PA allocation is per-connection, or per flow. We all understand that the PA is designed for the connections with periodic traffic patterns with relatively fixed payload sizes. The traffic patterns are application specific, i.e., service flow specific. Therefore, there are good reasons for the UL PA allocations for some specific service flows.

However, there is critical problem with UL PA allocation, i.e., the current 16m UL PA allocation mechanism does not support per-connection allocation, as there is no indications to tell the AMS which connection or flow a UL PA allocation is intended for.

In addition, although there are good reasons to have UL PA allocations for certain flows, it may not be a good idea to remove all the flexibility of the AMS to use UL PA allocations for other flows, e.g., use the leftover resources; or transmit other urgent data for control or other services, e.g., emergency services.

Therefore, we would propose:

- a) to fix the problem of lack of indications of the intended flow info for UL PA allocations; and
- b) to add a clarification allowing the AMS to use the UL PA allocations for other flows in some cases, e.g. use the leftover resources, or transmit other urgent data for other flows.

In this way, we can maximize the effectiveness of UL PA allocations while also keeping the flexibility of AMS's usage of the given UL allocations.

#### Suggested Remedy

discuss and adopt contribution C80216m-10\_0098r4 or its latest version.

#### GroupResolution

Decision of Group: Disagree

#### Reason for Group's Decision/Resolution

Does not consider VoIP via A-MAP IE.

#### Group's Notes

Clause 16.2.7; MAC Persistent Scheduling

#### Editor's Notes

#### Editor's Actions

Comment by:

Lei Wang

Membership Status: MemberDate: 7/9/2010Comment # 570Document under Review: P802.16m/D6Ballot ID: sb\_16mComment    Type Technical    Part of Dis  Satisfied     Page 339    Line 50    Fig/Table#    Subclause 16.2.12.8

The parameter, MAC in-order delivery indicator, should be applied to both non-ARQ connection and ARQ connection, as long as it is a data transport connection. This is because, in an IP-based networks, Layer-2 in-order delivery is application-specific, i.e., it helps for certain applications. However, it cannot be used alone to guarantee the in-order delivery of the application that needs in-order delivery, because IP-based Layer-3 is above it and IP won't keep the delivery order. Therefore, we should not bind all the ARQ connections with Layer-2 in-order delivery.

**Suggested Remedy**

change the first sentence in the description box of "MAC in-order delivery indicator" in Table 786 as follows:  
Indicate whether or not the order of delivery in the non-ARQ connection is preserved by the MAC.

**GroupResolution****Decision of Group: Disagree**

Vote: 1-2-0.

**Reason for Group's Decision/Resolution**

ARQ connection is not delay sensitive.

**Group's Notes**

16.2.12 Quality of Service (QoS)

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

Comment by:

Lei Wang

Membership Status: MemberDate: 7/9/2010Comment # 543Document under Review: P802.16m/D6Ballot ID: sb\_16mComment    Type Technical    Part of Dis  Satisfied     Page 378    Line 52    Fig/Table#    Subclause 16.2.15.3

I don't agree in 16m ranging design a ranging opportunity is a ranging channel. I think a ranging opportunity is a combination of ranging channel and ranging preamble code, which corresponds to how a ranging request is identified.

Suggested Remedy

make the following changes:

1. change the paragraph in line 52 on page 378 as follows:

Ranging channel and ranging preamble codes for initial ranging are specified in 16.3.9.2.4. Each combination of a ranging channel and a ranging preamble code indicates a ranging opportunity.

2. change sentence in line 5 on page 379 as follows:

The AMS shall send the selected ranging preamble code to the ABS in the selected ranging channel opportunity.

GroupResolutionDecision of Group: DisagreeReason for Group's Decision/Resolution

The proposed remedy must apply to multiple places in the standard. This remedy only touches one location and is therefore incomplete.

Group's Notes

16.2.15 Network Entry and Initialization

Editor's NotesEditor's Actions    b) none needed

Comment by:

Lei Wang

Membership Status: MemberDate: 7/9/2010Comment # 569Document under Review: P802.16m/D6Ballot ID: sb\_16mComment      Type Technical      Part of Dis  Satisfied       Page 383      Line 30      Fig/Table#      Subclause 16.2.16

In 16m/D6, there are two mechanisms that are related to air link status monitoring and maintenance, periodic ranging and coverage loss detection. Periodic ranging is used for maintain the UL synchronization, and a periodic ranging timer is maintained at AMS. Coverage loss detection is used for the ABS to monitor the status of the AMS, and a timer is maintain at the ABS for each active AMS. Those two mechanisms are disconnected and could have one running right after another, because the periodic ranging process does not provide the ABS the AMS's identification so the ABS does not know who have just successfully done a periodic ranging. Some minor changes can build the connection between those two air link status monitoring/maintenance mechanisms for system performance improvement. For example, after a successful periodic ranging, the ABS provides an UL allocation through CDMA allocation IE for the AMS to transmit an AAI\_RNG-CFM message to the ABS, so that the ABS knows who has just successfully completed periodic ranging process. In this way, the ABS can reset the active\_ABS\_timer for the coverage loss detection, then unnecessary triggers to the coverage loss detection procedure can be avoided.

**Suggested Remedy**

Insert the following new bullet in line 30 on page 383:

f) After responding to a periodic ranging request with a ranging status of "success" in the AAI\_RNG-ACK message, the ABS shall provide a unicast UL allocation through a CDMA allocation A-MAP assignment IE to the AMS who sent the periodic ranging request. The AMS shall send its STID information in an AAI\_RNG-CFM message to the ABS.

**GroupResolution****Decision of Group: Disagree**

vote: 2-3-0

**Reason for Group's Decision/Resolution**

AAI\_RNG-CFM should be sent only in case of a successful periodic ranging initiated by this unsolicited AAI-RNG-RSP. When ABS receives periodic ranging code, ABS can not know whether the periodic ranging request is for coverage loss detection or not. Increases complexity.

**Group's Notes**

16.2.16 Periodic Ranging

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

Comment by:

Lei Wang

Membership Status: MemberDate: 7/9/2010Comment # 568Document under Review: P802.16m/D6Ballot ID: sb\_16mComment      Type Technical      Part of Dis  Satisfied       Page 383      Line 30      Fig/Table#      Subclause 16.2.16

Based on the current periodic ranging design, when the AMS has active UL data communication and the UL is nicely synchronized with the ABS, the ABS does not need to send any UL Tx parameter adjustments to the AMS. However, in this case, the periodic ranging timer is still running at the AMS, then when timeouts, it will trigger the AMS to conduct periodic ranging, which is totally not necessary. Due to the mandatory HARQ for UL unicast data burst, the ACK to the UL bursts of the AMS is certainly a good indication of UL condition. So, we suggest the AMS reset the Periodic Ranging timer upon receiving a HARQ ACK for the AMS's UL transmission.

Suggested Remedy

Insert the following new bullet in line 30 on page 383:

e) Upon receiving a HARQ ACK for an UL data burst of the AMS, the AMS shall reset the Periodic Ranging timer.

GroupResolutionDecision of Group: Disagree

Vote: 1-6-0

Reason for Group's Decision/Resolution

The HARQ ACK is received at PHY layer, and it is implementation issue how or if this is communicated to MAC layer. Thus solution is incomplete.

Group's Notes

16.2.16 Periodic Ranging

Editor's NotesEditor's Actions    b) none needed

Comment by:

Lei Wang

Membership Status:Date:Comment # **A061**Document under Review: **P802.16m/D7**Ballot ID: **sb\_16m**CommentType TechnicalPart of DisSatisfiedPage 415Line 59Fig/Table#Subclause

16.2.20

The sentence in line 59 on page 415 is not true, as Subsection 16.2.12 does not have any contents about how to determine whether a CLC class meets the CLC limits.

**Suggested Remedy**

delete the sentence in line 59 on page 415, i.e.,

<del>The process of determining whether a CLC class meets the CLC limits for Type I, II, and III classes is specified in 16.2.12. </del>

**GroupResolution****Decision of Group: Principle**

Resolved by comment #10128.

Resolution:

Modify texts as following :

The process of determining whether a CLC class meets the CLC limits for Type I, II, and III classes is specified in <del> 16.2.12 </del>  
<ins> 16.2.20.1, 16.2.20.2 and 16.2.20.3 respectively </ins>

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

Clause 16.2.22, MAC: MAC Control Reliability

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

Comment by:

Lei Wang

Membership Status: MemberDate: 7/9/2010Comment # 562Document under Review: P802.16m/D6Ballot ID: sb\_16mComment      Type Technical      Part of Dis  Satisfied       Page 423      Line 64      Fig/Table#      Subclause 16.2.26.1

There are multiple questions/issues around the usage of AAI\_RNG-RSP message in subsection 16.2.26.1, e.g.,

1. is the 1-bit "Ranging Request bit" field the only information needed to be included in the AAI\_RNG-RSP for this coverage loss detection usage? if so, why do we need such a complicated message to carry 1-bit information? if not, then what are the other field that are needed?
2. the unsolicited AAI\_RNG-RSP usage is not specified in the definition of AAI\_RNG-RSP in section 16.2.3.2, where it actually says AAI\_RNG-RSP shall be sent as a response to AAI\_RNG-REQ;
3. when the ABS invites the AMS to do periodic ranging, the ABS actually knows the AMS's ID. If the ABS can keep the knowledge of the AMS's ID info during this coverage loss detection required periodic ranging process, then the steps for AMS to send its ID info after a successful periodic ranging can be saved.

**Suggested Remedy**

Either define a new MAC control signal, e.g., a MAC control message or a MAC control signaling header, for the ABS to invite the AMS to conduct periodic ranging; or change the specification of the current AAI\_RNG-RSP message to allow the unsolicited usage as described in the current coverage loss detection procedure.

**GroupResolution****Decision of Group: Disagree****Reason for Group's Decision/Resolution**

There is specific remedy proposed for the group to consider.

**Group's Notes**

16.2.26 Coverage loss

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

Comment by:

Lei Wang

Membership Status: MemberDate: 7/9/2010Comment # 549Document under Review: P802.16m/D6Ballot ID: sb\_16mComment      Type Technical      Part of Dis  Satisfied       Page 432      Line 35      Fig/Table#      Subclause 16.3.3.1

the numbers regarding bursts specified on page 432 seems not consistent with page 530 about the number A-MAP IEs. On page 432, the max number of DL bursts for an AMS in a subframe is 7, including 4 unicast bursts, 2 broadcast bursts, and 1 E-MBS burst. The max number of UL bursts is 4, including 3 unicast bursts and 1 CDMA/BR-ACK IE allocated burst. On page 530, the max number of assignment IEs to an AMS in a subframe is 8. Note that it includes both DL assignment IEs and UL assignment IEs. In addition, the numbers gets more complicated when considering the sum of FFT size is larger than 2048 in multicarrier systems as specified in line 46 page 432.

Suggested Remedy

clarify the relevant text to make the numbers in different places consistent.

GroupResolutionDecision of Group: DisagreeReason for Group's Decision/Resolution

Maximum DL is 7, maximum UL is 4, the maximum total is 8, which means you can mix and match, but cannot exceed 8.

Group's Notes

Clause 16.3: AAI PHY

Editor's NotesEditor's Actions    b) none needed

Comment by:

Lei Wang

Membership Status:Date:Comment # **A038**Document under Review: **P802.16m/D7**Ballot ID: **sb\_16m**Comment    Type Technical    Part of Dis  Satisfied     Page 433    Line 47    Fig/Table#    Subclause 16.2.26.1

There are multiple questions/issues around the usage of AAI\_RNG-RSP message in subsection 16.2.26.1, e.g.,

1. is the 1-bit "Ranging Request bit" field the only information needed to be included in the AAI\_RNG-RSP for this coverage loss detection usage? if so, why do we need such a complicated message to carry 1-bit information? if not, then what are the other field that are needed?
2. the unsolicited AAI\_RNG-RSP usage is not specified in the definition of AAI\_RNG-RSP in section 16.2.3.2, where it actually says AAI\_RNG-RSP shall be sent as a response to AAI\_RNG-REQ;
3. when the ABS invites the AMS to do periodic ranging, the ABS actually knows the AMS's ID. If the ABS can keep the knowledge of the AMS's ID info during this coverage loss detection required periodic ranging process, then the steps for AMS to send its ID info after a successful periodic ranging can be saved.

Suggested Remedy

discuss and adopt contribution C80216m-10\_0968 or its latest version.

GroupResolutionDecision of Group: **Disagree**Reason for Group's Decision/Resolution

using signaling header for state change opens security risk.

vote: 1 for, 3 against, 0 abstain

Group's Notes

Clause 16.2.26, MAC: Coverage Detection and Recovery

Editor's NotesEditor's Actions    b) none needed

Comment by:

Lei Wang

Membership Status:Date: 8-Sep-2010Comment # **B156**Document under Review: **P802.16m/D8**Ballot ID: **sb\_16m**Comment    Type Technical    Part of Dis  Satisfied     Page 464    Line 47    Fig/Table#    Subclause 16.2.26.1

Not satisfied with the comment resolution given to comment A038 in 802.16-10/0045r2. Understand the given reason about the MAC signaling header vs. the security, however, the identified issues by comment A038 needs to be resolved and there should be alternative solution that does not have to use MAC signaling header.

There are multiple questions/issues around the usage of AAI\_RNG-RSP message in subsection 16.2.26.1, e.g.,

1. is the 1-bit "Ranging Request bit" field the only information needed to be included in the AAI\_RNG-RSP for this coverage loss detection usage? if so, why do we need such a complicated message to carry 1-bit information? if not, then what are the other field that are needed?

2. the unsolicited AAI\_RNG-RSP usage is not specified in the definition of AAI\_RNG-RSP in section 16.2.3.2, where it actually says AAI\_RNG-RSP shall be sent as a response to AAI\_RNG-REQ;

3. when the ABS invites the AMS to do periodic ranging, the ABS actually knows the AMS's ID. If the ABS can keep the knowledge of the AMS's ID info during this coverage loss detection required periodic ranging process, then the steps for AMS to send its ID info after a successful periodic ranging can be saved.

Suggested Remedy

discuss and adopt contribution C80216m-10\_0968r1 or its latest version.

GroupResolutionDecision of Group: **Disagree**Reason for Group's Decision/Resolution

Vote: 0, 6, 0

Proposed scheme increases system complexity too much to obtain small gain for rare case.

Group's Notes

Clause 16.2.26; MAC Coverage Loss Detection and Recovery

Editor's NotesEditor's Actions

Comment by:

Lei Wang

Membership Status:Date: 10/25/2010Comment # C062Document under Review: P80216m/D9Ballot ID: sb\_16mComment    Type Technical    Part of Dis  Satisfied     Page 468    Line 7    Fig/Table#    Subclause 16.2.16

Not satisfied with the comment resolution given to comment B159 in 80216-10\_0047r3, which was a follow-up comment to the comment A042 in 802.16-10/0045r2.

Again, the point of this series of comments is about the disconnection between the two air link status monitoring and maintenance procedures (i.e., coverage loss detection and periodic ranging), particularly, it was about some unnecessary triggers to the coverage loss detection procedure.

Based on one of the reply comments given to comment B159 in 80216-10\_0047r3, the suggested remedy is revised as follows.

**Suggested Remedy**

Insert the following new bullet after line 7 on page 468:

f) After responding to a periodic ranging request with a ranging status of "success" in the AAI\_RNG-ACK message, the ABS may provide a unicast UL allocation through a CDMA allocation A-MAP assignment IE to the AMS who sent the periodic ranging request. The AMS shall send its STID information in an AAI\_RNG-CFM message to the ABS.

**GroupResolution****Decision of Group: Disagree**

Vote: 1-2-0

**Reason for Group's Decision/Resolution**

Assignment of CDMA allocation A-MAP IE as a response to periodic RNG code not considered in the standard.

**Group's Notes**

Clause 16.2.16; MAC Periodic Ranging

**Editor's Notes****Editor's Actions**

Comment by: Lei Wang

Membership Status:

Date: 10/25/2010

Comment # C061

Document under Review: P80216m/D9

Ballot ID: sb\_16m

Comment      Type Technical      Part of Dis  Satisfied       Page 468      Line 7      Fig/Table#      Subclause 16.2.16

Not satisfied with the comment resolution given to comment B158 in 80216-10\_0047r3, which was a follow-up comment to the comment A041 in 802.16-10/0045r2.

Again, the point of this series of comments is about the periodic ranging design, i.e., when the AMS has active UL data communication and the UL is nicely synchronized with the ABS, the ABS does not need to send any UL Tx parameter adjustments to the AMS. However, in this case, the periodic ranging timer is still running at the AMS, then when timeouts, it will trigger the AMS to conduct periodic ranging, which is totally not necessary.

Due to the mandatory HARQ for UL unicast data burst, the ACK to the UL bursts of the AMS is certainly a good indication of UL condition. So, we suggest the AMS reset the Periodic Ranging timer upon receiving a HARQ ACK for the AMS's UL transmission.

One of the reply comments to comment B158 mentioned that "If we ad"opt the above suggested remedy, it implies that HARQ ACK is always delivered to MAC layer upon receiving HARQ ACK., it eventually results in performance degradation."

Note that HARQ ACK will be delivery to MAC layer as the scheduler is at MAC layer which is the module that the HARQ channel ID can be used for a new burst.

#### Suggested Remedy

Insert the following new bullet after line 7 on page 468:

e) Upon receiving a HARQ ACK for an UL data burst of the AMS, the AMS shall reset the Periodic Ranging timer.

#### GroupResolution

Decision of Group: Disagree

Vote: 1-4-0

#### Reason for Group's Decision/Resolution

Periodic RNG also used as reference signal for ABS to perform timing and/or power adjustment of the AMS transmission. HARQ ACK to the UL burst doesn't necessarily mean there being no need for Tx adjustment. Furthermore, managing periodic RNG timer based on DL HARQ ACK would only complicate AMS implementation. Also, note that there could be a case with different HARQ response with NACK and ACK when there are multiple UL bursts allocated to an AMS.

#### Group's Notes

Clause 16.2.16; MAC Periodic Ranging

#### Editor's Notes

#### Editor's Actions

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by:

Lei Wang

Membership Status: Member

Date: 7/9/2010

Comment # 551

Document under Review: P802.16m/D6

Ballot ID: sb\_16m

Comment

Type Technical

Part of Dis



Satisfied



Page 470

Line 16

Fig/Table#

Subclause 16.3.5.3.1

The parameter DCAS<sub>i</sub> is actually one parameter, not a series of parameters with subscript i, as specified in line 63 page 470 and Table 840.

It is misleading to use the notation DCAS<sub>i</sub> with i as subscript, as comparing to all the other parameter names with subscript.

Suggested Remedy

Throughout the entire 16m/D6 document, change DCAS<sub>i</sub> to DCASI.

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

DCAS<sub>i</sub> indicates the size per partition, with 'i' indicating which partition.

Group's Notes

Clause 16.3: AAI PHY

Editor's Notes

Editor's Actions b) none needed

Comment by:

Lei Wang

Membership Status:Date:Comment # **A035**Document under Review: **P802.16m/D7**Ballot ID: **sb\_16m**Comment      Type Technical      Part of Dis  Satisfied       Page 480      Line 63      Fig/Table#      Subclause 16.3.4.3.1

Based on the paragraph in line 63 on page 480 and Table 837, for  $FP_i (i > 0, FPCT \neq 2)$ , only one value for  $DCAS_i$  is explicitly signaled for all  $i > 0$ .

Therefore, It is misleading to use the notation  $DCAS_i$  with  $i$  as subscript in Table 837, as comparing to all the other parameter names with subscript.

**Suggested Remedy**

Make the following changes:

1. in line 63 page 480, before "in the SFH....", insert the text "called  $DCAS_i$ ,"
2. in line 55, page 552, Table 837, change " $DCAS_i$ " to " $DCAS_i$ "

**GroupResolution****Decision of Group: Disagree****Reason for Group's Decision/Resolution**

Accepting this comment will make the specification inconsistent (this is also used in line 20).

**Group's Notes**

Clause 16.3.4, PHY: Downlink physical structure

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

Comment by: Lei Wang

Membership Status:

Date:

Comment # **A034**

Document under Review: **P802.16m/D7**

Ballot ID: **sb\_16m**

Comment      Type Technical      Part of Dis  Satisfied       Page 538      Line 1      Fig/Table#      Subclause 16.3.5.2.2

The long TTI burst vs. the use of assignment A-MAP IE needs to be clarified.

I am confused by the resolution given to comment #547 in 80216-10\_0040r2 regarding the long TTI burst allocation vs. assignment A-MAP. I am copying the "reason" box below from 80216-10\_0040r2 for comment #547:

"A-MAP region includes not only assignment A-MAP but also NUS A-MAP, HF-A-MAP, PC-A-MAP. And a long TTI burst can be signaled through an assignment A-MAP in all subframes. "

Note that the 2nd sentence above is totally unclear and incorrect about the A-MAP use for a long TTI allocation. First, it uses "can" i.e., the unclear part. Second, it says "an assignment A-MAP in all subframes" for a long TTI burst., which won't work for FDD system at all, i.e., the incorrect part.

We suggest that, for a long TTI burst, only one assignment A-MAP IE is used and it should be in the A-MAP of the first subframe of the long TTI burst's A-MAP relevance.

#### Suggested Remedy

change the paragraph in line 1 on page 538 as follows:

A-MAP regions shall be present in all DL AAI subframes. When default TTI is used, DL data allocations corresponding to an A-MAP region can occupy resources in any frequency partition within the AAI subframe where the A-MAP region is located. UL data allocations corresponding to an A-MAP region can occupy resources in any frequency partition within the UL AAI subframe according to A-MAP relevance and HARQ timing defined in 16.2.14.2.2. <ins> A long TTI data burst allocation is signaled by an A-MAP that corresponds to the first subframe of the long TTI data burst. </ins>

#### GroupResolution

Decision of Group: Disagree

#### Reason for Group's Decision/Resolution

In page 375, line 1, "A DL Assignment A-MAP IE in the l-th DL subframe (when l is not 0) of the i-th frame may also indicate the long TTI transmission. In this case, the long TTI transmission of DL HARQ subpacket shall begin in the 0-th DL subframe of (i+1) frame.". As you can see, an A-MAP IE can signal a long TTI burst transmitted in the next frame.

#### Group's Notes

Clause 16.3.5, PHY: Downlink control structure

#### Editor's Notes

Editor's Actions      b) none needed

Comment by:

Lei Wang

Membership Status: MemberDate: 7/9/2010Comment # 572Document under Review: P802.16m/D6Ballot ID: sb\_16mComment    Type Technical    Part of Dis  Satisfied     Page 585    Line 22    Fig/Table#    Subclause 16.3.6.5.2.4.7

When using a CDMA allocation IE to allocate UL resource in response to a received contention-based bandwidth request, the allocation size don't have to be just for a BW REQ header. Depending on the traffic load, the ABS may allocate different sizes of data bursts. Therefore, the Isizeoffset is needed.

**Suggested Remedy**

make the following changes:

1. insert a new row in line 22 page 585 in Table 858 as follows:

Syntax Size (bits) Notes

IsizeOffset 5 Offset used to compute burst size index

2. in line 24 page 585, change the size field of the "Reserved" row from 20 to 15.

**GroupResolution****Decision of Group: Disagree****Reason for Group's Decision/Resolution**

BW REQ Hdr is fixed size, we don't need I<sub>sizeoffset</sub>

**Group's Notes**

Clause 16.3: AAI PHY

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

Comment by:

Lei Wang

Membership Status: MemberDate: 7/9/2010Comment # 574Document under Review: P802.16m/D6Ballot ID: sb\_16m

<u>Comment</u>	<u>Type</u> Technical	<u>Part of Dis</u> <input checked="" type="checkbox"/>	<u>Satisfied</u> <input type="checkbox"/>	<u>Page</u> 585	<u>Line</u> 24	<u>Fig/Table#</u>	<u>Subclause</u> 16.3.6.5.2.4.7
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With the 16m UL synchronous HARQ retransmission mechanism, before reaching the max number of HARQ retransmissions but still not successful, the ABS can change or stop the UL allocations for the synchronous UL HARQ retransmissions by sending a basic UL allocation IE with the same ACID by with AI\_SN not-toggled or toggled, respectively.

However, the above mentioned mechanisms do not apply to the unicast UL allocations anonymously allocated by CDMA allocation IE or BR-ACK IE, because there is no ACID or AI\_SN fields in such unicast UL allocations, and the AMS of the UL allocation is identified by RAID or the used random access channel and random access preamble.

We propose to introduce a 1-bit flag in the CDMA allocation A-MAP IE to indicate a stop of UL HARQ retransmissions.

Suggested Remedy

make the following changes:

1. replace the "Reserved" row in line 24 page 585 in Table 858 by the following two rows:

Syntax Size (bits) Notes

ReTx Stop Indicator 1 when set to 1, indicate to stop the

UL HARQ retransmissions

Reserved 20 19 Reserved bits

2. in line 6 page 586, change the "Reserved" as follow:

Syntax Size (bits) Notes

ReTx Stop Indicator 1 when set to 1, indicate to stop the

UL HARQ retransmissions

Reserved 1 Reserved bits

3. change the paragraph in line 30 on page 586 as follows:

The maximum number of the HARQ retransmission is set to the default value defined in 16.2.14.2. HARQ retransmission control information cannot be changed during retransmission process. If the AMS receives a CDMA Allocation A-MAP IE with the ReTx Stop Indicator set to 1, it shall stop the HARQ retransmissions of the UL data burst allocated to the RAID.

GroupResolutionDecision of Group: DisagreeReason for Group's Decision/Resolution

Stop operation is not required because the maximum number of retransmission is restricted to 4, it may be better to use non-adaptive HARQ for simple operation/implementation.

Group's Notes

Clause 16.3: AAI PHY

Editor's NotesEditor's Actions b) none needed



Comment by: Lei Wang

Membership Status:

Date: 10/25/2010

Comment # **C060**

Document under Review: **P80216m/D9**

Ballot ID: **sb\_16m**

Comment    Type Technical    Part of Dis  Satisfied     Page 650    Line 54    Fig/Table#    Subclause 16.3.5.5.2.4.1

Not satisfied with the comment resolution given to comment B155 in 80216-10\_0047r3, which was a follow-up comment A036 in 802.16-10/0045r2, about allocation granularity in the 20MHz system bandwidth.

For convenience, the reason for rejecting B155 is copied below

"Want to keep the reserved bit. Incomplete remedy (only considers one IE)."

Note that 1) I don't think it is appropriate to say "Want to keep the reserved bit " without giving any reasons; 2) the suggested remedy was about one IE and there are other IEs that need to be addressed too. However, let's discuss and address the key points of this identified issue based on one IE first. If a conclusion is reached, then it should be straightforward to change the other IEs that have the same issue.

Again, as pointed out by comment A036 in 802.16-10/0045r2, there were some serious doubts about the correctness of the original analysis, e.g., conclusions based on  $1/6 < 31/1422$ .

In addition, we think Sacrificing the allocation granularity seems not a good design choice, particularly at steps as big as 8 LRUs. Even with code-matching schemes, the offset of the required size to the nearest allowed S value can be up to 4 LRUs. This makes the ratio of the offset to the assigned size is greater than majority of the code steps based on the nominal MCS table given in Table 927, on page 825 in 16m/D9.

We would recommend reconsidering the RI field encoding issue, particularly for the 20MHz system bandwidth, instead of sacrificing the allocation granularity, looking for some other alternatives, e.g., change the RI field from 11 bits to 12 bits by using the 1 reserved bit, and/or consider the constraints of the allocations to remove those ones that do not need to be signaled by the assignment A-MAP IEs, e.g., the control channel occupied resources, and/or allocations spanning over multiple frequency partitions, etc.

#### Suggested Remedy

discuss and adopt contribution C80216m-10\_1195r1 or its latest version.

#### GroupResolution

Decision of Group: **Disagree**

#### Reason for Group's Decision/Resolution

Vote:

In favor: 0

Opposed: 3

Reason: Changing the resource allocation structure would impact the standard significantly and the suggested remedy is not complete. The current trade-off between resource allocation granularity and link adaptation is reasonable and no further change is necessary.

#### Group's Notes

Editor's Notes

Editor's Actions

Comment by: Lei Wang

Membership Status:

Date: 10/25/2010

Comment # **C063**

Document under Review: **P80216m/D9**

Ballot ID: **sb\_16m**

Comment    Type Technical    Part of Dis  Satisfied     Page 676    Line 39    Fig/Table#    Subclause 16.3.5.5.2.4.7

Not satisfied with the comment resolution given to comment B160 in 80216-10\_0047r3, which was a follow-up comment to the comment A045 in 802.16-10/0045r2.

The reason given to a rejection to comment B160 is "Still not clear how the ABS determines BW size to be assigned to a specific user and/or connection as a response to the BR code received"

Note that the only thing that needs to be specified is the minimum size of the allocation, i.e., no need to specify how ABS to determine a specific size as it is a scheduler issue. Well, the minimum allocation size for a received contention-based BW REQ is the size of BR header, and it has been specified in the BW request procedure.

For convenience, here's a copy of comment B160:

All the reply commenters and also "disagree" reason given in the comment resolution said almost the same thing, i.e., without knowing STID, how does the ABS know how much bandwidth the AMS is requesting. Well, as clearly stated in comment A045, depending on the traffic load, the ABS does not have to just allocate the size for the AMS to send a BR header. In other words, the 3-step BR procedure shall not only apply to the BR with a short message. Note that in 16e where there is no such short message thing for the OFDMA-system contention-based BR request, BR procedure can be 3-step or 5-step, although it is not clearly named as 3-step /5-step, because it did not mandate the allocation size for the CDMA-allocation-IE.

Again, the key point of this comment is not to limit the 3-step BR only to the BR with short message.

Here's a re-submission of comment A045:

When using a CDMA allocation IE to allocate UL resource in response to a received contention-based bandwidth request, the allocation size don't have to be just for a BW REQ header. Depending on the traffic load, the ABS may allocate different sizes of data bursts, i.e., don't have to be a fixed size for sending BW REQ header. Therefore, the Isizeoffset is needed.

#### Suggested Remedy

make the following changes:

1. insert a new row in line 39 page 676 in Table 851 as follows:

Syntax Size (bits) Notes

<ins> ISizeOffset 5 Offset used to compute burst size index </ins>

2. in line 41 page 676, change the size field of the "Reserved" row from 20 to 15.

#### GroupResolution

Decision of Group: **Disagree**

#### Reason for Group's Decision/Resolution

Vote:

In favor: 0

Reason: Allowing flexibility in BW allocation size as a response to BR code seems to be redundant and useless since ABS cannot actually use the flexibility in practice as a response to contention based anonymous BR code .

**Group's Notes**

Clause 16.3.5; PHY Downlink control structure

**Editor's Notes****Editor's Actions****2010/10/12****IEEE 802.16-10/0040r3****Comment by:**

Lei Wang

**Membership Status:** Member**Date:** 7/9/2010**Comment #** 577**Document under Review:** P802.16m/D6**Ballot ID:** sb\_16m

**Comment**      **Type** Technical      **Part of Dis**  **Satisfied**       **Page** 710      **Line** 6      **Fig/Table#**      **Subclause** 16.3.9.2.4.1

Formula (283) gives, ISB, the subband index as the location in frequency domain for NS-RCH ranging channel allocations. It varies with IDcell, which puts the ranging channels in different subbands for different cells. However, it does not consider the frequency partition scenarios, which may put the ranging channel in a disadvantaged frequency partition for a cell, e.g., one of the not-power-booster reuse-3 partition.

We would like to suggest having the NS-RCH ranging channel in the UL primary frequency partition.

**Suggested Remedy**

Change the text in line 57 page 709 to line 10 page 710 as follows:

The information for ranging time resource allocation is indicated by the S-SFH in a regular allocation. The information of the NS-RCH allocation consists of the ranging configuration with AAI subframe-offset (OSF) for ranging resource allocation in the time domain. The information for ranging frequency resource allocation, i.e., the subband index for ranging resource allocation is determined by the IDcell and the allocated number of subbands in the UL primary frequency partition YSB,PP YSB according to the Equation (283), where IDcell is defined in 16.3.6.1.2 and YSB is defined in 16.3.6.5.2.4.3 with exception of is the number of allocated subband CRUs in 16.3.8.3.

ISB = mode (IDCell, YSB,PP YSB ) (283)

where ISB denotes the subband index (0, to YSB,PP YSB-1) for ranging resource allocation among YSB,PP YSB subbands.

**GroupResolution****Decision of Group:** Disagree**Reason for Group's Decision/Resolution**

There is no primary frequency partition in the UL.

**Group's Notes**

Clause 16.3: AAI PHY

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

Comment by:

Lei Wang

Membership Status: MemberDate: 7/9/2010Comment # 578Document under Review: P802.16m/D6Ballot ID: sb\_16mComment      Type Technical      Part of Dis  Satisfied       Page 713      Line 6      Fig/Table#      Subclause 16.3.9.2.4.2

Similar to the comment on Formula (283), the Formula (286) gives, ISB,s, the subband index as the location in frequency domain for S-RCH ranging channel allocations. It varies with IDcell, which puts the ranging channels in different subbands for different cells. However, it does not consider the frequency partition scenarios, which may put the ranging channel in a disadvantaged frequency partition for a cell, e.g., one of the not-power-boostered reuse-3 partition. We would like to suggest having the S-RCH ranging channel in the UL primary frequency partition.

**Suggested Remedy**

change the text in line 59 page 712 to line 48 page 713 (except Table 925) as follows:

The information of the S-RCH allocation consists of the ranging configuration with AAI subframe-offset (OSF) for ranging resource allocation in the time domain where OSF is same AAI subframe-offset of the NS-RCH defined in 16.3.9.2.4.1. The information for ranging frequency resource allocation, i.e., the subband index for ranging resource allocation is determined by the IDcell and the allocated number of subbands in the UL primary frequency partition YSB,PP YSB according to the Equation (286) where IDcell is defined in 16.3.6.1.2 and YSB is defined in 16.3.6.5.2.4.3 with exception of is the number of allocated subband CRUs in 16.3.8.3.  $ISB, s = \text{mod}(ID_{cell} + 1, YSB, PP YSB)$  (286) where ISB, s denotes the subband index (0, to YSB,PP YSB-1) for ranging resource allocation among YSB,PP YSB subbands.

**Group Resolution****Decision of Group: Disagree****Reason for Group's Decision/Resolution**

There is no primary frequency partition in the UL.

**Group's Notes**

Clause 16.3: AAI PHY

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

Comment by:

Lei Wang

Membership Status: MemberDate: 7/9/2010Comment # 598Document under Review: P802.16m/D6Ballot ID: sb\_16mComment    Type Technical    Part of Dis  Satisfied     Page 790    Line 14    Fig/Table#    Subclause 16.4.5.1

When a Femto ABS is connected to an overlaid Macro ABS through the Femto ABS's air interface, Why is the wireless connection between Femto ABS and Macro ABS limited to control message only?

Suggested Remedy

change the paragraph in line 14 on page 790 as follows:

For a Femto ABS that uses air interface connection with the overlaid Macro ABS for exchanging control messages, the Femto ABS shall perform the following additional initialization procedure during the Femto ABS initialization procedure.

GroupResolutionDecision of Group: DisagreeReason for Group's Decision/Resolution

Allowing data messages increases complexity.

Group's Notes

Clause 16.4: AAI Femto

Editor's NotesEditor's Actions    b) none needed

Comment by:

Lei Wang

Membership Status:Date: 10/25/2010Comment # **C065**Document under Review: **P80216m/D9**Ballot ID: **sb\_16m**Comment      Type Technical      Part of Dis  Satisfied       Page 890      Line 15      Fig/Table#      Subclause 16.4.5.1

Not satisfied with the resolution to the comment #B164 in 80216-10\_0047r3. The following text was given as the reason to disagree with comment #B164:

"Since the number of AMSs and the traffic of the AMSs will keep on varying and hence a proper signaling mechanism has to be in place for allocating appropriate resources on the air interface between the Femto and the Macro. This will lead to increased complexity and overhead.

Moreover Femto has wired backhaul connection which it is encouraged to use."

Note that 1) the comment B164 was not questioning the air interface between Femto and Macro; 2) regarding the complexity and overhead issue, the comment B164 has stated pretty clearly, i.e., considering the existence of an air interface between Femto and Macro, removing the restriction of "control messages" only does not increase complexity and overhead; and 3) the comment B164 does not discourage the use of wired backhaul for Femto.

Just for the convenience, the comment B164 is copied below:

\*\*\*\*\* comment B164 on 16m/D8:

Not satisfied with the comment resolution given to comment A055 in 802.16-10/0045r2. The following text is given as the "reason" to disagree with comment A055:

"To limit complexity and to avoid limiting the duplication of functionality of Relay and Femto. "

Note that we are talking about there is already an air link connection between the Femto ABS and the Macro ABS; then why more complexity? Regarding Femto vs. relay, I think there are two points that should be pointed out: one is that there is no reason (neither technical nor practical) to draw a solid line between Femto and relay; the other is the air interface between the Femto ABS and the Macro ABS does not have to be the same as the air interface between the Femto ABS and its subscriber stations.

Therefor, When a Femto ABS is connected to an overlaid Macro ABS through the Femto ABS's air interface, Why is the wireless connection between Femto ABS and Macro ABS limited to control message only?

#### Suggested Remedy

change the paragraph in line 15 on page 890 as follows:

For a Femto ABS that uses air interface connection with the overlaid Macro ABS ~~for exchanging control messages~~, the Femto ABS shall perform the following additional initialization procedure during the Femto ABS initialization procedure.

#### GroupResolution

Decision of Group: **Disagree**

#### Reason for Group's Decision/Resolution

This functionality is already performed by relays, so we don't need it in a Femto ABS.

**Group's Notes**

Clause 16.4; Other Femto

IEEE 802.16-10/0059

**Editor's Notes**

**Editor's Actions**

Comment by: Lei Wang

Membership Status:

Date: 10/25/2010

Comment # **C066**

Document under Review: **P80216m/D9**

Ballot ID: **sb\_16m**

Comment    Type Technical    Part of Dis  Satisfied     Page 952    Line 58    Fig/Table#    Subclause 16.9.2.4

Not satisfied with the resolution to the comment #B170 in 80216-10\_0047r3.

Based on answers given to the questions listed in the comment #B170, the issues are now narrowed down to one question, i.e., why do we need two modes for carrier switching for E-MBS as there is much difference between mode-0 and mode-1. Even allowing the bitmap being repeated in both DSx and AAI-EMBS-RSP, the one in DSx is really optional and the one in AAI-EMBS-RSP is really needed.

#### Suggested Remedy

combine the two modes of carrier switching for E-MBS by making the following changes:

1. Change the paragraph in line 51 page 952 as follows:

~~A Carrier Switching Mode is included in AAI-DSA-REQ/RSP and AAI-DSC-REQ messages. If Carrier Switching Mode is used 0b0, the AMS's availability in the primary carrier is indicated using Unicast Available Interval bitmap transmitted in the AAI-E-MBS-REP/RSP messages, and optionally in the AAI-DSA-REQ, AAI-DSC-REQ messages to add and change the Unicast Available Interval.~~

2. change the sentence in line 58 page 952 as follows:

When Carrier Switching Mode is ~~used 0b0~~, a Unicast Available Interval Bitmap is ~~used~~ included in AAI-DSA-REQ/RSP message for carrier switching mode to indicate the duration in which the AMS is available in the primary carrier for Unicast and duration the AMS is in the secondary carrier to receive E-MBS.

3. change the sentence in line 7 page 953 as follows:

Whenever the AMS adds E-MBS content, the AMS shall discontinue carrier switching, return to the primary carrier. The ABS shall re-allocate the Unicast Available Interval ~~using AAI-DSA transaction. AAI-DSC transaction is also used to~~ and also update the Unicast Available Interval Bitmap.

4. change the sentence in line 13 page 953 as follows:

~~When Carrier Switching Mode is 0b1, an~~ An AMS transmits the AAI-E-MBS-REP message to the ABS to inform the ABS which E-MBS service(s) the AMS intends to receive.

#### Group Resolution

Decision of Group: **Disagree**

#### Reason for Group's Decision/Resolution

Vote:

In favor: 0

Opposed: 2

Reason: The proposed solution is incomplete and would trigger unnecessary E-MBS report/response transaction even when no update

Group's Notes

Clause 16.9; Other eMBS

Editor's Notes

Editor's Actions

**2010/10/12**

**IEEE 802.16-10/0040r3**

Comment by: Vladimir Yanover

Membership Status:

Date: 10/25/2010

Comment # **C050**

Document under Review: **P80216m/D9**

Ballot ID: **sb\_16m**

<u>Comment</u>	<u>Type</u>	<u>Technical</u>	<u>Part of Dis</u>	<input checked="" type="checkbox"/> <u>Satisfied</u>	<input type="checkbox"/>	<u>Page</u>	<u>Line</u>	<u>Fig/Table#</u>	<u>Subclause</u>
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According to the contribution IEEE C802.16m-10/1328 "Inefficiency related to DID management and randomization of Paging Offset"

Suggested Remedy

According to the contribution IEEE C802.16m-10/1328

GroupResolution

Decision of Group: **Disagree**

Vote: 4-14-1

Reason for Group's Decision/Resolution

AMSID\* is randomly generated by AMS, which hashed value may not be unique within a Paging Controller. It is improper to be used for AMS identification in idle mode

Group's Notes

Clause 16.2.1; MAC Addressing

Editor's Notes

Editor's Actions

2010/10/12

IEEE 802.16-10/0059

IEEE 802.16-10/0040r3

Comment by: Vladimir Yanover

Membership Status:

Date: 10/25/2010

Comment # C034

Document under Review: P80216m/D9

Ballot ID: sb\_16m

Comment    Type Technical    Part of Dis  Satisfied     Page 468    Line 8    Fig/Table#    Subclause 16.2.17

See contribution IEEE C802.16m-10/1323 "Inconsistencies in definition of Sleep Mode"

**Suggested Remedy**

Rewrite the whole section 16.2.17 to follow the concept of clearly defined states (which might be "sleep" and "awake" or "Sleep Window" and "Listening Window") so that the AMS is available to the ABS in "awake" state only and unavailable in another state. The behavior of the ABS and AMS should be specified in terms of these two states only. All other concepts should be removed

**GroupResolution**

Decision of Group: Disagree

Vote: 0-2-0

**Reason for Group's Decision/Resolution**

No proposed text to include in the standard

**Group's Notes**

Clause 16.2.17; MAC Sleep Mode

**Editor's Notes**

**Editor's Actions**

Comment by: Vladimir Yanover

Membership Status:

Date: 10/25/2010

Comment # **C035**

Document under Review: **P80216m/D9**

Ballot ID: **sb\_16m**

Comment    Type Technical    Part of Dis  Satisfied     Page 485    Line 10    Fig/Table#    Subclause 16.2.18.2.3

The following sentence is talking about specific AMS:

1. "At the beginning of the paging listening interval, the AMS shall scan and synchronize ... etc."

In this case meaning of "THE paging listening interval" is clear: it is the interval mentioned in previous paragraph. But the next sentence appears in a wrong context:

2. ( p.485. line 10) "The ABS shall transmit the PGID-Info at a predetermined location in the paging listening interval in order to advertise the paging group(s) that is supported by the ABS. The PGID-Info shall be transmitted by the ABS regardless of whether or not there any notifications for AMSs. "

What is "THE paging listening interval" in the second sentence? There are many AMSs near the ABS having different listening intervals; normally the ABS does not know about their presence.

So first of all the language of the second sentence should be clarified.

In my view, the only possible interpretation of the second sentence is that the ABS must transmit (the same) PGID\_Info message in ANY paging listening interval ever assigned to ANY mobile in ANY paging group supported by the ABS. This requirement in fact enforces the ABS to transmit the PGID-Info message in all possible listening intervals. For example, if paging cycle = 64 SFs, and the ABS supports several paging groups (tens of thousands of mobiles), with high probability all offsets 0..2047 will be occupied by listening intervals, therefore the ABS will be mandated to transmit the PGID\_Info in every frame. Obviously the air interface will be overloaded with PGID\_Info transmissions.

#### Suggested Remedy

Clarify the language of the sentence p.485. line 10. Make sure that new language does not enforce the ABS to transmission of PGID-Info every SF

#### GroupResolution

Decision of Group: **Disagree**

Wed AM: deferred

#### Reason for Group's Decision/Resolution

No text available to include.

#### Group's Notes

Clause 16.2.18; MAC Idle Mode

#### Editor's Notes

#### Editor's Actions