

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6001**

Comment submitted by: Jeff

Mandin

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **3** Starting Line # **8** Fig/Table# Section **2**
Missing items in References section

Additionally: AES Key Wrap was not standardized by NIST. Rather it is standardized in IETF RFC 3394 - "Advanced Encryption Standard (AES) Key Wrap Algorithm"

Suggested Remedy

1. Add the following references:

IETF RFC 3095 "<http://www.ietf.org/rfc/rfc3095.txt>"

IETF RFC 3545 "<http://www.ietf.org/rfc/rfc3545.txt>"

IETF RFC 3748 "<http://www.ietf.org/rfc/rfc3748.txt>"

NIST Special Publication 800-38B - "Recommendation for Block Cipher Modes of Operation: The CMAC Mode for Authentication"

2. Change '<http://csrc.nist.gov/CryptoToolkit/kms/key-wrap.pdf>' Draft NIST AES Key Wrap Specification" to:

IETF RFC 3394 "<http://www.ietf.org/rfc/rfc3394.txt>"

3. Modify all RFC references so that "/rfc/" is in the URL path (as in RFC 3748 example above).

Proposed Resolution Recommendation: Accepted**Recommendation by**

1. Add the following references:

IETF RFC 3095 "<http://www.ietf.org/rfc/rfc3095.txt>"

IETF RFC 3545 "<http://www.ietf.org/rfc/rfc3545.txt>"

IETF RFC 3748 "<http://www.ietf.org/rfc/rfc3748.txt>"

NIST Special Publication 800-38B - "Recommendation for Block Cipher Modes of Operation: The CMAC Mode for Authentication"

2. Change '<http://csrc.nist.gov/CryptoToolkit/kms/key-wrap.pdf>' Draft NIST AES Key Wrap Specification" to:

IETF RFC 3394 "<http://www.ietf.org/rfc/rfc3394.txt>"

3. Modify all RFC references so that "/rfc/" is in the URL path (as in RFC 3748 example above).

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

1. Add the following references:

IETF RFC 3095 "<http://www.ietf.org/rfc/rfc3095.txt>"

IETF RFC 3545 "<http://www.ietf.org/rfc/rfc3545.txt>"

IETF RFC 3748 "<http://www.ietf.org/rfc/rfc3748.txt>"

NIST Special Publication 800-38B - "Recommendation for Block Cipher Modes of Operation: The CMAC Mode for Authentication"

2. Change '<http://csrc.nist.gov/CryptoToolkit/kms/key-wrap.pdf>' Draft NIST AES Key Wrap Specification" to:

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3. Modify all RFC references so that "/rfc/" is in the URL path (as in RFC 3748 example above).

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6002**

Comment submitted by: Kyungjoo

Suh

Other

2005/07/14

Comment	Type	Editorial	Starting Page #	3	Starting Line #	15	Fig/Table#	Section	2
currently, the draft is confirmed as "Mobility Support in IPv6 (RFC 3775) "									

Suggested Remedy~~IETF Internet Draft, "http://www.ietf.org/proceedings/03jul/I-D/draft-ietf-mobileip-ipv6-24.txt"~~[IETF RFC 3775, "http://www.ietf.org/rfc3775.txt"](http://www.ietf.org/rfc3775.txt).**Proposed Resolution****Recommendation: Accepted****Recommendation by**~~IETF Internet Draft, "http://www.ietf.org/proceedings/03jul/I-D/draft-ietf-mobileip-ipv6-24.txt"~~[IETF RFC 3775, "http://www.ietf.org/rfc3775.txt"](http://www.ietf.org/rfc3775.txt).**Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**~~IETF Internet Draft, "http://www.ietf.org/proceedings/03jul/I-D/draft-ietf-mobileip-ipv6-24.txt"~~[IETF RFC 3775, "http://www.ietf.org/rfc3775.txt"](http://www.ietf.org/rfc3775.txt).**Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6003**

Comment submitted by: Phillip

Barber

Member

2005/07/14

Comment	Type	Editorial	Starting Page #	5	Starting Line #	1	Fig/Table#	Section	3.
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I object to the resolution of comment 5004

Nearly all of the editorial changes changing 'MS' to 'mobile station (MS)', 'BS' to 'base station (BS)', etc...in the Definitions section text to conform to the format employed in the 802.16-2004 document for the Definitions section were not applied.

Suggested Remedy

In 3. Definitions, page 5, line 1, modify as:]

'3.5.1 neighbor BS: For any mobile station (MS), a neighbor BS is a base station (BS) (other than the serving BS) whose downlink transmission can be received by the mobile station (MS).

3.5.2 serving BS: For any mobile station (MS), the serving BS is the base station (BS) with which the mobile station (MS) has most recently completed registration at initial network-entry or during a handover (HO).

3.5.3 target BS: The base station (BS) that a mobile station (MS) intends to be registered with at the end of a handover (HO).

3.5.4 active BS: An active BS is informed of the mobile station (MS)' capabilities, security parameters, service flows and full MAC context information. For soft handover (SHO), the mobile station (MS) transmits/receives data to/from all active BSs in the active set.'

3.71 active set: The active set contains a list of active BSs to the mobile station (MS). The active set is managed by the mobile station (MS) and base station (BS). The active set is applicable to soft handover (SHO) and fast BS switching (FBSS)'

'3.73 anchor BS: For soft handover (SHO) or fast BS switching (FBSS) supporting mobile station (MS)s, this is a base station (BS) where the mobile station (MS) is registered, synchronized ~~with~~, performs ranging ~~with~~ and monitors the downlink (DL) for control information. For fast BS switching (FBSS) supporting mobile station (MS), this is the serving BS that is designated to transmit/receive data to/from the mobile station (MS) at a given frame.

3.74 frequency assignment (FA) index: A network specific logical frequency assignment (FA) index assignment. FA index assignment is used in combination with operator specific configuration information provided to the mobile station (MS) in a method outside the scope of this standard.

3.75 fast BS switching (FBSS): base station (BS) switching that utilizes a fast switching mechanism to improve link quality. The mobile station (MS) is only transmitting/receiving data to/from one of the active BS (anchor BS) at any given frame. The anchor BS can change from frame to frame depending on the base station (BS) selection scheme.

3.76 frequency assignment (FA): A frequency assignment (FA) denotes a logical assignment of downlink (DL) center frequency and channel bandwidth programmed to the base station (BS).

3.77 handover (HO): The process in which a mobile station (MS) migrates from the air-interface provided by one base station (BS) to the air-interface provided by another base station (BS). Two HO variants are defined:

- break-before-make HO: A HO where service with the target BS starts after a disconnection of service with the previous serving BS.
- make-before-break HO: A HO where service with the target BS starts before disconnection of the service with the previous serving BS.

3.78 group key encryption key (GKEK): The GKEK is a random number generated by the base station (BS) or a network entity (for example, an

ASA server) used to encrypt the GTEKs sent in multicast messages by the base station (BS) to mobile station (MS)s in the same multicast group.

3.79 MIMO: Multiple Input, Multiple Output.

3.80 mobile station (MS): A station in the mobile service intended to be used while in motion or during halts at unspecified points. A mobile station (MS) is always a subscriber station (SS) unless specifically excepted otherwise in the standard.

3.81 orderly power down procedure: The procedure that the mobile station (MS) performs when powering down as directed by (e.g., user input or prompted by a automatic power down mechanism).

3.82 scanning interval: A time period intended for the mobile station (MS) to monitor neighbor BSs to determine the suitability of the base station (BS)s as targets for handover (HO).

3.83 soft handover (SHO): The process in which an mobile station (MS) migrates from the air-interface provided by one or more base station (BS)s to the air-interface provided by other one or more base station (BS)s. This process is accomplished in the downlink (DL) by having two or more base station (BS)s transmitting the same MAC/PHY protocol data unit (PDU)s to the mobile station (MS) such that diversity combining can be performed by the mobile station (MS). In the uplink (UL) it is accomplished by having two or more base station (BS)s receiving (demodulating, decoding) the same protocol data unit (PDU)s from the mobile station (MS), such that diversity combining of the received protocol data unit (PDU)s can be performed among the base station (BS)s.

3.84 backbone network: communication mechanism by which two or more base station (BS)s communicate to each other, and may also include communication with other networks. The method of communication for backbone networks is outside the scope of this standard.

Proposed Resolution **Recommendation: Accepted**

Recommendation by

In 3. Definitions, page 5, line 1, modify as:]

'3.5.1 neighbor BS: For any mobile station (MS), a neighbor BS is a base station (BS) (other than the serving BS) whose downlink transmission can be received by the mobile station (MS).

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Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

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Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6004**

Comment submitted by: Jungnam

Yun

Other

2005/07/14

Comment	Type	Starting Page #	Starting Line #	Fig/Table#	Section
The abbreviation CSIT is used in the draft more than 10 times but its full name is not defined anywhere.	editorial	7	13		4

Suggested Remedy*add abbreviation:*[CSIT - Channel State Information at the Transmitter.](#)**Proposed Resolution**Recommendation: **Accepted**

Recommendation by

add abbreviation:[CSIT - Channel State Information at the Transmitter.](#)**Reason for Recommendation****Resolution of Group**Decision of Group: **Accepted***add abbreviation:*[CSIT - Channel State Information at the Transmitter.](#)**Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes**

Editor's Actions k) done

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6005**

Comment submitted by: **Lei**

Wang

Member

2005/07/14

Comment	Type Editorial	Starting Page # 7	Starting Line # 28	Fig/Table#	Section 4
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SN needs to be added in the list of abbreviations.

Suggested Remedy
 insert the follwoing in line 28 on page 7:
 SN Sequence Number

Proposed Resolution **Recommendation: Accepted** **Recommendation by**
 insert the follwoing in line 28 on page 7:
 SN Sequence Number

Reason for Recommendation

Resolution of Group **Decision of Group: Accepted**
 insert the follwoing in line 28 on page 7:
 SN Sequence Number

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6006**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Editorial** Starting Page # **8** Starting Line # **1** Fig/Table# Section **5.2**

Current Draft is missing part for Header-Compression-specific part at convergence sublayer accepted during session 34 only because Section 5 FrameMaker document not provided to Editor.(refer to commentary database 80216-04_69r4.USR, comment number 567)

But, since header compression is in TGe Draft and it is very important and required support at convergence sublayer. 802.16 will release specification TGe and Corrigendum of 2004 specificatin(it contains section 5 document) as whole document. Therefore, missing part about section 5 of contribution C80216e-04_523r1 is very important and should be incorporated as a part of TGe specification(draft).

And despite several meeting after session 34, nothing affected the content of section 5 of C80216e-04_523r1, therefore, it is need to just adopting part of section 5 from suggested remedy of C80216e-04_523r1.

Suggested Remedy

At page 8, Insert proposed text change about section 5 at page 3 of contribution C80216e-04_523r1 like below :

5.2.6.2 IP classifiers

IP classifiers operate on the fields of the IP header and the transport protocols (UDP and RTP). The parameters (11.13.19.3.4.2, 11.13.19.3.4.7, 11.13.19.3.4.16, 11.13.19.3.4.17) may be used in IP classifiers.

5.2.7 Header-compression-specific part

This CS shall be applied when the compressed RTP/UDP/IP packets are carried over the IEEE Std 802.16 network.

5.2.7.1 Header-compression CS PDU format

The format of the Header-compression CS PDU shall be as shown in Figure 18 & Figure 19 .



Figure 18 Header-compression CS PDU format without header suppression



Figure 19 Header-compression CS PDU format with header suppression

5.2.7.2 Header-compression classifiers

Header-compression classifiers operate on the fields of the header compression protocols , IP, UDP and RTP headers. The parameters (11.13.19.3.4.2, 11.13.19.3.4.7, 11.13.19.3.4.16, 11.13.19.3.4.17, 11.13.19.3.4.18, 11.13.19.3.4.19) may be used in Headercompression classifiers.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

[See 6311](#)

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) [none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6007**

Comment submitted by: **Lei**

Wang

Member

2005/07/14

Comment Type **Editorial**

Starting Page # **11**

Starting Line # **6**

Fig/Table# **T5a**

Section **6.3.2.1.1**

Type 1 or Type I? use the notations consistantly!

Suggested Remedy

Either change all occurenaces of "Type 1" to "Type I", Type 2" to "Type II", or the opposite way. But keep consistant.

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Change all occurenaces of "Type 1" to "Type I", Type 2" to "Type II".

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change all occurenaces of "Type 1" to "Type I", Type 2" to "Type II".

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6008**

Comment submitted by: Yerang

Hur

Other

2005/07/14

Comment Type **Technical non-binding** Starting Page # **11** Starting Line # **20** Fig/Table# **5a** Section **6.3.2.1.1**

The name appeared in Table 7b and description of Bandwidth request and CINR report header does not match the actual name.

Suggested Remedy

[Change line 20, Table 5a, p. 11 of Section 6.3.2.1.2.1.1 as indicated:]

Type field:

100

MAC header type (with HT/EC=0b10):

~~BR and DL burst profile change request header~~[Bandwidth request and CINR report header](#)

[Change line 28, p. 15 of Section 6.3.2.1.2.1.3 as indicated:]

The Bandwidth request and ~~downlink burst profile change request header~~[CINR report header](#) shall have the following properties:

[Change line 38, p. 15 of Section 6.3.2.1.2.1.3 as indicated:]

The fields of the Bandwidth request and ~~downlink burst profile change request header~~[CINR report header](#) are defined in Table 7b.

[Change line 10, p. 16 of Table 7b as indicated:]

Name: Type

Length (bits): 3

Description: The type of ~~BR and DL burst profile change request header~~[Bandwidth request and CINR report header](#) is defined in Table 5a.**Proposed Resolution**Recommendation: **Accepted**

Recommendation by

[Change line 20, Table 5a, p. 11 of Section 6.3.2.1.2.1.1 as indicated:]

Type field:

100

MAC header type (with HT/EC=0b10):

~~BR and DL burst profile change request header~~[Bandwidth request and CINR report header](#)

[Change line 28, p. 15 of Section 6.3.2.1.2.1.3 as indicated:]

The Bandwidth request and ~~downlink-burst-profile-change-request-header~~[CINR report header](#) shall have the following properties:

[Change line 38, p. 15 of Section 6.3.2.1.2.1.3 as indicated:]

The fields of the Bandwidth request and ~~downlink-burst-profile-change-request-header~~[CINR report header](#) are defined in Table 7b.

[Change line 10, p. 16 of Table 7b as indicated:]

Name: Type
Length (bits): 3
Description: The type of ~~BR-and-DL-burst-profile-change-request-header~~[Bandwidth request and CINR report header](#) is defined in Table 5a.

Reason for Recommendation

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

[Change line 20, Table 5a, p. 11 of Section 6.3.2.1.2.1.1 as indicated:]

Type field:
100

MAC header type (with HT/EC=0b10):
~~BR-and-DL-burst-profile-change-request-header~~
[Bandwidth request and CINR report header](#)

[Change line 28, p. 15 of Section 6.3.2.1.2.1.3 as indicated:]

The Bandwidth request and ~~downlink-burst-profile-change-request-header~~[CINR report header](#) shall have the following properties:

[Change line 38, p. 15 of Section 6.3.2.1.2.1.3 as indicated:]

The fields of the Bandwidth request and ~~downlink-burst-profile-change-request-header~~[CINR report header](#) are defined in Table 7b.

[Change line 10, p. 16 of Table 7b as indicated:]

Name: Type
Length (bits): 3
Description: The type of ~~BR-and-DL-burst-profile-change-request-header~~[Bandwidth request and CINR report header](#) is defined in Table 5a.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6009**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment	Type	Editorial	Starting Page #	15	Starting Line #	28	Fig/Table#	Section	6.3.2.1.2.1.3
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Suggested Remedy

In line 28, line 34 and line 37 page 15, replace 'downlink burst profile change request' with 'CINR report'.

In line 4 and line 11 page 16, replace 'DL burst profile change request' with 'CINR report'.

In line 36 page 534, replace 'downlink burst profile change request' with 'CINR report'.

Proposed ResolutionRecommendation: **Accepted**

Recommendation by

In line 28, line 34 and line 37 page 15, replace 'downlink burst profile change request' with 'CINR report'.

In line 4 and line 11 page 16, replace 'DL burst profile change request' with 'CINR report'.

In line 36 page 534, replace 'downlink burst profile change request' with 'CINR report'.

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

In line 28, line 34 and line 37 page 15, replace 'downlink burst profile change request' with 'CINR report'.

In line 4 and line 11 page 16, replace 'DL burst profile change request' with 'CINR report'.

In line 36 page 534, replace 'downlink burst profile change request' with 'CINR report'.

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

Editor's Actions k) done

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6010**

Comment submitted by: Kiseon

Ryu

Other

2005/07/14

Comment	Type	Starting Page #	Starting Line #	Fig/Table#	Section
	Editorial	15	34		6.3.2.1.2.1.3

Correction :

The name of the header for "Bandwidth request and downlink burst profile change request" has been changed to "Bandwidth request and CINR report header".

Suggested Remedy

Modify the text, line 34 - 39, as follows :

c) The allowed type for Bandwidth request and ~~downlink burst profile change request~~ CINR report is defined in Table 5a. The requested bandwidth is incremental.

The fields of the Bandwidth request and ~~downlink burst profile change request~~ CINR report header are defined in Table 7b.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: [Superseded](#)****Reason for Group's Decision/Resolution**[See 6009](#)**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** [1\) none needed](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6011**

Comment submitted by: **Lei**

Wang

Member

2005/07/14

Comment Type **Editorial**
typo

Starting Page # **17**

Starting Line # **48**

Fig/Table# **T7c**

Section **6.3.2.1.2.1.4**

Suggested Remedy

add "," between 302a and When

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

add "," between 302a and When

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

add "," between 302a and When

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6012**

Comment submitted by: **Kiseon**

Ryu

Other

2005/07/14

Comment Type **Editorial**

Starting Page # **17**

Starting Line # **64**

Fig/Table#

Section **6.3.2.1.2.1.4**

Editorial :
MSS is still in D9.

Suggested Remedy

Replace MSS with MS at page 17, line 64 and at page 19, line 18.

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Replace MSS with MS at page 17, line 64 and at page 19, line 18.

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Replace MSS with MS at page 17, line 64 and at page 19, line 18.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6013**

Comment submitted by: **Lei**

Wang

Member

2005/07/14

Comment Type **Editorial**
typo

Starting Page # **21**

Starting Line # **5**

Fig/Table# **F20f**

Section **6.3.2.1.2.1.7**

Suggested Remedy

change "SDU SN MSB" to "SDU SN 2 MSB"

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

change "SDU SN MSB" to "SDU SN 2 MSB"

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

change "SDU SN MSB" to "SDU SN 2 MSB"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6014**

Comment submitted by: Phillip

Barber

Member

2005/07/14

Comment Type **Technical, Satisfied (was** Starting Page # **32** Starting Line # Fig/Table# Section **6.3.2.2.7**
 According to the current IEEE802.16e/D9, the method for defining and activating/deactivating Power Saving Class ID has been redefined and refined. However, the method for adding and removing CIDs from defined Power Saving Class IDs has not been similarly updated.

Suggested Remedy

Adopt the remedy in the contribution "C80216e-05_319"(John Lee).

Proposed ResolutionRecommendation: **Accepted-Modified**

Recommendation by

Adopt C802.16e-05/319r1 with the following change:
 Correct numbering for second instance of 6.3.2.2.7.9 and in the table.

Complete edits on Comment 6022 before adopting Contribution 319r1

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

Vote: 15-11
 Current sleep mode becomes more complex and harder to implement and to use in real environment.
 And the proposed scheme make more complex and harder to control the state of MS and BS since this thing propose that BS ans MS shall control sleep mode per connection not per sleep class.
 And if MS and BS want to control sleep mode per connection, by assigning sleep class per connection, it can be handled.
 sleep mode becomes
 It does give more burden to system with less efficiency.

Group's Notes**Group's Action Items****Editor's Notes**

Editor's Actions |) none needed

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6015**

Comment submitted by: Phillip

Barber

Member

2005/07/14

Comment Type **Editorial** Starting Page # **32** Starting Line # **19**Fig/Table# **10** Section **6.3.2.2.2**

I object to the resolution of comment 5064.

Delete artifact instance of 'reserved' in table. Does not appear in Table 9.

Suggested Remedy

[Delete line 19, 6.3.2.2.2 Grant Management subheader, page 32, Table 10, 'Reserved | 3']

Proposed ResolutionRecommendation: **Accepted**

Recommendation by

[Delete line 19, 6.3.2.2.2 Grant Management subheader, page 32, Table 10, 'Reserved | 3']

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

[Delete line 19, 6.3.2.2.2 Grant Management subheader, page 32, Table 10, 'Reserved | 3']

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6016**

Comment submitted by: Mark

Cudak

Member

2005/07/14

Comment	Type	Editorial	Starting Page #	32	Starting Line #	33	Fig/Table#	Section	6.3.2.2.7
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* Several typos in Figure 20I.

* use of "extended subheader" and "extended subheader group" is not consistent in text

Suggested Remedy

Change last sentence of first paragraph as follows:

"The extended subheader group format is specified in Tables 13a, 13b and 13c. extended subheaders shall not be encrypted."

Change Figure 20I as follows:

"Extended sub-header group lengths in bytes (8 bits)""Extended sub-header type~~l~~ (7 bits)""Figure 20I—Extended subheader group format"

Change above Table 13a as follows:

"The fields of the extended subheader group structure are described in Table 13a."**Proposed Resolution****Recommendation: Accepted****Recommendation by**

Change last sentence of first paragraph as follows:

"The extended subheader group format is specified in Tables 13a, 13b and 13c. extended subheaders shall not be encrypted."

Change Figure 20I as follows:

"Extended sub-header group lengths in bytes (8 bits)""Extended sub-header type~~l~~ (7 bits)""Figure 20I—Extended subheader group format"

Change above Table 13a as follows:

"The fields of the extended subheader group structure are described in Table 13a."**Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Change last sentence of first paragraph as follows:

"The extended subheader group format is specified in Tables 13a, 13b and 13c. extended subheaders shall not be encrypted."

Change Figure 20I as follows:

"Extended sub-header group lengths in bytes (8 bits)""Extended sub-header type~~l~~ (7 bits)"

"Figure 20l—Extended subheader group format"

Change above Table 13a as follows:

"The fields of the extended subheader group structure are described in Table 13a."

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6017**

Comment submitted by: Phillip

Barber

Member

2005/07/14

Comment Type **Editorial**Starting Page # **32**Starting Line # **35**

Fig/Table#

Section **6.3.2.2.7**

Missing 'Figure' in the reference.

Suggested Remedy*[In 6.3.2.2.7 Extended subheader format, page 32, line 35, modify as:]*

The extended subheader group (see [Figure 20l](#)), when used, shall always appear immediately after the Generic MAC header and before all subheaders, and PN number (if MAC PDU is protected (i.e., when EC=1)), as described in 6.3.2.2. The extended subheader format is specified in Tables 13a, 13b and 13c. extended subheaders shall not be encrypted.

Proposed ResolutionRecommendation: **Accepted**

Recommendation by

[In 6.3.2.2.7 Extended subheader format, page 32, line 35, modify as:]

The extended subheader group (see [Figure 20l](#)), when used, shall always appear immediately after the Generic MAC header and before all subheaders, and PN number (if MAC PDU is protected (i.e., when EC=1)), as described in 6.3.2.2. The extended subheader format is specified in Tables 13a, 13b and 13c. extended subheaders shall not be encrypted.

Reason for Recommendation**Resolution of Group**Decision of Group: **Accepted***[In 6.3.2.2.7 Extended subheader format, page 32, line 35, modify as:]*

The extended subheader group (see [Figure 20l](#)), when used, shall always appear immediately after the Generic MAC header and before all subheaders, and PN number (if MAC PDU is protected (i.e., when EC=1)), as described in 6.3.2.2. The extended subheader format is specified in Tables 13a, 13b and 13c. extended subheaders shall not be encrypted.

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

Editor's Actions k) done

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6018**

Comment submitted by: Mark

Cudak

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **32** Starting Line # **39** Fig/Table# Section **6.3.2.2.7**

Current format and type values do not allow more than one extended subheader per extended subheader. This needs to be clarified.

Suggested Remedy

Add the following text to the first paragraph:

"There shall be no more than one extended subheader per extended subheader group, and no more than one extended subheader group per MAC PDU"

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

See comment 6019.

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6019**

Comment submitted by: Lei

Wang

Member

2005/07/14

Comment Type **Editorial** Starting Page # **32** Starting Line # **42** Fig/Table# Section **6.3.2.2.7**
 contribution C80216e-05_282 was accepted by the SBC in Chicago (comment #5069, supercedded by Comment #5067), but it was not correctly implemented in 16e/D9.

Figure 20L, the Rsv field is only one bit, but showing 8-bit long. Also, the bit mark in the entire Figure 20l is incorrect.

Suggested Remedy

see contribution C80216e-05_282r2 for a re-drawing of Figure 20L. The differences between 282r1 and 282 are marked as red, and the differences between r2 and r1 are marked as green.

Proposed Resolution

Recommendation: **Accepted-Modified**

Recommendation by

Adopt contribution C80216e-05_282r2 for a re-drawing of Figure 20L and additional text.

Change Table 13a as follows:

Table 13a - Extended subheader group format

Name	Size (bits)	Description
Extended subheader group length	8	The extended subheader Group Length field indicates the <u>total</u> length of the subheader group, including all the <u>extended</u> subheader, and including this the length byte
Reserved	1	Reserved = 0
Extended subheader type	7	Type of subheader as defined in Tables 13b (DL)and 13c (UL)
Extended subheader body	Variable	<u>The size of the extended subheader is determined by extended subheader type as spcified in Tables 13b and 13c.</u> The size of the extended subheader body is byte aligned

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Adopt contribution C80216e-05_282r2 for a re-drawing of Figure 20L and additional text.

Change Table 13a as follows:

Table 13a - Extended subheader group format

Name	Size (bits)	Description
Extended subheader group length	8	The extended subheader Group Length field indicates the total length of the subheader group, including all the extended subheader, and including this the length byte
Reserved	1	Reserved = 0
Extended subheader type	7	Type of subheader as defined in Tables 13b (DL)and 13c (UL)
Extended subheader body	Variable	The size of the extended subheader is determined by extended subheader type as spcified in Tables 13b and 13c. The size of the extended subheader body is byte aligned

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

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

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6020**

Comment submitted by: **Yongseok**

Jin

Other

2005/07/14

Comment Type **Editorial**

Starting Page # **35**

Starting Line #

Fig/Table# **13f**

Section **6.3.2.2.7.3**

The reference table index was changed before the last session.

Suggested Remedy

change 'Table 7b' to 'Table 7i' in the Feedback field.

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

change 'Table 7b' to 'Table 7i' in the Feedback field.

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

change 'Table 7b' to 'Table 7i' in the Feedback field.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6021**

Comment submitted by: Yongseok

Jin

Other

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **35** Starting Line # **3** Fig/Table# Section **6.3.2.2.7.3**
 Clarification of the language

Suggested Remedy

6.3.2.2.7.3 Feedback request extended subheader

Feedback request extended subheader shall be only sent by BS to ~~allocate~~provide UL ~~resource~~allocation for ~~obtaining the feedback value from an MS the Feedback header transmission.~~ and BS shall indicate the allocation of applied frame. ~~For each PDU in the DL, the BS shall indicate presence or absence of such subheader in the extended subheader bit(ESF).~~ The format of the Feedback request extended subheader is as described in Table 13f

Proposed Resolution**Recommendation: Accepted-Modified****Recommendation by**

Feedback request extended subheader shall be only sent by BS to ~~allocate~~provide UL ~~resource~~allocation for ~~obtaining the feedback value from an MS the Feedback header transmission.~~ ~~For each PDU in the DL, the BS shall indicate presence or absence of such subheader in the extended subheader bit(ESF).~~ The format of the Feedback request extended subheader is as described in Table 13f

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

Feedback request extended subheader shall be only sent by BS to ~~allocate~~provide UL ~~resource~~allocation for ~~obtaining the feedback value from an MS the Feedback header transmission.~~ ~~For each PDU in the DL, the BS shall indicate presence or absence of such subheader in the extended subheader bit(ESF).~~ The format of the Feedback request extended subheader is as described in Table 13f

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6022**

Comment submitted by: Yongseok

Jin

Other

2005/07/14

Comment Type Editorial Starting Page # 37 Starting Line # 22 Fig/Table# Section 6.3.2.2.7.7

The 'PDU SN Extended Subheader' in the contribution 05/115r3 was accepted during session #37. but still this was not reflected on IEEE802.16e/D9

Suggested Remedy

Insert the new description to Table 13b(DL) and Table 13c(UL)

Table 13b - Description of extended subheader types(DL)

ES Type	Name	ES body Size (byte)	Description
4	PDU SN(short) extended subheader	1	See 6.3.2.2.7.8
5	PDU SN(long) extended subheader	2	See 6.3.2.2.7.8
4 6-127	reserved		

Table 13c - Description of extended subheader types(UL)

ES Type	Name	ES body Size (byte)	Description
3	PDU SN(short) extended subheader	1	See 6.3.2.2.7.8
4	PDU SN(long) extended subheader	2	See 6.3.2.2.7.8
3 5-127	reserved		

Insert the following subclause after the section 6.3.2.2.7.7 SN request extended subheader

6.3.2.2.7.8 PDU SN extended subheader

Specify the PDU sequence number in a monotonic increasing manner. The format of the PDU SN extended subheader is as described in Table 13k and Table 13l.

Table 13k.PDU (short) SN extended subheader

Name	Length(bits)	Description
------	--------------	-------------

PDU SN (short)	8	Specify the PDU SN number
----------------	---	---------------------------

Table 13l.PDU SN (long) extended subheader

Name	Length(bits)	Description
PDU SN (long)	16	Specify the PDU SN number

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

Insert the new description to Table 13b(DL) and Table 13c(UL)
 Table 13b - Description of extended subheader types(DL)

ES Type	Name	ES body Size (byte)	Description
4	PDU SN(short) extended subheader	1	See 6.3.2.2.7.8
5	PDU SN(long) extended subheader	2	See 6.3.2.2.7.8
4 6-127	reserved		

Table 13c - Description of extended subheader types(UL)

ES Type	Name	ES body Size (byte)	Description
3	PDU SN(short) extended subheader	1	See 6.3.2.2.7.8
4	PDU SN(long) extended subheader	2	See 6.3.2.2.7.8
3 5-127	reserved		

Insert the following subclause after the section 6.3.2.2.7.7 SN request extended subheader

6.3.2.2.7.8 PDU SN extended subheader

Specify the PDU sequence number in a monotonic increasing manner. The format of the PDU SN extended subheader is as described in Table 13k and Table 13l.

Table 13k.PDU (short) SN extended subheader

Name	Length(bits)	Description
PDU SN (short)	8	Specify the PDU SN number

Table 13l.PDU SN (long) extended subheader

Name	Length(bits)	Description
PDU SN (long)	16	Specify the PDU SN number

the support of this subheader shall be negotiated like others.

Insert the new subclauses in the Table of 11.7.24 MAC header and extended subheader support (line 53 , page 534)

Type	Length	value	Scope
MAC header and extended support Type42	3 Bit #17 : PDU SN(short) extended subheader Bit #18 : PDU SN(long) extended subheader Bit # 17 19 - 23 : reserved	REGREQ/RSP REG-REQ/RSP

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Insert the new description to Table 13b(DL) and Table 13c(UL)

Table 13b - Description of extended subheader types(DL)

ES Type	Name	ES body Size (byte)	Description
4	PDU SN(short) extended subheader	1	See 6.3.2.2.7.8
5	PDU SN(long) extended subheader	2	See 6.3.2.2.7.8
4 6-127	reserved		

Table 13c - Description of extended subheader types(UL)

ES Type	Name	ES body Size (byte)	Description
3	PDU SN(short) extended subheader	1	See 6.3.2.2.7.8
4	PDU SN(long) extended subheader	2	See 6.3.2.2.7.8
5-127	reserved		

Insert the following subclause after the section 6.3.2.2.7.7 SN request extended subheader

6.3.2.2.7.8 PDU SN extended subheader

Specify the PDU sequence number in a monotonic increasing manner. The format of the PDU SN extended subheader is as described in Table 13k and Table 13l.

Table 13k.PDU (short) SN extended subheader

Name	Length(bits)	Description
PDU SN (short)	8	Specify the PDU SN number

Table 13l.PDU SN (long) extended subheader

Name	Length(bits)	Description
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Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6023**

Comment submitted by: Yerang

Hur

Other

2005/07/14

Comment Type **Technical non-binding** Starting Page # **39** Starting Line # **43** Fig/Table# **Table** Section **6.3.2.3**
 MOB_ASC-REPORT is missing in Table 14 , page 39. Refer to Table 108k, page 111 for definition of MOB_ASC-REPORT.

Suggested Remedy

[Add MOB_ASC-REPORT as indicated in Table 14:]

Type: [66](#)Message description: [MOB_ASC-REPORT](#)Connection: [Primary Management](#)**Proposed Resolution Recommendation: Accepted****Recommendation by**

[Add MOB_ASC-REPORT as indicated in Table 14:]

Type: [66](#)Message description: [MOB_ASC-REPORT](#)Connection: [Primary Management](#)**Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

[Add MOB_ASC-REPORT as indicated in Table 14:]

Type: [66](#)Message description: [MOB_ASC-REPORT](#)Connection: [Primary Management](#)**Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done

Using the message name as the message description did not seem appropriate; I inserted "Association result report message" instead.

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6024**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **40** Starting Line # **27** Fig/Table# Section **6.3.2.3.5**

[Identical comment submitted by Panyuh Joo and Jaehwan Chang]

During initial network entry or handover ranging, an MSS has no unique CID. MSS can get a basic CID and a primary CID from RNG-RSP after it sends RNG-REQ with MAC address and some TLV information. Therefore, BS shall provide sufficient allocation for RNG-REQ with at least MAC address to assign a Basic CID to the MSS.

If BS does not provide sufficient allocation and MSS needs to send a bandwidth request header for additional RNG-REQ transmission, what shall be the CID value in the header? Note that the BS cannot identify MSS using the initial ranging CID.

Suggested Remedy

[Modify the text as indicated.]

TLV message elements shall only be included in RNG-REQ messages of adequate UL bandwidth. In OFDMA, BS shall provide for initial RNG-REQ message allocation of size sufficient for transmission of RNG-REQ message with no TLVs at least MS MAC address TLV and bandwidth request header grant management subheader for piggyback bandwidth request.

[Add the following in line 13 of page 152.]

In OFDMA, when BS receives RNG-REQ message with grant management subheader over initial ranging connection, it shall provide UL resource for the subsequent RNG-REQ messages to be sent over basic connection.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

See comment 6026.

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6025**

Comment submitted by: Phillip

Barber

Member

2005/07/14

Comment	Type	Technical, Satisfied (was	Starting Page #	40	Starting Line #	32	Fig/Table#	Section	6.3.2.3.5
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I object to the resolution of comment 5104.

While resolution of the comment repaired the backwards compatibility problem; actually the text in D9 is now duplicate of text in 802.16-2004, page 49, paragraph 6, with the exception that the language for 'MAC Address' in D9 specifies 'MS' Mac Address. Since MS is also always an SS, the language in 802.16-2004 already specifies MAC Address be included in the exact same circumstances. So the language in D9 from line 32-38 is duplicate of language in the 802.16-2004 document. This is an error in the original remedy that should have simply specified deletion of the paragraph.

Suggested Remedy

[In 6.3.2.3.5 Ranging Request (RNG-REQ) message, page 40; delete lines 32-38]

Proposed ResolutionRecommendation: **Accepted**

Recommendation by

[In 6.3.2.3.5 Ranging Request (RNG-REQ) message, page 40; delete lines 32-38]

Reason for Recommendation**Resolution of Group**Decision of Group: **Superseded****Reason for Group's Decision/Resolution**

See comment 6026

Group's Notes**Group's Action Items****Editor's Notes**

Editor's Actions |) none needed

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6026**

Comment submitted by: Phillip

Barber

Member

2005/07/14

Comment Type Technical, Satisfied (was Starting Page # 40 Starting Line # 37 Fig/Table# Section 6.3.2.3.5

I object to the resolution of comment 5103.

The change to the text forces two RNG-REQ/RSP handshakes during handover, always. In fact, there are situations when the MS is using a pre-arranged, agreed handover code that the target BS can recognize and anticipate and, upon detection of the expected code in the right time and regions, allocate adequate bandwidth to conduct RNG-REQ including necessary mobility TLVs, which gets us back to a single RNG-REQ/RSP handshake. The penalty is transmitting the TLVs in a poor burst profile. The benefit is skipping re-tuning and and processing latency of the additional, unnecessary RNG-REQ/RSP handshake. Also, the change to D9 makes no requirement that future RNG-REQ must be conducted including necessary TLVs for mobility handover or Idle Mode re-entry. This breaks both of those features since MS will not longer be able to identify themselves as performing those actions during network entry.

We should revert the language to its previous form in D8.

Suggested Remedy

In 6.3.2.3.5 Ranging Request (RNG-REQ) message, page 40, lines 27-30, modify as:]

~~TLV message elements shall only be included in RNG-REQ messages of adequate UL bandwidth. BS shall provide for initial RNG-REQ message allocation of size sufficient for transmission of RNG-REQ message with no TLVs and bandwidth request header. TLV message elements shall only be included in RNG-REQ messages of adequate UL bandwidth. If required TLV message elements cannot be accommodated in the UL bandwidth of a current RNG-REQ message, the MS shall make UL BW request of sufficient size to conduct additional RNG-REQ including all required message elements, at the first available opportunity.~~

Proposed Resolution

Recommendation: **Accepted-Modified**

Recommendation by

[In 6.3.2.3.5 Ranging Request (RNG-REQ) message, page 40, lines 25 through page 41, line 50, replace as:]

All other parameters are coded as TLV tuples as defined in 11.5.

~~TLV message elements shall only be included in RNG-REQ messages of adequate UL bandwidth. In OFDMA, when the MS transmits the handover CDMA ranging code, BS shall provide for initial RNG-REQ message UL bandwidth allocation of size at least sufficient for transmission of RNG-REQ message with no TLVs MS MAC address TLV and Grant Management subheader and bandwidth request header. If required TLV message elements cannot be accommodated in the UL bandwidth of a current RNG-REQ message, after the MS obtains a Basic CID from the BS, the MS shall make UL BW request of sufficient size to conduct additional RNG-REQ including all required message elements, at the first available opportunity.~~

The following parameters shall be included in the RNG-REQ message when the SS is attempting ~~to join the network~~initial entry to the network:

Requested Downlink Burst Profile
SS MAC Address

The following parameters shall be included in the RNG-REQ message when transmitted during ~~initial ranging~~SS initial entry to the network. ~~The parameter shall be sent~~ on the SS's Basic connection:

MAC Version (11.1.3)

The following parameters may be included in the RNG-REQ message after the SS has received an RNG-RSP addressed to the SS:

The following parameters may be included in the RNG-REQ message after the SS has received an RNG-RSP addressed to the SS.

Requested Downlink Burst Profile
Ranging Anomalies

The following parameter may be included in the RNG-REQ message:

AAS broadcast capability

The following parameters may be included in the RNG-REQ message when the MS is attempting to perform re-entry, association or handover:

Requested Downlink Burst Profile

The following parameters shall be included in the RNG-REQ message when the MS is attempting to perform re-entry, association or handover:

Serving BSID

The ~~BS ID~~ BSID of the BS to which the MS is currently connected (has completed the registration cycle and is in Normal Operation). The serving BSID shall not be included if the aging timer is timed-out (serving BSID AGINGTIMER, see Table 264a). Inclusion of serving BSID in the RNG-REQ message signals to the target BS that the MS is currently connected to the network through the serving BS and is performing association or is in the process of handover network re-entry.

The following TLV parameter shall be included in the RNG-REQ message when the MS is attempting to perform re-entry, ~~or~~ handover, or Location Update:

Ranging Purpose Indication

Presence of item in message indicates MS action as follows:

If bit #0 is set to 1, in combination with serving BS ID BSID indicates the MS is currently attempting to HO; or in combination with

Paging Controller ID the MS is attempting Network Re-entry from Idle Mode to the BS.

If bit #1 is set to 1, indicates MS action of Idle Mode Location Update Process

The following TLV parameter shall be included in the RNG-REQ message when the MS is attempting to perform re-entry:

Paging Controller ID

The Paging Controller ID is a logical network identifier for the serving BS or other network entity retaining MS service and operational information and/or administering paging activity for the MS while in Idle Mode.

The following TLV parameter may be included in RNG-REQ message when a MS is performing initial ranging to the selected target BS:

HO_ID

Optional ID assigned for use in initial ranging to the target BS during HO once the BS is selected as the target BS (see 6.3.20.5).

The following parameters may be included in the RNG-REQ message when the MS is attempting to perform re-entry, association or handover:

MS MAC Address

MS MAC Address shall be included if HO_ID is omitted.

The following TLV parameter may be included in the RNG-REQ message when MS is attempting to perform Location Update:

MAC Hash Skip Threshold

Maximum number of successive MOB_PAG-ADV messages that may be sent from a BS without individual notification for an MS.

including MAC address hash of an MS for which Action Code is 00, 'No Action Required'.

The following TLV parameter shall be included in the RNG-REQ message when the MS is attempting to perform Location Update due to power down:

Power Down Indicator

Indicates the MS is currently attempting to perform Location Update due to power down.

The following parameter may be included in RNG-REQ message when the MS is attempting to perform handover and needs to inform target BS of its preference to continue in Sleep Mode after handover to target BS.

Power Saving Class Parameters

Compound TLV to specify Power Saving Class operation.

The following parameter may be included in the RNG-REQ message when the MS is attempting to perform network re-entry or handover and the MS has a valid HMAC/CMAC Tuple necessary to expedite security authentication.

HMAC/CMAC Tuple (see 11.1.2)

The HMAC/CMAC Tuple shall be the last attribute in the message.

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

[In 6.3.2.3.5 Ranging Request (RNG-REQ) message, page 40, lines 25 through page 41, line 50, replace as:]

All other parameters are coded as TLV tuples as defined in 11.5.

TLV message elements shall only be included in RNG-REQ messages of adequate UL bandwidth. In OFDMA, when the MS transmits the handover CDMA ranging code, BS shall provide for initial RNG-REQ message UL bandwidth allocation of size at least sufficient for transmission of RNG-REQ message with ~~no TLVs~~ MS MAC address TLV and Grant Management subheader and bandwidth request header. If required TLV message elements cannot be accommodated in the UL bandwidth of a current RNG-REQ message, after the MS obtains a Basic CID from the BS, the MS shall make UL BW request of sufficient size to conduct additional RNG-REQ including all required message elements, at the first available opportunity.

The following parameters shall be included in the RNG-REQ message when the SS is attempting ~~to join the network~~ initial entry to the network:

Requested Downlink Burst Profile

SS MAC Address

The following parameters shall be included in the RNG-REQ message when transmitted during ~~initial ranging~~ SS initial entry to the network. The ~~parameter shall be sent~~ on the SS's Basic connection:

MAC Version (11.1.3)

The following parameters may be included in the RNG-REQ message after the SS has received an RNG-RSP addressed to the SS:

Requested Downlink Burst Profile

Requested Downlink Burst Profile
Ranging Anomalies

The following parameter may be included in the RNG-REQ message:

AAS broadcast capability

The following parameters may be included in the RNG-REQ message when the MS is attempting to perform re-entry, association or handover:

Requested Downlink Burst Profile

The following parameters shall be included in the RNG-REQ message when the MS is attempting to perform re-entry, association or handover:

Serving BSID

The ~~BS ID~~ BSID of the BS to which the MS is currently connected (has completed the registration cycle and is in Normal Operation).

The serving BSID shall not be included if the aging timer is timed-out (serving BSID AGINGTIMER, see Table 264a). Inclusion of serving BSID in the RNG-REQ message signals to the target BS that the MS is currently connected to the network through the serving BS and is performing association or is in the process of handover network re-entry.

The following TLV parameter shall be included in the RNG-REQ message when the MS is attempting to perform re-entry, ~~or~~ handover, or Location Update:

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6027**

Comment submitted by: Mark

Cudak

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **40** Starting Line # **39** Fig/Table# Section **6.3.2.3.5**

Section 6.3.2.3.5 states that the Serving BSID must be included in RNG-REQ messages, even for network re-entry. Note that the mentioned re-entry can only refer to re-entry after idle mode or re-entry after a disconnect, because handover is mentioned as a separate case. But when re-entering from idle mode or after a disconnect, there is no Serving BSID because the MS is not connected to the network.

Suggested Remedy

Change the text on page 40, line 39 as follows:

"The following parameters shall be included in the RNG-REQ message when the MS is attempting to perform ~~re-entry~~, association or handover:"

Proposed Resolution Recommendation: Accepted

Recommendation by

Change the text on page 40, line 39 as follows:

"The following parameters shall be included in the RNG-REQ message when the MS is attempting to perform ~~re-entry~~, association or handover:"

Reason for Recommendation

Resolution of Group

Decision of Group: Rejected

Reason for Group's Decision/Resolution

Vote: 8-3

Network re-entry is considered a part of HO process, for example in 6.3.21.2 HO process

"Network re-entry proceeds per 6.3.9.5 ... etc."

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6028**

Comment submitted by: Mark

Cudak

Member

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	40	Starting Line #	52	Fig/Table#	Section	6.3.2.3.5
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Section 6.3.2.3.5 states that the "Ranging Purpose Indication TLV" shall be included in the RNG-REQ when the MS attempts re-entry or handover. However, the content of the TLV suggests that it shall also be included when location update is performed. The same can be said for the HMAC Tuple.

Suggested Remedy

Change text on page 40, line 52 as follows:

"The following TLV parameter shall be included in the RNG-REQ message when the MS is attempting to perform re-entry, [location update](#) or handover:"

Also, change text on page 41, line 41 as follows:

"The following parameter may be included in the RNG-REQ message when the MS is attempting to perform network re-entry, [location update](#) or handover and the MS has a valid HMAC Tuple necessary to expedite security authentication."

Proposed Resolution Recommendation: Accepted**Recommendation by**

Change text on page 40, line 52 as follows:

"The following TLV parameter shall be included in the RNG-REQ message when the MS is attempting to perform re-entry, [location update](#) or handover:"

Also, change text on page 41, line 41 as follows:

"The following parameter may be included in the RNG-REQ message when the MS is attempting to perform network re-entry, [location update](#) or handover and the MS has a valid HMAC Tuple necessary to expedite security authentication."

Reason for Recommendation**Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution**

See comment 6026.

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6029**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	41	Starting Line #	38	Fig/Table#	Section	6.3.2.3.5
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During last BRG meeting, MAC version TLV was removed from being used in RNG-REQ without basic CID because current 2004 specification already include MAC version TLV used in RNG-REQ (but should be with basic CID).

Up to now, TGe has been working hard for reducing handover delay, but above change harms on those efforts since MS should try for redundant RNG-REQ with MAC version and basic CID after successful handover ranging.

And, I also understand the persons concerning on duplicated and unclear description of MAC version TLV in a message of RNG-REQ since the previous line only says MAC version may be included in RNG-REQ TLV. Therefore, I suggest to include more clear description about including MAC version TLV in RNG-REQ should be possible during network re-entry before acquiring Basic CID.

Suggested Remedy

[Add the following text at line 38, page 41 after lines about Power_Saving_Class_Parameters including description]

During network re-entry for handover or returning from Idle mode, MAC version(11.1.3) may be included in RNG-REQ message before acquiring MS's basic connection.

And after MS transmits RNG-REQ message with MAC version(11.1.3) before acquiring basic CID during network re-entry, MS is allowed not to transmit RNG-REQ message with MAC version and MS's basic CID during network re-entry.

Proposed Resolution	Recommendation:	Recommendation by
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Reason for Recommendation

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

See comment 6026.

Group's Notes

Group's Action Items

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

2005/08/12

IEEE 802.16-045r4

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6030**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type Editorial Starting Page # 41 Starting Line # 41 Fig/Table# 37k Section 6.3.2.3.5

HMAC Tuple should be changed to HMAC/CMAC Tuple in RNG-REQ, RNG-RSP, MOB_SLP-REQ, MOB_SLP-RSP, MOB_SCN-REQ, MOB_SCN-RSP, MOB_SCN-REP, MOB_BSHO-REQ, MOB_MSHO-REQ, MOB_BSHO-RSP, MOB_HO-IND, and so on.

Suggested Remedy

[Change the text from line 41 through 49 in page 41 to:]

The following parameter may be included in the RNG-REQ message when the MS is attempting to perform network re-entry or handover and the MS has a valid HMAC/CMAC Tuple necessary to expedite security authentication.

HMAC/CMAC Tuple (see 11.1.2)

The HMAC/CMAC Tuple shall be the last attribute in the message.

[Change the text from line 43 through 51 in page 60 to:]

The following parameter, necessary to expedite security authentication, shall be included in the RNG-RSP message when the BS notifies the MS through the HO Process Optimization TLV that the PKM-REQ/RSP sequence may be omitted for the current HO re-entry attempt, or when the BS wishes to acknowledge a valid HMAC/CMAC Tuple in the acknowledged RNG-REQ management message:

HMAC/CMAC Tuple (see 11.1.2)

The HMAC/CMAC Tuple shall be the last attribute in the message.

[Change the text from line 26 through 27 in page 90 to:]

[Change the text from line 25 through 26 in page 94 to:]

[Change the text from line 25 through 26 in page 104 to:]

[Change the text from line 56 through 58 in page 110 to:]

[Change the text from line 26 through 27 in page 120 to:]

[Change the text from line 21 through 22 in page 124 to:]

[Change the text from line 39 through 40 in page 131 to:]

[Change the text from line 8 through 9 in page 134 to:]

[Change the text from line 37 through 40 in page 120 to:]

HMAC/CMAC Tuple (see 11.1.2)

The HMAC/CMAC Tuple shall be the last attribute in the message.

[Change the text from line 33 through 37 in page 107 to:]

The MOB_SCN-REQRSP message shall include the following parameters encoded as TLV tuples:

HMAC/CMAC Tuple (see 11.1.2)

The HMAC/CMAC Tuple shall be the last attribute in the message.

[Change all the HMAC in page 181, 199, and 200 to:]
HMAC/CMAC Tuple

Proposed Resolution **Recommendation: Accepted**

Recommendation by

[Change the text from line 41 through 49 in page 41 to:]

The following parameter may be included in the RNG-REQ message when the MS is attempting to perform network re-entry or handover and the MS has a valid HMAC/CMAC Tuple necessary to expedite security authentication.

HMAC/CMAC Tuple (see 11.1.2)

The HMAC/CMAC Tuple shall be the last attribute in the message.

[Change the text from line 43 through 51 in page 60 to:]

The following parameter, necessary to expedite security authentication, shall be included in the RNG-RSP message when the BS notifies the MS through the HO Process Optimization TLV that the PKM-REQ/RSP sequence may be omitted for the current HO re-entry attempt, or when the BS wishes to acknowledge a valid HMAC/CMAC Tuple in the acknowledged RNG-REQ management message:

HMAC/CMAC Tuple (see 11.1.2)

The HMAC/CMAC Tuple shall be the last attribute in the message.

[Change the text from line 26 through 27 in page 90 to:]

[Change the text from line 25 through 26 in page 94 to:]

[Change the text from line 25 through 26 in page 104 to:]

[Change the text from line 56 through 58 in page 110 to:]

[Change the text from line 26 through 27 in page 120 to:]

[Change the text from line 21 through 22 in page 124 to:]

[Change the text from line 39 through 40 in page 131 to:]

[Change the text from line 8 through 9 in page 134 to:]

[Change the text from line 37 through 40 in page 120 to:]

HMAC/CMAC Tuple (see 11.1.2)

The HMAC/CMAC Tuple shall be the last attribute in the message.

[Change the text from line 33 through 37 in page 107 to:]

The MOB_SCN-REQ/RSP message shall include the following parameters encoded as TLV tuples:

HMAC/CMAC Tuple (see 11.1.2)

The HMAC/CMAC Tuple shall be the last attribute in the message.

[Change all the HMAC in page 181, 199, and 200 to:]
HMAC/CMAC Tuple

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

[Change the text from line 41 through 49 in page 41 to:]

The following parameter may be included in the RNG-REQ message when the MS is attempting to perform network re-entry or handover and the MS has a valid HMAC/CMAC Tuple necessary to expedite security authentication.

HMAC/CMAC Tuple (see 11.1.2)

The HMAC/CMAC Tuple shall be the last attribute in the message.

[Change the text from line 43 through 51 in page 60 to:]

The following parameter, necessary to expedite security authentication, shall be included in the RNG-RSP message when the BS notifies the MS through the HO Process Optimization TLV that the PKM-REQ/RSP sequence may be omitted for the current HO re-entry attempt, or when the BS wishes to acknowledge a valid HMAC/CMAC Tuple in the acknowledged RNG-REQ management message:

HMAC/CMAC Tuple (see 11.1.2)

The HMAC/CMAC Tuple shall be the last attribute in the message.

[Change the text from line 26 through 27 in page 90 to:]

[Change the text from line 25 through 26 in page 94 to:]

[Change the text from line 25 through 26 in page 104 to:]

[Change the text from line 56 through 58 in page 110 to:]

[Change the text from line 26 through 27 in page 120 to:]

[Change the text from line 21 through 22 in page 124 to:]

[Change the text from line 39 through 40 in page 131 to:]

[Change the text from line 8 through 9 in page 134 to:]

[Change the text from line 37 through 40 in page 120 to:]

HMAC/CMAC Tuple (see 11.1.2)

The HMAC/CMAC Tuple shall be the last attribute in the message.

[Change the text from line 33 through 37 in page 107 to:]

The MOB_SCN-~~REQ~~RSP message shall include the following parameters encoded as TLV tuples:

HMAC/CMAC Tuple (see 11.1.2)

The HMAC/CMAC Tuple shall be the last attribute in the message.

The HMAC/CMAC Tuple shall be the last attribute in the message.

[Change all the HMAC in page 181, 199, and 200 to:]
HMAC/CMAC Tuple

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6031**

Comment submitted by: Kiseon

Ryu

Other

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **43** Starting Line # **4** Fig/Table# Section **6.3.2.3.6**

Correction :

If a BS receives RNG-REQ including MAC Hash Skip Threshold TLV from Idle MS performing Paging Group Update, the BS shall include MAC Hash Skip Threshold in RNG-RSP in order to provide the MS with updated MAC Hash Skip Threshold TLV parameter.

Suggested Remedy

1. Modify the text at page 43, line 4 - 15, as follows :

The following parameter ~~may~~ shall be included in RNG-RSP message transmitted ~~in response to~~ when a BS receives RNG-REQ message containing MAC Hash Skip Threshold:

MAC Hash Skip Threshold

Maximum number of successive MOB_PAG-ADV messages that may be sent from a BS without individual notification for an MS, including MAC address hash of an MS for which Action Code for the MS is 00, 'No Action Required'. ~~If BS does not include this TLV item in the RNG-RSP message, any BS may omit MAC Address Hash of the MS with Action Code 00, 'No Action Required' from any MOB_PAG-ADV message.~~

2. Modify the text in 11.6 RNG-RSP management message encodings at page 523, line 30-41, as follows :

Table 367.RNG-RSP message encodings

Name	Type(1 byte)	Length	Value(variable-length)
MAC Hash Skip Threshold	28	1	Maximum number of successive MOB_PAG-ADV messages that may be sent from a BS without individual notification for an MS, including MAC address hash of an MS for which Action Code for the MS is 00, 'No Action Required'. If BS does not include this TLV item in the RNG-RSP message, any BS may omit MAC Address Hash of the MS with Action Code 00, 'No Action Required' from any MOB_PAG-ADV message.

Proposed Resolution

Recommendation: **Accepted-Modified**

Recommendation by

1. Modify the text at page 43, line 4 - 15, as follows :

The following parameter may be included in RNG-RSP message transmitted in response to RNG-REQ message containing MAC Hash Skip Threshold:

MAC Hash Skip Threshold

Maximum number of successive MOB_PAG-ADV messages that may be sent from a BS without individual notification for an MS, including MAC address hash of an MS for which Action Code for the MS is 00, 'No Action Required'. ~~If BS does not include this TLV item in the RNG-RSP message, any BS may omit MAC Address Hash of the MS with Action Code 00, 'No Action Required' from any MOB_PAG-ADV message.~~

2. Modify the text in 11.6 RNG-RSP management message encodings at page 523, line 30-41, as follows :

Table 367.RNG-RSP message encodings

Name	Type(1 byte)	Length	Value(variable-length)
MAC Hash Skip Threshold	28	1	Maximum number of successive MOB_PAG-ADV messages that may be sent from a BS without individual notification for an MS, including MAC address hash of an MS for which Action Code for the MS is 00, 'No Action Required'. If BS does not include this TLV item in the RNG-RSP message, any BS may omit MAC Address Hash of the MS with Action Code 00, 'No Action Required' from any MOB_PAG-ADV message.

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

1. Modify the text at page 43, lines 12 - 15, as follows :

MAC Hash Skip Threshold

Maximum number of successive MOB_PAG-ADV messages that may be sent from a BS without individual notification for an MS, including MAC address hash of an MS for which Action Code for the MS is 00, 'No Action Required'. ~~If BS does not include this TLV item in the RNG-RSP message, any BS may omit MAC Address Hash of the MS with Action Code 00, 'No Action Required' from any MOB_PAG-ADV message.~~

2. Modify the text in 11.6 RNG-RSP management message encodings at page 523, line 30-41, as follows :

Table 367.RNG-RSP message encodings

Name	Type(1 byte)	Length	Value(variable-length)
MAC Hash Skip Threshold	28	1	Maximum number of successive MOB_PAG-ADV messages that may be sent from a BS without individual notification for an MS, including MAC address hash of an

MS for which Action Code for the MS is 00,
'No Action Required'. ~~If BS does not include
this TLV item in the RNG-RSP message,
any BS may omit MAC Address Hash of the
MS with Action Code 00, 'No Action
Required' from any MOB_PAG-ADV message.~~

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6032**

Comment submitted by: Kiseon

Ryu

Other

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	43	Starting Line #	26	Fig/Table#	Section	6.3.2.3.6
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Correction :

Power_Saving_Class_Parameters TLV in RNG-RSP is only to activate Power Saving Class of type 3. When a BS receives RNG-REQ with Power_Saving_Class_Parameters TLV from MS performing HO, the BS shall send unsolicited MOB_SLP-RSP after completing network re-entry procedure with the MS.

Suggested Remedy

Modify the text at page 43, line 26 - 28, as follows :

The following parameter may be included in RNG-RSP message by the BS ~~during handover process to inform the MS of its Sleep mode operation~~ to activate Power Saving Class of type 3.

Power_Saving_Class_Parameters

Compound TLV to specify Power Saving Class operation.

Proposed Resolution Recommendation: Accepted-Modified**Recommendation by**

Modify the text at page 43, line 26 - 28, as follows :

The following parameter may be included in RNG-RSP message by the BS ~~during handover process to inform the MS of its Sleep mode operation~~ to activate or deactivate Power Saving Class of type 2 and type 3.

Power_Saving_Class_Parameters

Compound TLV to specify Power Saving Class operation.

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

Modify the text at page 43, line 26 - 28, as follows :

The following parameter may be included in RNG-RSP message by the BS ~~during handover process to inform the MS of its Sleep mode operation~~ to activate or deactivate Power Saving Class of type 2 and type 3.

Power_Saving_Class_Parameters

Compound TLV to specify Power Saving Class operation.

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

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6033**

Comment submitted by: Phillip

Barber

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **47** Starting Line # **11** Fig/Table# **26** Section **6.3.2.3.9**

I object to the resolution of comment 5115.

Should not have removed 'EAP Start' from Table 26. EAP start still exists: 6.3.2.3.9.27 EAP start. Need appropriate entry in Table 26.

These are two different messages. The former (PKMv2-EAP Start message) carries no fixed field and is used to initiate an EAP-based authentication or re-authentication. The latter (EAP-Start message) carries two different fixed fields which is used only in re-authentication procedure

Suggested Remedy

Add Code = 29 for 'EAP Start' message into Table 26

Also update the reserved value appropriately

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Vote: 3-0

The same EAP start message serves both purposes.

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6034**

Comment submitted by: Phillip

Barber

Member

2005/07/14

Comment Type Technical, Satisfied (was Starting Page # **48** Starting Line # **45** Fig/Table# **37c** Section **6.3.2.3.9.13**

PKMv2 RSA-Reject message contains SigBS, but no BS certificate. And MS has no way to receive any BS certificate before it receives this message. without BS certificate, MS can not authenticate the SigBS.

Signature is used to prove that the message truly comes from the right sender. So usually the signature should be based on some private information such as a private key. It is just like endorsing your bill or files in your own signature and you'll never expect your signature be imitated by anyone else. MS's public key can be obtained by everyone; that's why it is named "public key", so signature with a public key can be calculated by everyone. That means it useless, and it proves nothing. So we need BS certificate.

Suggested Remedy

Add "BS_Certificate" attribute into PKMv2 RSA-Reject message, and modify the Table 37c as follows:

Table 37c-- PKMv2 RSA-Reject attribute

Attribute	contents
MS_Random	A 64 bit random number generated in the MS
BS_Random	A 64 bit random number generated in the BS
Error-Code	Error code identifying reason for rejection of authorization request
BS_Certificate	Contains the BS's X.509 certificate
Display-String(optional)	Display string providing reason for rejection of authorization request
SigBS	An RSA signature over all the other attributes in the message

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

Add "BS_Certificate" attribute into PKMv2 RSA-Reject message, and modify the Table 37c as follows:

Table 37c-- PKMv2 RSA-Reject attribute

Attribute	contents
MS_Random	A 64 bit random number generated in the MS
BS_Random	A 64 bit random number generated in the BS
Error-Code	Error code identifying reason for rejection of authorization request
BS_Certificate	Contains the BS's X.509 certificate
Display-String(optional)	Display string providing reason for rejection of authorization request
SigBS	An RSA signature over all the other attributes in the message

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6035**

Comment submitted by: Phillip

Barber

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **49** Starting Line # **20** Fig/Table# **37d** Section **6.3.2.3.9.14**

MS/BS_Random has been added into PKMv2-Request, PKMv2-Reply, PKMv2-Reject, and PKMv2 -Acknowledgement messages to protect against replay attack just as a challenge. But "MS-Random" in PKMv2 Acknowledgement message is meaningless, because no message is responded to it which means no message is about to be protected. So "MS-Random" in PKMv2 Acknowledgement message is redundant.

Since different message has different CMAC_PN which never repeated in the context of one AK, it truly is enough to protect from replay attack. Is there one example to show that CMAC_PN is not enough to provide adequate security from replay attacks?

Suggested Remedy

remove "MS_Random" from table 37d

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

remove "MS_Random" from table 37d

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6036**

Comment submitted by: Jeff

Mandin

Member

2005/07/14

Comment	Type Technical, Non-binding	Starting Page # 49	Starting Line # 41	Fig/Table#	Section 6.3.2.3.9.15
---------	------------------------------------	---------------------------	---------------------------	------------	-----------------------------

EAP start appears twice

Suggested Remedy

1 First:

In section 6.3.2.3.9.27 change "code" value from "29" to "17"

2. Then: Replace section 6.3.2.3.9.15 with 6.3.2.3.9.27 (ie. move it so that 6.3.2.3.9.27 is no longer there)

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

Reason for Recommendation

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

1. Delete section 6.3.2.3.9.27

2. Replace section 6.3.2.3.9.15 with the following:

6.3.2.3.9.15 PKMv2 EAP start

In the case of EAP re-authentication, using EAP methods deriving keys, "HMAC Digest/CMAC Digest" and "Key Sequence Number" attributes shall be included. At initial EAP authentication, these attributes are omitted.

Code: 17
Attributes are shown in Table xx.

Table xx — PKMv2 EAP-Start attributes

Attribute	Contents
Key Sequence Number	AK sequence number
HMAC Digest/CMAC Digest	Message digest calculated using AK

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

2005/08/12

IEEE 802.16-045r4

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: 802.16e/D9

Ballot Number: 0001056

Comment Date

Comment # 6037

Comment submitted by: Jeff

Mandin

Member

2005/07/14

Comment	Type Editorial	Starting Page # 50	Starting Line # 21	Fig/Table#	Section 6.3.2.3.9.17
---------	----------------	--------------------	--------------------	------------	----------------------

Authenticated EAP description text is unclear

Suggested Remedy

Modify line 24:

This message ~~is can be used in case of negotiating for~~ Authenticated EAP-based authorization as authorization policy ~~(if this was specified by Authorization Policy Support negotiated included in the SBC-REQ/RSP exchange message) between an MS and the BS.~~ Moreover, if EIK is available and ~~Specifically, when~~ an MS or BS has an EAP payload received from an EAP method protocol for transmission ~~after an authentication established EIK,~~ it encapsulates the EAP payload in a PKMv2 Authenticated EAP Transfer message.

Modify line 46:

HMAC Digest/CMAC Digest

Modify line 55:

Inclusion of the CMAC or HMAC-Digest allows the MS and BS to cryptographically bind previous authorization and following EAP authentication by authenticating the EAP payload. ~~The CMAC-Digest's or HMAC-Digest's authentication key is derived from the EIK.~~ The key for the CMAC-Value or HMAC-Digest is derived from the EIK.

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

Reason for Recommendation

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

Modify line 24:

This message ~~is can be used in case of negotiating for~~ Authenticated EAP-based authorization as authorization policy ~~(if this was specified by Authorization Policy Support negotiated included in the SBC-REQ/RSP exchange message) between an MS and the BS.~~ Moreover, if EIK is available and ~~Specifically, when~~ an MS or BS has an EAP payload received from an EAP method protocol for transmission ~~after an authentication established EIK,~~ it encapsulates the EAP payload in a PKMv2 Authenticated EAP Transfer message.

Modify line 46:

HMAC Digest/CMAC Digest

Modify line 55:

Inclusion of the CMAC or HMAC-Digest allows the MS and BS to cryptographically bind previous authorization and following EAP authentication by authenticating the EAP payload. ~~The CMAC-Digest's or HMAC-Digest's authentication key is derived from the EIK.~~ **The key for the CMAC-Value or HMAC-Digest is derived from the EIK.**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6038**Comment submitted by: **Seokheon**

Cho

Other

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **50** Starting Line # **60** Fig/Table# Section **6.3.2.3.9.18**

In general, the CMAC/HMAC-Digest is used to authenticate PKM-related MAC messages and the CMAC/HMAC Tuple is used to authenticate the other MAC messages.

The CMAC/HMAC Tuple included in the PKM-related MAC messages should be changed to the CMAC/HMAC-Digest.

Suggested Remedy

Adopt the contribution C802.16e-05/341.

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

Adopt the contribution C802.16e-05/341r1

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6039**

Comment submitted by: **Panyuh**

Joo

Member

2005/07/14

Comment Type **Editorial**

Starting Page # **51**

Starting Line # **18**

Fig/Table# **37g**

Section **6.3.2.3.9.18**

CMAC/HMAC tuple should be the last attribute in the PKMv2 SA-TEK-Challenge message.

Suggested Remedy

move the row of CMAC tuple / HMAC tuple attribute to the last row of table 37g

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Superseded

Reason for Group's Decision/Resolution

See 6350

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6040**

Comment submitted by: **Kiseon**

Ryu

Other

2005/07/14

Comment Type **Editorial** Starting Page # **51** Starting Line # **27** Fig/Table# Section **6.3.2.3.9.18**

Editorial :
What is the RK sequence number?

Suggested Remedy

Replace "RK" with "AK" as follows:

The CMAC key sequence number/HMAC key sequence number included in the CMAC Tuple/HMAC Tuple should be equal to the newly assigned ~~RK~~ AK sequence number.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

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

Reason for Group's Decision/Resolution

See [6350](#)

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6041**

Comment submitted by: Jeff

Mandin

Member

2005/07/14

Comment Type **Editorial**

Starting Page # **51**

Starting Line # **31**

Fig/Table#

Section **6.3.2.3.9.19**

Clarification

Suggested Remedy

Modify line 33:

The PKMv2 SA-TEK_Request proves liveness of the MS and its possession of the AK to the BS.

If this message is being generated upon following HO, then it constitutes a request for establishment (in the target BS) of TEKs, GTEKs and GKEKs for at the MS and renewal of active primary, static and dynamic SAs and associated SAIDs used by the MS in its previous serving BS.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Modify line 33:

The PKMv2 SA-TEK_Request proves liveness of the MS and its possession of the AK to the BS.

If this message is being generated upon following HO, then it constitutes a request for establishment (in the target BS) of TEKs, GTEKs and GKEKs for at the MS and renewal of active primary, static and dynamic SAs and associated SAIDs used by the MS in its previous serving BS.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions) none needed

Text completely re-written by another comment.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: 802.16e/D9

Ballot Number: 0001056

Comment Date

Comment # 6042

Comment submitted by: Jeff

Mandin

Member

2005/07/14

Comment Type Technical, Non-binding Starting Page # 52 Starting Line # 7

Fig/Table# 37h Section 6.3.2.3.9.19

Clarifications:

- Not clear what we consider to be a "new handshake"
- emphasize that the capabilities exchange is for confirmation purposes
- clean up

Suggested Remedy

1. Add a footnote to the text on line 10 thusly.

"A 64-bit number chosen by the MS freshly for every new handshake." ¹

¹ Receipt of a new BS Random value in SA-TEK-Challenge or SA-Challenge tuple indicates the beginning of a new handshake

2. Modify line 13:

~~This identifies the AK to the BS that was used for protecting this message~~

3. Modify line 17:

~~Confirms~~ Describes requesting MS's security capabilities (see 11.8.4)

4. Modify line 18:

CMAC/HMAC Tuple | Message integrity tuple ~~code~~ of this message (using the MAC key derived from the AK identified by AKID)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

1. Add a footnote to the text on line 10 thusly.

"A 64-bit number chosen by the MS freshly for every new handshake." ¹

¹ Receipt of a new BS Random value in SA-TEK-Challenge or SA-Challenge tuple indicates the beginning of a new handshake

2. Modify line 13:

This identifies the AK to the BS that was used for protecting this message

3. Modify line 17:

~~Confirms~~ Describes requesting MS's security capabilities (see 11.8.4)

4. Modify line 18:

CMAC/HMAC Tuple | Message integrity tuple code of this message (using the MAC key derived from the AK identified by AKID)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6043**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **52** Starting Line # **17** Fig/Table# **37h** Section **6.3.2.3.9.19**

Security Negotiation Parameters attribute can be included in SA-TEK-Request/Response. However, MS and BS negotiates MAC mode as CMAC, these attributes are not necessary.

Suggested Remedy

Option 1: Remove the row of "Security Negotiation Parameters" in table 37h and 37i.

Option 2: Limit the use of Security Negotiation Parameters attribute for HMAC only.

[change the contents column of the Security Negotiation Parameters on line 17 in Table 37h and on line 59 in Table 37i to:]

Describes requesting MS's security capabilities (see 11.8.4). This attribute is included only when HMAC is chosen for the MAC mode.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Rejected****Reason for Group's Decision/Resolution**Vote: **Vote 3-0**

Commenter misunderstood the purpose of the security negotiation attributes

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6044**

Comment submitted by: **Jeff**

Mandin

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **52** Starting Line # **17** Fig/Table# **37h** Section **6.3.2.3.9.19**

It's confusing that there is a "security capabilities" TLV and then there is a "security negotiation parameters" TLV.

Suggested Remedy

Rename the "Security Negotiation parameters" TLV to "PKM capabilities".

Specifically:

1. Rename section 11.8.4 to "PKM capabilities"
2. Add "PKM-REQ, PKM-RSP" to the 'Scope" column on page 545 line 25
3. Page 52 line 17: Change "Security Negotiation parameters" to PKM capabilities

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Withdrawn**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6045**

Comment submitted by: **Panyuh**

Joo

Member

2005/07/14

Comment Type **Editorial**

Starting Page # **52**

Starting Line # **18**

Fig/Table# **37h**

Section **6.3.2.3.9.19**

CMAC/HMAC should be CMAC Tuple/HMAC Tuple.

Suggested Remedy

[change the attribute name of the last row to :]

CMAC tuple/HMAC tuple

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Superceded

Reason for Group's Decision/Resolution

See 6042

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6046**

Comment submitted by: Jeff

Mandin

Member

2005/07/14

Comment

Type Editorial

Starting Page # 52

Starting Line # 40

Fig/Table# 37i

Section 6.3.2.3.9.20

Corrections to last msg of 3way handshake

Suggested Remedy

Modify table 37i as follows:

Attribute	Contents
MS_Random	The number received from the MS
BS_Random	The random number included in the PKMv2 SA-TEK-Challenge message or SA-Challenge TLV.
AKID	This identifies the AK to the MS that was used for protecting this message.
SA_TEK_Update	A compound TLV list each of which specifies an SA identifier (SAID) and additional properties of the SA that the MS is authorized to access. This compound field may be present at the reentry. Additionally, in case of HO, for each active SA in previous serving BS, corresponding TEK, GTEK and GKEK parameters are also included.
Frame Number	An absolute frame number in which the old PMK and all its associated AKs should be discarded.
(one or more) SA-Descriptor(s)	Each compound SA-Descriptor attribute specifies an SA identifier (SAID) and additional properties of the SA. This attribute is present at the initial network entry only .
Security Negotiation Parameters	Describes Confirms the authentication and message integrity parameters to be used -requesting MS's security capabilities (see 11.8.4)
CMAC Tuple/HMAC Tuple	Message integrity tuple for this message. (using the MAC key derived from the AK identified by AKID)

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

Modify table 37i as follows:

Attribute	Contents
MS_Random	The number received from the MS
BS_Random	The random number included in the PKMv2 SA-TEK-Challenge message or SA-Challenge TLV.
AKID	This identifies the AK to the MS that was used for protecting this message.
SA_TEK_Update	A compound TLV list each of which specifies an SA identifier (SAID) and additional properties of the SA that the MS is authorized to access. This compound field may be present at the reentry. Additionally, in case of HO, for each active SA in previous serving BS, corresponding TEK, GTEK and GKEK parameters are also included.
Frame Number	An absolute frame number in which the old PMK and all its associated AKs should be discarded.
(one or more) SA-Descriptor(s)	Each compound SA-Descriptor attribute specifies an SA identifier (SAID) and additional properties of the SA. This attribute is present at the initial network entry only .
Security Negotiation Parameters	Describes Confirms the authentication and message integrity parameters to be used requesting MS's security capabilities (see 11.8.4)
CMAC Tuple/HMAC Tuple	Message integrity tuple for this message. (using the MAC key derived from the AK identified by AKID)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6047**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **52** Starting Line # **47** Fig/Table# **37i** Section **6.3.2.3.9.20**

In SA-TEK-Response message, SA_TEK_Update doesn't need to contain SAIDs and their additional properties, because SA descriptor(s) have them already. So the SA_TEK_Update is included in the PKMv2 SA-TEK-Response message only in handover case to update previous keys such as TEK, GTEK, GKEK for active SAs.

Suggested Remedy

[Change the content of SA_TEK_Update attribute as follows:]

~~A compound TLV list each of which specifies an SA identifier (SAID) and additional properties of the SA that the MS is authorized to access. This compound field may be present at the reentry. Additionally, in~~ In case of HO, for each active SA in previous serving BS, corresponding TEK, GTEK and GKEK parameters are **also** included.

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

[On page 52 line 47, Change the content of SA_TEK_Update attribute as follows:]

A compound TLV list each of which specifies an SA identifier (SAID) and additional properties of the SA that the MS is authorized to access. This compound field may be present at the reentry **only**. ~~Additionally, in~~ In case of HO, for each active SA in previous serving BS, corresponding TEK, GTEK and GKEK parameters are **also** included.

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

Document under Review: 802.16e/D9

Ballot Number: 0001056

Comment Date

Comment # 6048

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type Editorial

Starting Page # 52

Starting Line # 52

Fig/Table# 37i

Section 6.3.2.3.9.20

The Frame Number in PKMv2 SA-TEK-Response message is not defined in the current text.

Suggested Remedy

Option 1: Delete the Frame Number in the table 37i

Option 2: Define a Frame Number

[add the following new section in section 11.9:]

11.9.36 Frame Number

```

+++++
+ Type + Length + Value +
+++++
+ 31 + 3 + 24bit Frame Number in msb first order +
+++++

```

Description: This attribute contains a 24-bit absolute frame number in which the old PMK and all its associate AKs should be discarded. The value is in most significant bit first order.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

[add the following new section in section 11.9:]

11.9.36 Frame Number

```

+++++
+ Type + Length + Value +
+++++
+ 31 + 3 + 24bit Frame Number in msb first order +
+++++

```

Description: This attribute contains a 24-bit absolute frame number in which the old PMK and all its associate AKs should be discarded. The value is in most significant bit first order.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6049** Comment submitted by: Phillip Barber Member 2005/07/14Comment Type Technical, Satisfied (was Starting Page # **53** Starting Line # **1** Fig/Table# Section **6.3.2.3.9.21**

In IEEE802.16e/D9, TEK updating and delivering procedure has been defined as follow: at all times the BS maintains two active sets of keying material per SAID, which is redundancy in many cases.

Suggested Remedy

Adopt the remedy in the contribution "C80216e-05_314"(John Lee).

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Withdrawn**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6050**

Comment submitted by: Phillip

Barber

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **53** Starting Line # **26** Fig/Table# **37j** Section **6.3.2.3.9.21**

PKMv2 Key Request, PKMv2 Key-Reply, PKMv2 Key-Reject PKMv2 SA-Addition and PKMv2 TEK-invalid all contain a "Nonce" attribute which seems to be used to avoid replay attack. But CMAC has done the same thing. It's redundant.

Suggested Remedy

remove 'Nonce' attribute from tables 37j, 37k, 37i, 37m and 37n.

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

remove 'Nonce' attribute from tables 37m and 37n.

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6051**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Editorial** Starting Page # **54** Starting Line # **20** Fig/Table# **37k** Section **6.3.2.3.9.22**

Since TEK-parameters attribute has a GKEK subattribute in table 372, GKEK-paramters attribute should be changed to TEK-parameters in PKMv2 Key-Reply message.

Suggested Remedy

[Change the attribute name in line 20 and 23 in table 37k to:]

GKEK~~TEK~~-Parameters

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

see 6333

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6052**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Editorial** Starting Page # **54** Starting Line # **20** Fig/Table# **37k** Section **6.3.2.3.9.22**

The attribute, Security Negotiation Parameters, defined in PKMv2 SA-TEK-Request/Response is not included in table 370 - PKM attribute types. Since it is already defined as a TLV with type # 25 in SBC-REQ/RSP, we can reuse it.

Suggested Remedy

Inset the following row after type 22 in table 37k on page 549:]

[25 | Security Negotiation Parameters](#)

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

Inset the following row after type 22 in table 37k on page 549:]

[25 | Security Negotiation Parameters](#)

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6053**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Editorial** Starting Page # **54** Starting Line # **34** Fig/Table# **37k** Section **6.3.2.3.9.22**

The GKEK-Parameters attribute is a compound attribute which includes GKEK, GKEK lifetime, and GKEK sequence number. But an attribute type of the GKEK-Parameters is not defined in section 11.9

Suggested Remedy

Change the text from line 33 through 35 to:]

The GKEK-Parameters attribute is a compound attribute containing all of the GKEK-related parameters corresponding to a GSAID.

This compound attribute uses the attribute type of TEK-parameters defined in section 11.9.8. This would include ...¶

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: **Superseded******Reason for Group's Decision/Resolution**[see 6333](#)**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6054**

Comment submitted by: Haixiang

He

Member

2005/07/14

Comment Type **Technical, Non-binding**

Starting Page # **57**

Starting Line # **50**

Fig/Table#

Section **6.3.2.3.9.15**

The sentence is not clear.

Suggested Remedy

Change

"This message has no attributes ..."

to

"In the case of re-authentication, "HMAC Digest/CMAC Digest " and "Key Sequence Number" attributes shall be included."

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

see 6036

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6055**

Comment submitted by: Seokheon

Cho

Other

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **58** Starting Line # **28** Fig/Table# Section **6.3.2.3.23**

RNG-REQ and RNG-RSP messages can include the CMAC Tuple or the HMAC Tuple during HO.

SBC-REQ and SBC-RSP message exchange is followed by RNG-REQ and RNG-RSP message exchange.

SBC-REQ and SBC-RSP messages have to be able to also include the CMAC Tuple or the HMAC Tuple during HO, only when the message authentication is necessary such as RNG-REQ and RNG-RSP messages.

Suggested Remedy

6.3.2.3.23 SS basic capability request (SBC-REQ) message

[Insert at the end of 6.3.2.3.23:]

CMAC-Tuple/HMAC-Tuple

Either the CMAC-Tuple or the HMAC-Tuple shall be final attribute in the message's TLV attribute list. This attribute should be included in the message during HO. Refer to 11.1.2

6.3.2.3.24 SS basic capability response (SBC-RSP) message

[Insert at the end of 6.3.2.3.24:]

CMAC-Tuple/HMAC-Tuple

Either the CMAC-Tuple or the HMAC-Tuple shall be final attribute in the message's TLV attribute list. This attribute should be included in the message during HO. Refer to 11.1.2

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

6.3.2.3.23 SS basic capability request (SBC-REQ) message

[Insert at the end of 6.3.2.3.23:]

CMAC-Tuple/HMAC-Tuple

Either the CMAC-Tuple or the HMAC-Tuple shall be final attribute in the message's TLV attribute list. This attribute should be included in the message during HO reentry . (see 11.1.2)

6.3.2.3.24 SS basic capability response (SBC-RSP) message

[Insert at the end of 6.3.2.3.24:]

CMAC-Tuple/HMAC-Tuple

Either the CMAC-Tuple or the HMAC-Tuple shall be final attribute in the message's TLV attribute list. This attribute should be included in the message during HO reentry (see 11.1.2)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6056**

Comment submitted by: Phillip

Barber

Member

2005/07/14

Comment	Type	Technical, Satisfied (was	Starting Page #	58	Starting Line #	43	Fig/Table#	Section	6.3.2.3.26
---------	------	---------------------------	-----------------	----	-----------------	----	------------	---------	------------

I object to the resolution of comment 5150.

The Accepted-Modified remedy of the BRC has not only failed to fix the original problem of non-backwards compatibility with 802.16-2004, it has made the situation much worse by creating TWO tables now, neither of which works. And no descriptions after the second table, which we don't need anyway. Very confusing, and very wrong.

The codes don't overlap. An MS is always an SS, so the legacy codes (00 through 04) still have applicability to MS. Of course they do, or else none of the specification for SS in 802.16-2004 would have applicability for MS. We just leave those codes alone. Don't touch them. Those codes work the same for an MS as they do for an SS. And they are legacy, so we don't want to touch them, though we can clarify their descriptive language. Codes 00 through 04 of the DREG-CMD message are not mentioned EVER in the 16e document. All we did in 16e was to add a couple of NEW codes (05, 06, 07) that were meaningful to MS only. That was all that needed to be done. The new codes let MS enter Idle Mode; and provide a mechanism to control MS going into Idle Mode so the BS could send some last minute, pending traffic if it exists. That is it. There is no conflict in the use of the codes within the 16e document. I checked. The problem is that some others have confused themselves because they are not looking back into how the DREG-REG & DREG-CMD are structured to work, including the bits that exist in the 802.16-2004 document. They are only looking at those portions that have been copied over (and butchered) in the 16e document. And, no, the answer is not to make a carbon copy message and then modify that. All we are doing is adding a couple of more Action Codes, like we have done several times before in other messages as part of our 16e work.

The fixes I did in my contribution were the correct ones. They preserve backwards compatibility while leaving all of the codes we use specifically for 16e alone (I know, I am the one who added the codes; since I created the DREG-REQ message and put it into 16d and 16e simultaneously; I am the one who also modified DREG-CMD for 16e).

Please, please don't mess this up again. I am getting tired of re-writing remedies to fix this.

Suggested Remedy

Accept Contribution C802.16e-05/273r2

Proposed Resolution

Recommendation: **Accepted-Modified**

Recommendation by

Adopt Contribution C802.16e-05/273r3 with the following modification:

MAC Hash Skip Threshold

Maximum number of successive MOB_PAG-ADV messages that may be sent from a BS without individual notification for an MS, including MAC Address hash of an MS for which Action Code is 00, 'No Action Required'. If a BS receives the DREG-REQ message containing MAC Hash Skip Threshold TLV, the BS ~~shall~~ may include MAC Hash Skip Threshold TLV in the DREG-CMD message. If the value is set to 0xFF, a BS shall omit MAC Address hash of the MS with 'No Action Required' for every MOB_PAG-ADV message. If the value is set to zero, BS shall include the MS MAC Address hash in every MOB_PAG-ADV message.

Reason for Recommendation

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

Adopt Contribution C802.16e-05/273r3 with the following modification:

MAC Hash Skip Threshold

Maximum number of successive MOB_PAG-ADV messages that may be sent from a BS without individual notification for an MS, including MAC Address hash of an MS for which Action Code is 00, 'No Action Required'. If a BS receives the DREG-REQ message containing MAC Hash Skip Threshold TLV, the BS ~~shall~~ may include MAC Hash Skip Threshold TLV in the DREG-CMD message. If the value is set to 0xFF, a BS shall omit MAC Address hash of the MS with 'No Action Required' for every MOB_PAG-ADV message. If the value is set to zero, BS shall include the MS MAC Address hash in every MOB_PAG-ADV message.

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6057**

Comment submitted by: Kiseon

Ryu

Other

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **60** Starting Line # **9** Fig/Table# Section **6.3.2.3.26**

Clarification :

If a BS receives DREG-REQ including MAC Hash Skip Threshold TLV from a MS initiating Idle Mode, the BS should inform the MS of the specified rule for inclusion of MS MAC Address Hash with 'No Action Required' in MOB_PAG-ADV message through MAC Hash Skip Threshold TLV. And it needs to be described for the cases such as always omitted or included MS MAC Address in MOB_PAG-ADV message.

Suggested Remedy

1. Modify the text at page 60, line 9 - 18, as follows :

When the DREG-CMD is sent with Action Code = 0x05, the following TLVs may be included:

MAC Hash Skip Threshold

Maximum number of successive MOB_PAG-ADV messages that may be sent from a BS without individual notification for an MS, including MAC Address hash of an MS for which Action Code is 00, 'No Action Required'. If a BS receives the DREG-REQ message containing MAC Hash Skip Threshold TLV, the BS shall include MAC Hash Skip Threshold TLV in the DREG-CMD message. If the value is set to 0xFF, a BS shall omit MAC Address hash of the MS with 'No Action Required' for every MOB_PAG-ADV message. On the contrary, if the value is set to zero, a BS shall include the MS MAC Address hash in every MOB_PAG-ADV message. ~~If BS does not include this TLV item in the DREG-CMD message, any BS may omit MAC Address hash of the MS with 'No Action Required' for any MOB_PAG-ADV messages.~~

2. Modify the text in 11.14 DREG-CMD/REQ message encodings at page 574, line 3-12, as follows :

11.14 DREG-CMD/REQ message encodings

Name	Type(1 byte)	Length	Value(variable-length)
MAC Hash Skip Threshold	5	1	Maximum number of successive MOB_PAG-ADV messages that may be sent from a BS without individual notification for an MS, including MAC address hash of an MS for which Action Code for the MS is 0b00, 'No Action Required'. <u>If the value is set to 0xFF, a BS shall omit MAC Address hash of the MS with 'No Action Required' for every MOB_PAG-ADV message. On the contrary, if the value is set to zero, a BS shall include the MS MAC Address hash in every MOB_PAG-ADV message.</u> If BS does not include this TLV item in the DREG-CMD message, any BS may omit MAC Address Hash of the MS with Action Code 00, 'No Action Required' from any MOB_PAG-ADV message.

Proposed Resolution **Recommendation: Accepted-Modified** **Recommendation by**
 Modify the text in 11.14 DREG-CMD/REQ message encodings at page 574, line 3-12, as follows :

11.14 DREG-CMD/REQ message encodings

Name	Type(1 byte)	Length	Value(variable-length)
MAC Hash Skip Threshold	5	1	Maximum number of successive MOB_PAG-ADV messages that may be sent from a BS without individual notification for an MS, including MAC address hash of an MS for which Action Code for the MS is 0b00, 'No Action Required'. <u>If the value is set to 0xFF, a BS shall omit MAC Address hash of the MS with 'No Action Required' for every MOB_PAG-ADV message.</u> <u>On the contrary, if the value is set to zero, a BS shall include the MS MAC Address hash in every MOB_PAG-ADV message.</u> If BS does not include this TLV item in the DREG_CMD message, any BS may omit MAC Address Hash of the MS with Action Code 00, 'No Action Required' from any MOB_PAG-ADV message.

Reason for Recommendation

Resolution of Group **Decision of Group: Accepted-Modified**
 Modify the text in 11.14 DREG-CMD/REQ message encodings at page 574, line 3-12, as follows :

11.14 DREG-CMD/REQ message encodings

Name	Type(1 byte)	Length	Value(variable-length)
MAC Hash Skip Threshold	5	1	Maximum number of successive MOB_PAG-ADV messages that may be sent from a BS without individual notification for an MS, including MAC address hash of an MS for which Action Code for the MS is 0b00, 'No Action Required'. <u>If the value is set to 0xFF, a BS shall omit MAC Address hash of the MS with 'No Action Required' for every MOB_PAG-ADV message.</u> <u>On the contrary, if the value is set to zero, a BS shall include the MS MAC Address hash in</u>

every MOB_PAG-ADV message. ~~If BS does not include~~
~~—this TLV item in the DREG-GMD message;~~
~~—any BS may omit MAC Address Hash of the~~
~~MS with Action Code 00, 'No Action~~
~~—Required' from any MOB_PAG-ADV message.~~

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6058**

Comment submitted by: Kiseon

Ryu

Other

2005/07/14

Comment	Type Editorial	Starting Page # 60	Starting Line # 30	Fig/Table#	Section 6.3.2.3.26
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Editorial :

A part of the text in "6.3.22 MS Idle Mode" is wrongly copied in "6.3.2.3.26 De/Re-register command (DREG-CMD) message"

Suggested Remedy

Remove the text at page 60, line 30 - 36, as follows :

~~In the IDLE Mode operation, the DREG-CMD message may be sent to MS in unsolicited manner. When BS transmits the unsolicited DREG-CMD with Action Code = 0x05 to MS, it shall start T46 timer at the same time. If the BS does not receive the DREG-REQ message from MS in response to the unsolicited DREGCMD within T46 timer expiry, the BS shall retransmit the DREG-CMD message in unsolicited manner as long as DREG-Command Retry Count has not been exhausted. If DREG-Command Retry Count is exhausted, BS shall stop all the IDLE Mode operation that it intends to make MS enter Idle Mode.~~

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

See 6056.

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6059**

Comment submitted by: Phillip

Barber

Member

2005/07/14

Comment Type Technical, Satisfied (was Starting Page # 61 Starting Line # 56 Fig/Table# Section 6.3.2.3.42
 I object to the resolution of comment 5154.

The remedy fixed the problem--nearly. The remedy was incomplete and missed one instance of 'MSS' that needed changing to 'SS'.

Suggested Remedy

[In 6.3.2.3.42 MS De-registration Request (DREG-REQ) message, page 61, line 56; modify as]
 An ~~M~~SS shall generate ~~M~~SS DREG-REQs including the following parameters:

Proposed Resolution Recommendation: Accepted-Modified Recommendation by
Revert the title of the subclause to "SS De-registration request (DREG-REQ) message"

[In 6.3.2.3.42 MS De-registration Request (DREG-REQ) message, page 61, line 56; modify as]
 An ~~M~~SS shall generate ~~M~~SS DREG-REQs including the following parameters:

Reason for Recommendation

Resolution of Group Decision of Group: Accepted-Modified

Revert the title of the subclause to "SS De-registration request (DREG-REQ) message"

[In 6.3.2.3.42 MS De-registration Request (DREG-REQ) message, page 61, line 56; modify as]
 An ~~M~~SS shall generate ~~M~~SS DREG-REQs including the following parameters:

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

Editor's Notes Editor's Actions k) done

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6060**

Comment submitted by: Mark

Cudak

Member

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	62	Starting Line #	7	Fig/Table#	Section	6.3.2.3.42
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Section 6.3.2.3.42 states that the Paging_Cycle Request and Idle Mode Retain Information TLVs shall be included in the DREG-REQ sent by the MS to the BS.

Especially the PAGING_CYCLE will in most cases be determined by the network, not by individual MS. Therefor the MS can only give a preference. It does not seem to be beneficial to put this as a "shall" requirement. The MS may indicate its preference but does not have to.

The same can be said for Idle Mode Retain information: the MS may indicate a preference, but what actually happens will be driven by the network.

Suggested Remedy

Change the text in 6.3.2.3.42 on page 62, line 7 (immediately below the HMAC/CMAC tuple and above Paging Cycle Request) as follows:
 "The MS ~~shall~~may include the following parameters in the DREG-REQ only if De-Registration_Request_Code = 0x01"

Optionally, remove the (now redundant) sentence between Idle Mode Retain Information and MAC Hash Skip Threshold as follows:
~~"The MS may include the following parameters in the DREG-REQ message only if DeRegistration_Request_Code = 0x01:"~~

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

Change the text in 6.3.2.3.42 on page 62, line 7 (immediately below the HMAC/CMAC tuple and above Paging Cycle Request) as follows:
 "The MS ~~shall~~may include the following parameters in the DREG-REQ only if De-Registration_Request_Code = 0x01"

Optionally, remove the (now redundant) sentence between Idle Mode Retain Information and MAC Hash Skip Threshold as follows:
~~"The MS may include the following parameters in the DREG-REQ message only if DeRegistration_Request_Code = 0x01:"~~

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

Vote: 0-4

MS MUST include request for specific paging cycle selection and retain information at time of request to de-register and enter idle mode. So use of 'shall' is correct. Cannot be 'may'. 'May' still applies to MAC Hash Skip Threshold which is an optional feature for MS only applicable to certain implemenation models. So the section is correct, as is.

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

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6061**

Comment submitted by: Phillip

Barber

Member

2005/07/14

Comment

Type Editorial

Starting Page # 65

Starting Line # 38

Fig/Table#

Section 6.3.2.3.43.6

I object to the resolution of comment 5157.

While the comment was wrong in its Problem assertion that the identified messages were not backwards compatible (yes, I do make mistakes), there are several instances where of incorrect usage of 'DIUC' and 'UIUC' in the messages and in the message element descriptions that follow. These are simple editorial fixes.

Suggested Remedy

[In 6.3.2.3.43.6.1 Compact_DL-MAP IE for normal subchannel, page 66, line 11, Table 96—H-ARQ Compact_DL-MAP IE format for normal subchannel; change message element 'Shortened UIUC' to 'Shortened DIUC' in both the Syntax and Notes columns]

[In 6.3.2.3.43.6.1 Compact_DL-MAP IE for normal subchannel, page 66, line 29, Table 96—H-ARQ Compact_DL-MAP IE format for normal subchannel; change message element 'Shortened DIUC' to 'Shortened UIUC' in the Notes columns]

[In 6.3.2.3.43.6.1 Compact_DL-MAP IE for normal subchannel, page 67, lines 5-8; modify as:]

Shortened UIUC

A shortened version of the UIUC. The shortened UIUC takes on values 1..8 of the UIUC as defined in the ~~DEBUCD~~. See 8.4.5.4.1

[In 6.3.2.3.43.6.3 Compact_DL-MAP IE for safety subchannel, page 69, line 38, Table 98—H-ARQ Compact_DL-MAP IE format for safety; change message element 'Shortened UIUC' to 'Shortened DIUC' in both the Syntax and Notes columns]

[In 6.3.2.3.43.6.3 Compact_DL-MAP IE for safety subchannel, page 69, line 58, Table 98—H-ARQ Compact_DL-MAP IE format for safety; change message element 'Shortened DIUC' to 'Shortened UIUC' in the Notes columns]

[In 6.3.2.3.43.6.3 Compact_DL-MAP IE for safety subchannel, page 70, lines 36-38; modify as:]

Shortened UIUC

A shortened version of the UIUC. The shortened UIUC takes on values 1..8 of the UIUC as defined in the ~~DEBUCD~~. See 8.4.5.4.1

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

[In 6.3.2.3.43.6.1 Compact_DL-MAP IE for normal subchannel, page 66, line 11, Table 96—H-ARQ Compact_DL-MAP IE format for normal subchannel; change message element 'Shortened UIUC' to 'Shortened DIUC' in both the Syntax and Notes columns]

[In 6.3.2.3.43.6.1 Compact_DL-MAP IE for normal subchannel, page 66, line 29, Table 96—H-ARQ Compact_DL-MAP IE format for normal subchannel; change message element 'Shortened DIUC' to 'Shortened UIUC' in the Notes columns]

[In 6.3.2.3.43.6.1 Compact_DL-MAP IE for normal subchannel, page 67, lines 5-8; modify as:]

Shortened UIUC

A shortened version of the UIUC. The shortened UIUC takes on values 1..8 of the UIUC as defined in the ~~DEBUCD~~. See 8.4.5.4.1

[In 6.3.2.3.43.6.3 Compact_DL-MAP IE for safety subchannel, page 69, line 38, Table 98—H-ARQ Compact_DL-MAP IE format for safety;

[In 6.3.2.3.43.6.3 Compact_DL-MAP IE for safety subchannel, page 69, line 58, Table 98—H-ARQ Compact_DL-MAP IE format for safety; change message element 'Shortened UIUC' to 'Shortened DIUC' in both the Syntax and Notes columns]

[In 6.3.2.3.43.6.3 Compact_DL-MAP IE for safety subchannel, page 69, line 58, Table 98—H-ARQ Compact_DL-MAP IE format for safety; change message element 'Shortened DIUC' to 'Shortened UIUC' in the Notes columns]

[In 6.3.2.3.43.6.3 Compact_DL-MAP IE for safety subchannel, page 70, lines 36-38; modify as:]

Shortened UIUC

A shortened version of the UIUC. The shortened UIUC takes on values 1..8 of the UIUC as defined in the ~~DCDU~~. See 8.4.5.4.1

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

[In 6.3.2.3.43.6.1 Compact_DL-MAP IE for normal subchannel, page 66, line 11, Table 96—H-ARQ Compact_DL-MAP IE format for normal subchannel; change message element 'Shortened UIUC' to 'Shortened DIUC' in both the Syntax and Notes columns]

[In 6.3.2.3.43.6.1 Compact_DL-MAP IE for normal subchannel, page 66, line 29, Table 96—H-ARQ Compact_DL-MAP IE format for normal subchannel; change message element 'Shortened DIUC' to 'Shortened UIUC' in the Notes columns]

[In 6.3.2.3.43.6.1 Compact_DL-MAP IE for normal subchannel, page 67, lines 5-8; modify as:]

Shortened UIUC

A shortened version of the UIUC. The shortened UIUC takes on values 1..8 of the UIUC as defined in the ~~DCDU~~. See 8.4.5.4.1

[In 6.3.2.3.43.6.3 Compact_DL-MAP IE for safety subchannel, page 69, line 38, Table 98—H-ARQ Compact_DL-MAP IE format for safety; change message element 'Shortened UIUC' to 'Shortened DIUC' in both the Syntax and Notes columns]

[In 6.3.2.3.43.6.3 Compact_DL-MAP IE for safety subchannel, page 69, line 58, Table 98—H-ARQ Compact_DL-MAP IE format for safety; change message element 'Shortened DIUC' to 'Shortened UIUC' in the Notes columns]

[In 6.3.2.3.43.6.3 Compact_DL-MAP IE for safety subchannel, page 70, lines 36-38; modify as:]

Shortened UIUC

A shortened version of the UIUC. The shortened UIUC takes on values 1..8 of the UIUC as defined in the ~~DCDU~~. See 8.4.5.4.1

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6062**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Editorial**

Starting Page # **74**

Starting Line # **9**

Fig/Table# **101**

Section **6.3.2.3.43.6.7**

There is a typo

Suggested Remedy

[modify the text in line 9 page 74 (section 6.3.2.3.43.6.7) as following]

~~b00000~~b0000 = A1

Proposed Resolution

Recommendation: Accepted

Recommendation by

[modify the text in line 9 page 74 (section 6.3.2.3.43.6.7) as following]

~~b00000~~b0000 = A1

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

[modify the text in line 9 page 74 (section 6.3.2.3.43.6.7) as following]

~~b00000~~b0000 = A1

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6063**

Comment submitted by: Kiseon

Ryu

Other

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	90	Starting Line #	26	Fig/Table#	Section	6.3.2.3.44
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Clarification :

MAC mode is negotiated during SBC exchange. Either HMAC or CMAC can be used.

Suggested Remedy

Replace "HMAC Tuple" with "HMAC/CMAC Tuple" as follows :

HMAC/CMAC Tuple (see 11.1.2)

The HMAC/CMAC Tuple shall be the last attribute in the message.

At page 90, line 26 in 6.3.2.3.44 Sleep Request message (MOB_SLP-REQ) :

At page 94, line 25 in 6.3.2.3.45 Sleep Response message (MOB_SLP-RSP) :

At page 104, line 25 in 6.3.2.3.48 Scanning Interval Allocation Request (MOB_SCN-REQ) message :

At page 107, line 36 in 6.3.2.3.49 Scanning Interval Allocation Response (MOB_SCN-RSP) message :

At page 110, line 56 in 6.3.2.3.50 Scanning Result Report (MOB_SCN-REP) message :

At page 120, line 26 in 6.3.2.3.52 BS HO Request (MOB_BSHO-REQ) message :

At page 124, line 21 in 6.3.2.3.53 MS HO Request (MOB_MSHO-REQ) message :

At page 131, line 39 in 6.3.2.3.54 BS HO Response (MOB_BSHO-RSP) message :

At page 134, line 8 in 6.3.2.3.55 HO Indication (MOB_HO-IND) message :

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

See 6030

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6064**

Comment submitted by: Yerang

Hur

Other

2005/07/14

Comment	Type	Technical Non-Binding	Starting Page #	92	Starting Line #	47	Fig/Table#	Section	6.3.2.3.45
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Line 53-57 include inconsistent descriptions of the Sleep_Approved bit when the BS transmits an unsolicited MOB_SLP-RSP.

Suggested Remedy

[Change line 48-57 as follows:]

Sleep_Approved

1 = Indicates that BS approves the MSS's Activation/Deactivation Request of the Power Saving Class.

0 = Indicates that BS disapproves the MSS's Activation/Deactivation Request of the Power Saving Class.

~~In case of the unsolicited MOB_SLP-RSP, there is included information of only the Power Saving Class with Sleep_Approved = 0 in it.~~

In case of the MOB_SLP-RSP transmitted from the BS in an unsolicited manner, the BS shall set "Sleep approved" = 1.

Proposed ResolutionRecommendation: **Accepted-Modified**

Recommendation by

[Change line 48-57 as follows:]

Sleep_Approved

1 = Indicates that BS approves the MSS's Activation/Deactivation Request of the Power Saving Class.

0 = Indicates that BS disapproves the MSS's Activation/Deactivation Request of the Power Saving Class.

~~In case of the unsolicited MOB_SLP-RSP, there is included information of only the Power Saving Class with Sleep_Approved = 0 in it. For a~~~~MOB_SLP-RSP transmitted in an unsolicited manner including Definition of one or more Power Saving Class IDs, the BS shall set Sleep Approved=0 for each Power Saving Class ID defined in the message.~~In case of the MOB_SLP-RSP transmitted from the BS in an unsolicited manner, the BS shall set "Sleep approved" = 1 for each Power Saving Class ID that is not defined in the message.**Reason for Recommendation****Resolution of Group**Decision of Group: **Accepted-Modified**

[Change line 48-57 as follows:]

Sleep_Approved

1 = Indicates that BS approves the MSS's Activation/Deactivation Request of the Power Saving Class.

0 = Indicates that BS disapproves the MSS's Activation/Deactivation Request of the Power Saving Class.

~~In case of the unsolicited MOB_SLP-RSP, there is included information of only the Power Saving Class with Sleep_Approved = 0 in it. For a~~~~MOB_SLP-RSP transmitted in an unsolicited manner including Definition of one or more Power Saving Class IDs, the BS shall set Sleep Approved=0 for each Power Saving Class ID defined in the message.~~In case of the MOB_SLP-RSP transmitted from the BS in an unsolicited manner, the BS shall set "Sleep approved" = 1 for each Power Saving Class ID that is not defined in the message.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6065**

Comment submitted by: Phillip

Barber

Member

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	94	Starting Line #	33	Fig/Table#	Section	6.3.2.3.46
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Changes to sleep mode have rendered the TRF-IND message only relevant to Power Saving Class Type 1. That is, only Type 1 defined Power Saving Class IDs are notified and affected using TRF-IND. However, the invoking language of the section has not been modified to clarify that TRF-IND only affects Power Saving Class IDs defined with Power Saving Class Type 1. A simple clarification to the invoking text clarifies this restricted applicability.

Suggested Remedy

[In 6.3.2.3.46 Traffic Indication message (MOB_TRF-IND), page 94, lines 33-38; modify as:]

This message is sent from BS to MS on the broadcast CID or Sleep mode multicast CID. The message is intended for MS that are in Sleep Mode that have one or more Power Saving Class IDs defined of Power Saving Class Type 1, and is sent during those MS's listening-intervals. All MS with no Power Saving Class IDs defined of Power Saving Class Type 1 shall ignore this message. The message indicates whether there has been traffic addressed to each MS that is in Sleep Mode. For an MS that is in Sleep Mode, during its listening-window the MS shall decode this message to seek an indication addressed to itself.

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

[In 6.3.2.3.46 Traffic Indication message (MOB_TRF-IND), page 94, lines 33-38; modify as:]

This message is sent from BS to MS on the broadcast CID or Sleep mode multicast CID. The message is intended for MS that are in Sleep Mode that have one or more Power Saving Class IDs defined of Power Saving Class Type 1, and is sent during those MS's listening-intervals. All MS with no Power Saving Class IDs defined of Power Saving Class Type 1 shall ignore this message. The message indicates whether there has been traffic addressed to each MS that is in Sleep Mode. For an MS that is in Sleep Mode, during its listening-window the MS shall decode this message to seek an indication addressed to itself.

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

[In 6.3.2.3.46 Traffic Indication message (MOB_TRF-IND), page 94, lines 33-38; modify as:]

This message is sent from BS to MS on the broadcast CID or Sleep mode multicast CID. The message is intended for MS that are in Sleep Mode that have one or more Power Saving Class IDs defined of Power Saving Class Type 1, and is sent during those MS's listening-intervals. All MS with no Power Saving Class IDs defined of Power Saving Class Type 1 shall ignore this message. The message indicates whether there has been traffic addressed to each MS that is in Sleep Mode. For an MS that is in Sleep Mode, during its listening-window the MS shall decode this message to seek an indication addressed to itself.

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

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6066**

Comment submitted by: Phillip

Barber

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **94** Starting Line # **33** Fig/Table# **108e** Section **6.3.2.3.46**

Changes to sleep mode have rendered the TRF-IND message only relevant to Power Saving Class Type 1. That is, only Type 1 defined Power Saving Class IDs are notified and affected using TRF-IND. Also, a single MS can define and create multiple Power Saving Class IDs of Power Saving Class Type 1. These changes make so that use of 'Short Basic CID', as a an indicator, is inadequately specific for notification purposes. Use of 'Short Basic CID' does not indicate which specific Power Saving Class ID has been deactivated by the message. So MS is left to infer that all Power Saving Class IDs of Power Saving Class Type 1 are 'deactivated' by the message, which is not necessarily true, and may require multiple DL headers or UL extended subheaders to re-activate the incorrectly inferred, deactivated Power Saving Class IDs. However, this problem is easily fixed. SLPID is assigned to all Power Saving Class IDs with Power Saving Class Type 1 when they are defined. And SLPID is unique to the MS and Power Saving Class ID. So we can easily substitute SLPID in place of 'Short Basic CID'.

Suggested Remedy

[In 6.3.2.3.46 Traffic Indication message (MOB_TRF-IND), page 94, lines 44-51; modify as:]

There are two formats for the MOB_TRF-IND message, indicated by the FMT field. When FMT=0, if the MS does not find its own SLPID-Group Indication bit-map or Traffic Indication bit-map to its SLPID in the MOB_TRF-IND message, it will consider this as a negative indication and may continue its Sleep Mode. The MS shall update its SLPID if it finds its own Old_New_SLPID in SLPID_Update TLV. When FMT=1, if the MS does not find its own ~~Short Basic CID~~SLPID in the MOB_TRF-IND message, it will consider this as a negative indication and may continue its Sleep Mode.

[In 6.3.2.3.46 Traffic Indication message (MOB_TRF-IND), page 94, Table 108e—Traffic-Indication (MOB_TRF-IND) message format; modify as:]

```
.....
    Num_Pos          |      8      | Number of CIDSLPIDs following
    for (i=0; i<Num_Pos; i++) { |      |
        Short Basic CIDSLPIDs |      4210 |
    }
}
Padding          |      variable | If needed for alignment to byte boundary
TLV encoded items  |      variable |
}
```

[In 6.3.2.3.46 Traffic Indication message (MOB_TRF-IND), page 96, lines 41-42; modify as:]

Short Basic CID

The ~~Basic CID~~SLPID for the Power Saving Class ID deactivated by this message and for MS to be transited into an awake mode.

Proposed Resolution Recommendation: **Accepted-Modified** Recommendation by

[In 6.3.2.3.46 Traffic Indication message (MOB_TRF-IND), page 94, lines 44-51; modify as:]

There are two formats for the MOB_TRF-IND message, indicated by the FMT field. When FMT=0, if the MS does not find its own SLPID-Group Indication bit-map or Traffic Indication bit-map to its SLPID in the MOB_TRF-IND message, it will consider this as a negative indication and may continue its Sleep Mode. The MS shall update its SLPID if it finds its own Old_New_SLPID in SLPID_Update TLV. When FMT=1, if the MS does not find its own ~~Short Basic CID~~SLPID in the MOB_TRF-IND message, it will consider this as a negative indication and may continue its Sleep Mode

.....

[In 6.3.2.3.46 Traffic Indication message (MOB_TRF-IND), page 94, Table 108e—Traffic-Indication (MOB_TRF-IND) message format; modify as:]

.....

Num_Pos		8		Number of CID SLPIDs following
for (i=0; i<Num_Pos; i++) {		—		—
Short Basic CID SLPIDs		4 210		—
}				
}				
<u>Padding</u>		<u>variable</u>		<u>If needed for alignment to byte boundary</u>
TLV encoded items		<u>variable</u>		—

[In 6.3.2.3.46 Traffic Indication message (MOB_TRF-IND), page 96, lines 41-42; modify as:]

~~Short Basic CID~~SLPID

The ~~Basic CID~~SLPID for the Power Saving Class ID deactivated by this message and for MS to be transited into an awake mode.

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

[In 6.3.2.3.46 Traffic Indication message (MOB_TRF-IND), page 94, lines 44-51; modify as:]

There are two formats for the MOB_TRF-IND message, indicated by the FMT field. When FMT=0, if the MS does not find its own SLPID-Group Indication bit-map or Traffic Indication bit-map to its SLPID in the MOB_TRF-IND message, it will consider this as a negative indication and may continue its Sleep Mode. The MS shall update its SLPID if it finds its own Old_New_SLPID in SLPID_Update TLV. When FMT=1, if the MS does not find its own ~~Short Basic CID~~SLPID in the MOB_TRF-IND message, it will consider this as a negative indication and may continue its Sleep Mode.

[In 6.3.2.3.46 Traffic Indication message (MOB_TRF-IND), page 94, Table 108e—Traffic-Indication (MOB_TRF-IND) message format; modify as:]

.....

Num_Pos		8		Number of CID SLPIDs following
for (i=0; i<Num_Pos; i++) {		—		—
Short Basic CID SLPIDs		4 210		—
}				
}				
<u>Padding</u>		<u>variable</u>		<u>If needed for alignment to byte boundary</u>
TLV encoded items		<u>variable</u>		—

[In 6.3.2.3.46 Traffic Indication message (MOB_TRF-IND), page 96, lines 41-42; modify as:]

~~Short Basic CID~~SLPID

The ~~Basic CID~~SLPID for the Power Saving Class ID deactivated by this message and for MS to be transited into an awake mode.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6067**

Comment submitted by: [Panyuh](#)

[Joo](#)

[Member](#)

[2005/07/14](#)

Comment	Type	Starting Page #	Starting Line #	Fig/Table#	Section
Description defines short basic CID is missing	Editorial	94	50		6.3.2.3.46

Suggested Remedy

[Add the following text at the end of line 50.](#)

[Short Basic CID is defined as 12 least significant bits of the Basic CID.](#)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

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

Reason for Group's Decision/Resolution

[See 6066](#)

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6068**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Editorial**
there is no size value for FMT field

Starting Page # **95**

Starting Line # **14**

Fig/Table#

Section **6.3.2.3.46**

Suggested Remedy

add the length value for the FMT field as following

FMT | 1 | -

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

add the length value for the FMT field as following

FMT | 1 | -

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

add the length value for the FMT field as following

FMT | 1 | -

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6069**

Comment submitted by: Hang

Zhang

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **96** Starting Line # **12** Fig/Table# Section **6.3.2.3.47**

Page 98, line 12, Neighbor_BSID in MOB_NBR-ADV is a 24-bits field, while in page 103, line 37, Recommended_BS_ID in MOB_SCN-REQ is a 48-bit field, and in page 121, line 17, Neighbor_BSID in MOB_MSHO-REQ is a 48-bit field.

Suggested Remedy

Please make the length of BSID consistency.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Rejected

Reason for Group's Decision/Resolution

It is specified in page 100, line 7:

Neighbor BSID

The least significant 24 bits of the Base Station ID parameter in the DL-MAP message of the Neighbor BS.

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6070**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment	Type	Starting Page #	Starting Line #	Fig/Table#	Section
	Editorial	98	56		6.3.2.3.47

Suggested Remedy

Change the sentences from line 56 to line 63 as follows:

bit 0: Unsolicited Grant Service (UGS)bit 1: Real-time Polling Service (rtPS)bit 2: Non-real-time Polling Service (nrtPS)bit 3: Best Effortbit 4: Extended real-time Polling Service (ertPS)If the value of bit 0 through bit 4 is 0b00000, it indicates no information on service available.bit 5-7: Reserved, shall be set to zero

Add the following after line 62 page 100:

Bit #4: Extended real-time Polling Service (ertPS)

Modify the line 64 page 100 as follows:

If the value of Bit #0 through #4 is 0b00000, ~~value of 0b0000~~ it indicates no information on service available.**Proposed Resolution**Recommendation: **Accepted**

Recommendation by

Change the sentences from line 56 to line 63 as follows:

bit 0: Unsolicited Grant Service (UGS)bit 1: Real-time Polling Service (rtPS)bit 2: Non-real-time Polling Service (nrtPS)bit 3: Best Effortbit 4: Extended real-time Polling Service (ertPS)If the value of bit 0 through bit 4 is 0b00000, it indicates no information on service available.bit 5-7: Reserved, shall be set to zero

Add the following after line 62 page 100:

Bit #4: Extended real-time Polling Service (ertPS)

Modify the line 64 page 100 as follows:

If the value of Bit #0 through #4 is 0b00000, ~~value of 0b0000~~ it indicates no information on service available.**Reason for Recommendation**

Change the sentences from line 56 to line 63 as follows:

bit 0: Unsolicited Grant Service (UGS)

bit 1: Real-time Polling Service (rtPS)

bit 2: Non-real-time Polling Service (nrtPS)

bit 3: Best Effort

bit 4: Extended real-time Polling Service (ertPS)

If the value of bit 0 through bit 4 is 0b00000, it indicates no information on service available.

bit 5-7: Reserved, shall be set to zero

Add the following after line 62 page 100:

Bit #4: Extended real-time Polling Service (ertPS)

Modify the line 64 page 100 as follows:

If the value of Bit #0 through #4 is 0b00000, ~~value of 0b0000~~ it indicates no information on service available.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6071**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **99** Starting Line # **6** Fig/Table# Section **6**

Parameter "Available Radio Resource" in MOB_NBR-ADV message is more misleading than useful:

- 1) There is no breakdown into DL and UL resources
- 2) There is no definition of how this "average" value is calculated ["Percentage of reported **average** available subchannels and symbols resources]. The text refers to vendor defined interval [of averaging]. Whatever is being averaged, how can it be useful if one BS makes it over 100 ms and another one over 10 sec interval and this differentiation IS NOT KNOWN to the MS
- 3) The definition contains confusing terms like "non-best efforts MS". 802.16 standard refers to BE Service Flows and connections, but not MSs
- 4) The definition contains undefined terms like "loading" ["the BS should take into consideration the average **loading**"]
- 5) The definition refers to "call admission policy" [are we in telephony world?]. The text instructs to advertise not just average percentage of "resources", but only part "determined by the BS call admission policy" [whatever this policy is, it is not defined or even mentioned in the standard]

I leave aside basic problem how can this sort of information be used for making decision whether specific MS can be accommodated by specific BS that presumably is the goal of information broadcasted in MOB_NBR-ADV message. This is because scheduling algorithm and policies and algorithms are unknown to the MS

Suggested Remedy

Delete this parameter from the Table 108f as well as description in the text starting from page 100, line 65

Proposed Resolution Recommendation: **Accepted**

Recommendation by

Delete this parameter from the Table 108f as well as description in the text starting from page 100, line 65

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Delete this parameter from the Table 108f as well as description in the text starting from page 100, line 65

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

2005/08/12

IEEE 802.16-045r4

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6072**

Comment submitted by: Yerang

Hur

Other

2005/07/14

Comment Type **Technical non-binding** Starting Page # **100** Starting Line # **54** Fig/Table# Section **6.3.2.3.47**

ertPS is missing in description of Scheduling Service Supported in MOB_NBR-ADV message, line 54-64, page 100. Also, line 54-64 of page 98 need to be updated accordingly.

Suggested Remedy

[Change description of Scheduling Service Supported from line 54-64 of page 100 as indicated:]

Scheduling Service Supported

The Scheduling Service Supported field is present only if bit #3 of Skip-optional-fields is 0. Bitmap to indicate if BS supports a particular scheduling service. 1 indicates support, 0 indicates not support:

Bit #0: Unsolicited Grant Service (UGS)

Bit #1: Real-time Polling Service (rtPS)

Bit #2: Non-real-time Polling service (nrtPS)

Bit #3: Best Effort

[Bit #4: Extended real-time Polling Service \(ertPS\)](#)

~~value of 0b0000 indicates no information~~

~~on-service-available~~

[Bit #5-7: Reserved, shall be set to zero.](#)

[If 5 LSBs set to 0b00000, it indicates that no information on scheduling service is available.](#)

[Change Notes of Scheduling Service Supported from line 54-64 of page 98 as indicated:]

Bitmap to indicate if BS supports a particular scheduling service. 1 indicates support, 0 indicates not support:

bit 0: Unsolicited Grant Service (UGS)

bit 1: Real-time Polling Service (rtPS)

bit 2: Non-real-time Polling service (nrtPS)

bit 3: Best Effort ~~value of 0b0000 indicates no information on-service-available~~

bit 4: Extended real-time Polling Service (ertPS)

bits 5-7: Reserved; shall be set to zero.

[If 5 LSBs set to 0b00000, it indicates that no information on scheduling service is available.](#)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

2005/08/12

IEEE 802.16-045r4

Reason for Group's Discontinuation:

[See 6070](#)

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6073**

Comment submitted by: Yigal

Leiba

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **101** Starting Line # **40** Fig/Table# Section **6.3.2.3.47**
 The DCD_settings TLV is defined as encapsulating a DCD message. The generic MAC header and CRC of such a message are not required. Also defining the TLV as compound is wrong.

Suggested Remedy

Change the sentence to read:

"The DCD_settings is a **compound** TLV value that encapsulates a DCD message (excluding the generic MAC header and CRC) that may be transmitted in the advertised BS downlink channel."

Apply also at line 50:

"The UCD_settings is a **compound** TLV value that encapsulates a UCD message (excluding the generic MAC header and CRC) that may be transmitted in the advertised BS downlink channel."

Proposed Resolution Recommendation: Accepted**Recommendation by**

Change the sentence to read:

"The DCD_settings is a **compound** TLV value that encapsulates a DCD message (excluding the generic MAC header and CRC) that may be transmitted in the advertised BS downlink channel."

Apply also at line 50:

"The UCD_settings is a **compound** TLV value that encapsulates a UCD message (excluding the generic MAC header and CRC) that may be transmitted in the advertised BS downlink channel."

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

Change the sentence to read:

"The DCD_settings is a **compound** TLV value that encapsulates a DCD message (excluding the generic MAC header and CRC) that may be transmitted in the advertised BS downlink channel."

Apply also at line 50:

"The UCD_settings is a **compound** TLV value that encapsulates a UCD message (excluding the generic MAC header and CRC) that may be transmitted in the advertised BS downlink channel."

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6074**

Comment submitted by: **Yigal**

Leiba

Member

2005/07/14

Comment	Type Editorial	Starting Page # 101	Starting Line # 57	Fig/Table#	Section 6.3.2.3.47
Typo					

Suggested Remedy

Change 'DCD setting' to 'UCD setting'

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Change 'DCD setting' to 'UCD setting'

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change 'DCD setting' to 'UCD setting'

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6075**

Comment submitted by: Yigal

Leiba

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **101** Starting Line # **58** Fig/Table# Section **6.3.2.3.47**

The PHY Mode ID parameter is very important when it is different from the current BS, since otherwise the MSS has to scan all FFT size, etc. There fore this TLV MUST be sent if it is different than current BS

Suggested Remedy

On page 101, line 58, insert the following sentence:

"When the PHY parameters specified by the PHY Mode ID TLV are different than those of the serving BS, the following TLV shall be included:"

Proposed Resolution Recommendation: Accepted**Recommendation by**

On page 101, line 58, insert the following sentence:

"When the PHY parameters specified by the PHY Mode ID TLV are different than those of the serving BS, the following TLV shall be included:"

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

On page 101, line 58, insert the following sentence:

"When the PHY parameters specified by the PHY Mode ID TLV are different than those of the serving BS, the following TLV shall be included:"

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6076**

Comment submitted by: Phillip

Barber

Member

2005/07/14

Comment	Type	Technical, Satisfied (was	Starting Page #	102	Starting Line #	Fig/Table#	Section	6.3.2.3.48
---------	------	---------------------------	-----------------	-----	-----------------	------------	---------	------------

In the current IEEE802.16e/D9, there is some problem in Scan/Association Type Indication in MOB_SCN-REQ/RSP message.

Suggested Remedy

Adopt the remedy in the contribution "C80216e-05_317"(John Lee).

Proposed Resolution **Recommendation: Accepted**

Recommendation by

Adopt the remedy in the contribution C80216e-05_317r2.

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Adopt the remedy in the contribution C80216e-05_317r2.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6077**

Comment submitted by: Phillip

Barber

Member

2005/07/14

Comment	Type	Technical, Satisfied (was	Starting Page #	103	Starting Line #	Fig/Table#	Section	6.3.2.3.48
---------	------	---------------------------	-----------------	-----	-----------------	------------	---------	------------

In the current IEEE802.16e/D9, there is some problems in Scan/Association related MAC management messages referring BSs.

Suggested Remedy

Adopt the remedy in the contribution "C80216e-05_318"(John Lee).

Proposed ResolutionRecommendation: **Accepted-Modified**

Recommendation by

Adopt C802.16e-05/318 with the following change:

[Modify subclause 6.3.2.3.51 of the contribution as indicated:]

6.3.2.3.51 Association Result Report (MOB_ASC-REPORT) message

When association level 2 is used, the MS does not have to wait for RNG-RSP from the Target BS after sending RNG-REQ or ranging code to the Target BS. Instead, the RNG-RSP info **will may** be sent by each Target BS to the Serving BS (over the backbone). The Serving BS may aggregate all the RNG-RSP messages to a single MOB_ASC_REPORT message, which the Serving BS then sends to the MS. This message is transmitted using primary management CID.

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

Adopt C802.16e-05/318 with the following change:

[Modify subclause 6.3.2.3.51 of the contribution as indicated:]

6.3.2.3.51 Association Result Report (MOB_ASC-REPORT) message

When association level 2 is used, the MS does not have to wait for RNG-RSP from the Target BS after sending RNG-REQ or ranging code to the Target BS. Instead, the RNG-RSP info **will may** be sent by each Target BS to the Serving BS (over the backbone). The Serving BS may aggregate all the RNG-RSP messages to a single MOB_ASC_REPORT message, which the Serving BS then sends to the MS. This message is transmitted using primary management CID.

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

Editor's Actions k) done

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6078**Comment submitted by: **Jaesun****Cha****Other****2005/07/14**

Comment	Type	Starting Page #	Starting Line #	Fig/Table#	Section
	Technical, Non-binding	104	3		6.3.2.3.48

Although "association type" was accepted to be used instead of "scan type" in the MAC management messages for scanning, the description of scan type still remains in the current specification.

Suggested Remedy

Adopt the text proposed in contribution IEEE C802.16e-05/333

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

See 6076.

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6079**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Editorial**Starting Page # **104** Starting Line # **35**

Fig/Table#

Section **6.3.2.3.49**

Scan type field is no longer exist in the SCN-REQ/RSP message. Therefore it should be replaced with Association type field over draft

Suggested Remedy

Page 104, line 35 :

A BS may allocate the scanning allocation for MS scanning with ~~Scan type = 0, Association type=0b000, MS non-contention Association ranging with Scan type = 1.~~ MS association with coordination with Association type=0b001 and NW assisted association reporting with association type=0b010.

Page 171, line 34 :

In the MOB_SCN-REQ message the MS (the MOB_SCN-RSP message the BS) shall indicate group of neighbor BSs for ~~which only Scanning or Scanning with Association are~~ Association level requested by MS (recommended by BS). Presence of those BSs for which Association is requested (recommended) is indicated by encoding of ~~Scan type = 1.~~ Association type=0b001 or 0b010.

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

See 6076

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6080**

Comment submitted by: Kiseon

Ryu

Other

2005/07/14

Comment	Type	Starting Page #	Starting Line #	Fig/Table#	Section
	Editorial	107	43		6.3.2.3.50

Editorial :

There is no MOB_SCAN-RSP and MOB_SCAN_REPORT message.

Suggested Remedy

1. Replace MOB_SCAN-RSP with MOB_SCN-RSP at page 107, line 43 and 45.
2. Replace MOB_SCAN_REPORT with MOB_SCN-REP at 109, line 49.

Proposed ResolutionRecommendation: **Accepted**

Recommendation by

1. Replace MOB_SCAN-RSP with MOB_SCN-RSP at page 107, line 43 and 45.
2. Replace MOB_SCAN_REPORT with MOB_SCN-REP at 109, line 49.

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

1. Replace MOB_SCAN-RSP with MOB_SCN-RSP at page 107, line 43 and 45.
2. Replace MOB_SCAN_REPORT with MOB_SCN-REP at 109, line 49.

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

Editor's Actions k) done

Item 2 had moved or was removed. I also did a search throughout the document for onther instances of this error.

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6081**

Comment submitted by: Tal

Kaitz

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **110** Starting Line # **27** Fig/Table# Section **6.3.2.3.50**

It is not clear whether the HO-related BS CINR measurements relate to the active portion of the frame preamble or to all usable subcarriers. The CINR for HO purposed should be measured on the active subcarriers of the segment.

Suggested Remedy

1) Modify text on page 110, lines 27-32 as follows

BS CINR mean

The BS CINR mean parameter indicates the CINR measured by the MS from the particular BS. The value shall be interpreted as a signed byte with units of 0.5 dB. The measurement shall be performed on the **subcarriers of the** frame preamble **which are active in the particular BS's segment** and averaged over the measurement period.

2) Modify text on page 123, lines 15-21 as follows

BS CINR mean

The BS CINR mean parameter indicates the CINR in dB measured at the MS on the downlink signal of a particular BS. The value shall be interpreted as a signed byte with the resolution of 0.5 dB. The measurement shall be performed on the **subcarriers of the** frame preamble **which are active in the particular BS's segment** and averaged over the measurement period.

3) Modify text on page 124, lines 11-17 as follows

BS CINR mean

The BS CINR mean parameter indicates the CINR in dB measured at the MS on the downlink signal of a particular BS. The value shall be interpreted as a signed byte with the resolution of 0.5 dB. The measurement shall be performed on the **subcarriers of the** frame preamble **which are active in the particular BS's segment** and averaged over the measurement period.

Proposed Resolution Recommendation: Accepted**Recommendation by**

1) Modify text on page 110, lines 27-32 as follows

BS CINR mean

The BS CINR mean parameter indicates the CINR measured by the MS from the particular BS. The value shall be interpreted as a signed byte with units of 0.5 dB. The measurement shall be performed on the **subcarriers of the** frame preamble **which are active in the particular BS's segment** and averaged over the measurement period.

2) Modify text on page 123, lines 15-21 as follows

BS CINR mean

The BS CINR mean parameter indicates the CINR in dB measured at the MS on the downlink signal of a particular BS. The value shall be interpreted as a signed byte with the resolution of 0.5 dB. The measurement shall be performed on the **subcarriers of the** frame preamble **which are active in the particular BS's segment** and averaged over the measurement period.

3) Modify text on page 124, lines 11-17 as follows

BS CINR mean

The BS CINR mean parameter indicates the CINR in dB measured at the MS on the downlink signal of a particular BS. The value shall be interpreted as a signed byte with the resolution of 0.5 dB. The measurement shall be performed on the **subcarriers of the** frame preamble **which are active in the particular BS's segment** and averaged over the measurement period.

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

1) Modify text on page 110, lines 27-32 as follows

BS CINR mean

The BS CINR mean parameter indicates the CINR measured by the MS from the particular BS. The value shall be interpreted as a signed byte with units of 0.5 dB. The measurement shall be performed on the **subcarriers of the** frame preamble **which are active in the particular BS's segment** and averaged over the measurement period.

2) Modify text on page 123, lines 15-21 as follows

BS CINR mean

The BS CINR mean parameter indicates the CINR in dB measured at the MS on the downlink signal of a particular BS. The value shall be interpreted as a signed byte with the resolution of 0.5 dB. The measurement shall be performed on the **subcarriers of the** frame preamble **which are active in the particular BS's segment** and averaged over the measurement period.

3) Modify text on page 124, lines 11-17 as follows

BS CINR mean

The BS CINR mean parameter indicates the CINR in dB measured at the MS on the downlink signal of a particular BS. The value shall be interpreted as a signed byte with the resolution of 0.5 dB. The measurement shall be performed on the **subcarriers of the** frame preamble **which are active in the particular BS's segment** and averaged over the measurement period.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6082**

Comment submitted by: Jaehwan

Chang

Other

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	110	Starting Line #	35	Fig/Table#	Section	6.3.2.3.50
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It is more natural to match smaller value to smaller binary number.

Suggested Remedy

[Both in line 35 of page 110 and in line 24 of page 124, modify the text as indicated.]

BS RSSI mean

The BS RSSI mean parameter indicates the Received Signal Strength measured by the MS from the particular BS. The value shall be interpreted as an unsigned byte with units of ~~-0.25~~ **0.25** dB, ~~and have -40 dBm subtracted from it (such that 0xff00 is interpreted as -103.75 dBm)~~, an MS shall be able to report values in the range -103.75 dBm to -40 dBm. The measurement shall be performed on the frame preamble and averaged over the measurement period.

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

[Both in line 35 of page 110 and in line 24 of page 124, modify the text as indicated.]

BS RSSI mean

The BS RSSI mean parameter indicates the Received Signal Strength measured by the MS from the particular BS. The value shall be interpreted as an unsigned byte with units of ~~-0.25~~ **0.25** dB, ~~and have -40 dBm subtracted from it (such that 0xff00 is interpreted as -103.75 dBm)~~, an MS shall be able to report values in the range -103.75 dBm to -40 dBm. The measurement shall be performed on the frame preamble and averaged over the measurement period.

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

[Both in line 35 of page 110 and in line 24 of page 124, modify the text as indicated.]

BS RSSI mean

The BS RSSI mean parameter indicates the Received Signal Strength measured by the MS from the particular BS. The value shall be interpreted as an unsigned byte with units of ~~-0.25~~ **0.25** dB, ~~and have -40 dBm subtracted from it (such that 0xff00 is interpreted as -103.75 dBm)~~, an MS shall be able to report values in the range -103.75 dBm to -40 dBm. The measurement shall be performed on the frame preamble and averaged over the measurement period.

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

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6083**

Comment submitted by: Tal

Kaitz

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **110** Starting Line # **44** Fig/Table# Section **6.3.2.3.50**

Newly added text relating to definition of round trip delay is incorrect. RTD does not equal (TTG-SSRTG-time offset accumulation).

The equation is based on the false assumption that the MS transmits initial ranging exactly SSRTG after the end of the DL sub-frame, where in reality initial ranging is transmitted in the designated initial ranging slots (which can be anywhere within the UL sub-frame) and are referenced relative to the start of the DL subframe using 'Allocation Start Time' field in UL-MAP.

Round trip delay is a well defined term and the standard need not specify how to obtain it - and most certainly not with an erroneous equation.

Suggested Remedy

1) Modify text on page 110, lines 44-51 as follows:

BS RTD

The BS RTD parameter indicates the round trip delay (RTD) measured by the MS from the serving BS. ~~RTD is calculated by using $RTD = (TTG - SSRTG - \text{timing offset})$, where timing offset is given by the accumulated value of Time Adjusts in RNG-RSP messages received from the serving BS through ranging.~~ The value shall be interpreted as an unsigned byte with units of 1/Fs (see Section 10.3.4.3). This parameter shall be only measured on serving BS/anchor BS.

2) Modify text on page 123, lines 33-40 as follows:

BS RTD

The BS RTD parameter indicates the round trip delay (RTD) measured by the MS from the serving BS. ~~RTD is calculated by using $RTD = (TTG - SSRTG - \text{timing offset})$, where timing offset is given by the accumulated value of Time Adjusts in RNG-RSP messages received from the serving BS through ranging.~~ The value shall be interpreted as an unsigned byte with units of 1/Fs (see Section 10.3.4.3). This parameter shall be only measured on serving BS/anchor BS.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

See 6084

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6084**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	110	Starting Line #	44	Fig/Table#	Section	6.3.2.3.51
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Re: #5611

Overcomplicated definition of RTD calculation is both wrong and unnecessary. Looks like the formula is based on some hidden assumption [for example, that MS's turnaround lasts precisely SSRTG time]. If this is the assumption, it certainly is incorrect : as SSRTG is not precise duration of switching time, but top limit for that [terminal's capability].

Anyway, there is no need in such explanation. RTD is naturally measured by the MS at each event of periodic ranging. Each time the terminal receives allocation for [periodic] CDMA ranging, it transmits with certain time advance [with respect to allocation signaled by the BS]. This time advance D is presumably known to the MS. After BS returns timing offset d in RNG-RSP, the MS can easily calculate one way delay = D + d.

Suggested Remedy

Change

The BS RTD parameter indicates the round trip delay (RTD) measured by the MS from the serving BS. RTD is calculated by using $RTD = (TTG - SSRTG - \text{timing offset})$, where timing offset is given by the accumulated value of Time Adjusts in RNG-RSP messages received from the serving BS through ranging. The value shall be interpreted as an unsigned byte with units of 1/Fs (see Section 10.3.4.3). This parameter shall be only measured on serving BS/anchor BS.

Same change should be done at page 123, line 33

Proposed Resolution

Recommendation: **Accepted-Modified**

Recommendation by

1) Modify text on page 110, lines 44-51 as follows:

BS RTD

The BS RTD parameter indicates the round trip delay (RTD) measured by the MS from the serving BS. RTD is can be given by the latest time advance taken by MS. ~~calculated by using $RTD = (TTG - SSRTG - \text{timing offset})$, where $RTD = (\text{Initial Time Advance} + \text{timing offset})$, where Initial Time Advance is given by the time advance value taken by MS at the first transmission in Initial Ranging, and its value is equal to or less than $(TTG - SSRTG)$ for TDD system. In the equation, timing offset is given by the accumulated value of Time Adjusts in RNG-RSP messages received from the serving BS through ranging.~~ The value shall be interpreted as an unsigned byte with units of 1/Fs (see Section 10.3.4.3). This parameter shall be only measured on serving BS/anchor BS.

2) Modify text on page 123, lines 33-40 as follows:

BS RTD

The BS RTD parameter indicates the round trip delay (RTD) measured by the MS from the serving BS.

RTD is can be calculated by using ~~$RTD = (TTG - SSRTG - \text{timing offset})$ where~~

~~RTD is can be~~ calculated by using ~~$RTD = (TTG - SSRTG - \text{timing offset})$~~ , where ~~$RTD = (\text{Initial Time Advance} + \text{timing offset})$~~ , where Initial Time Advance is given by the time advance value taken by MS at the first transmission in Initial Ranging, and its value is equal to or less than $(TTG - SSRTG)$ for TDD system. ~~In the equation,~~ timing offset is given by the accumulated value of Time Adjusts in RNG-RSP messages received from the serving BS through ranging. The value shall be interpreted as an unsigned byte with units of 1/Fs (see Section 10.3.4.3). This parameter shall be only measured on serving BS/anchor BS.

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

1) *Modify text on page 110, lines 44-51 as follows:*

BS RTD

The BS RTD parameter indicates the round trip delay (RTD) measured by the MS from the serving BS. ~~RTD is can be given by the latest time advance taken by MS. calculated by using $RTD = (TTG - SSRTG - \text{timing offset})$, where $RTD = (\text{Initial Time Advance} + \text{timing offset})$, where Initial Time Advance is given by the time advance value taken by MS at the first transmission in Initial Ranging, and its value is equal to or less than $(TTG - SSRTG)$ for TDD system. In the equation,~~ timing offset is given by the accumulated value of Time Adjusts in ~~RNG-RSP messages received from the serving BS through ranging.~~ The value shall be interpreted as an unsigned byte with units of 1/Fs (see Section 10.3.4.3). This parameter shall be only measured on serving BS/anchor BS.

2) *Modify text on page 123, lines 33-40 as follows:*

BS RTD

The BS RTD parameter indicates the round trip delay (RTD) measured by the MS from the serving BS. ~~RTD is can be~~ calculated by using ~~$RTD = (TTG - SSRTG - \text{timing offset})$~~ , where ~~$RTD = (\text{Initial Time Advance} + \text{timing offset})$~~ , where Initial Time Advance is given by the time advance value taken by MS at the first transmission in Initial Ranging, and its value is equal to or less than $(TTG - SSRTG)$ for TDD system. ~~In the equation,~~ timing offset is given by the accumulated value of Time Adjusts in RNG-RSP messages received from the serving BS through ranging. The value shall be interpreted as an unsigned byte with units of 1/Fs (see Section 10.3.4.3). This parameter shall be only measured on serving BS/anchor BS.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6085**

Comment submitted by: Phillip

Barber

Member

2005/07/14

Comment Type **Technical, Satisfied (was** Starting Page # **112** Starting Line # Fig/Table# Section **6.3.2.3.52**

In the current IEEE802.16e/D9, there is no HO priority or HO reason indication in the HO request sent by network, so MS can't distinguish different HO situations which should associate different response actions; instead MS treats all HO request from the network as the same priority.

Suggested Remedy

Adopt the remedy in the contribution "C80216e-05_316"(John Lee).

Proposed Resolution Recommendation: Accepted-Modified

Recommendation by

Adopt the remedy in the contribution "C80216e-05_316r2"

Reason for Recommendation

Resolution of Group Decision of Group: Accepted-Modified

Adopt the remedy in the contribution "C80216e-05_316r2"

Reason for Group's Decision/Resolution

Vote: 25-3

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6086**

Comment submitted by: Yigal

Eliaapur

Member

2005/07/14

Comment Type Technical, Non-binding Starting Page # 114 Starting Line # 12 Fig/Table# Section 6.3.2.3.52

D9 draft has some unjustified and inconvenient inconsistencies, between FBSS and HHO operations. In FBSS, there's no need for CID update after Anchor BS swithing, since the new Anchor BS CID assignments are known from the time of adding the BS to the active set.

In hard handover, CID update is currently performed during HO, after the BS transmits (and MS receives) RNG-RSP with either unsolicited REG-RSP message or REG-RSP TLVs that are part of the RNG-RSP message. In optimized HO, CID update could be the only action the MS performs upon reception of the message, thus the duration of the actual CID update operation by the MS is directly reflected on the HO latency. Without CID update during HO, the HO latency can be reduced.

Suggested Remedy

Add CID update to the MOB_BSHO-REQ/RSP messages.

When the BS initiates HO via MOB_BSHO-REQ or responds to MS initiated HO via MOB_BSHO-RSP, it will add to each BS in the recommended target BS list, the CIDs assigned by the target BS (i.e. CID update). Consequentially, the chosen target BS can omit the REG-RSP message/TLVs during HO. If the target BS changes the CID mapping from the time it was originally assigned, it may include REG-RSP message/TLV during HO with CID update TLVs.

Changes summary (to draft document):

Add the following text to D9/MOB_BSHO-REQ message (table 108l, page 114, line 12):

```

...
    HO_authorization_policy_support   | 8 | .....
    }                                 | — | —
    N_CIDs                            | 8 | Number of CIDs needed to be reassigned. For SHO, N_CIDs shall be set to zero.
    For (i= 0;i<N_CIDs;i++) {        | — | —
        New CID                       | 16 | New CID to be used after Active Set is updated
    }                                 | — | —
    N_SAIDs                           | 8 | Number of SAIDs need to be reassigned.
    For(i=0; i<N_SAIDs; i++){        | — | —
        New SAID                       | 16 | New SAID to be used after Anchor BS is updated
    }                                 | — | —
}
}
}
else if (Mode == 001) {
...

```

Add the following text to D9/MOB_BSHO-RSP message (table 108n, page 125, line 59):

```

...
    HO_authorization_policy_support   | 8 | .....
    }                                 | — | —

```

```

N_CIDs          | 8 | Number of CIDs needed to be reassigned. For SHO, N_CIDs shall be set to zero.
  For (i= 0;i<N_CIDs;i++) {
    New CID      | 16 | New CID to be used after Active Set is updated
  }
N_SAIDs         | 8 | Number of SAIDs need to be reassigned.
  For(i=0; i<N_SAIDs; i++){
    New SAID     | 16 | New SAID to be used after Anchor BS is updated
  }
}
}
}
else if (Mode == 001) {
...

```

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

Add CID update to the MOB_BSHO-REQ/RSP messages.

When the BS initiates HO via MOB_BSHO-REQ or responds to MS initiated HO via MOB_BSHO-RSP, it will add to each BS in the recommended target BS list, the CIDs assigned by the target BS (i.e. CID update). Consequentially, the chosen target BS can omit the REG-RSP message/TLVs during HO. If the target BS changes the CID mapping from the time it was originally assigned, it may include REG-RSP message/TLV during HO with CID update TLVs.

Changes summary (to draft document):

Add the following text to D9/MOB_BSHO-REQ message (table 108l, page 114, line 12):

```

...
HO_authorization_policy_support | 8 | .....
}
N_CIDs          | 8 | Number of CIDs needed to be reassigned. For SHO, N_CIDs shall be set to zero.
  For (i= 0;i<N_CIDs;i++) {
    New CID      | 16 | New CID to be used after Active Set is updated
  }
N_SAIDs         | 8 | Number of SAIDs need to be reassigned.
  For(i=0; i<N_SAIDs; i++){
    New SAID     | 16 | New SAID to be used after Anchor BS is updated
  }
}
}
}
else if (Mode == 001) {
...

```

Add the following text to D9/MOB_BSHO-RSP message (table 108n, page 125, line 59):

```

...
HO_authorization_policy_support | 8 | .....
}

```

```

N_CIDs          | 8 | Number of CIDs needed to be reassigned. For SHO, N_CIDs shall be set to zero.
  For (i= 0;i<N_CIDs;i++) {
    New CID      | 16 | New CID to be used after Active Set is updated
  }
N_SAIDs         | 8 | Number of SAIDs need to be reassigned.
  For(i=0; i<N_SAIDs; i++){
    New SAID     | 16 | New SAID to be used after Anchor BS is updated
  }
}
}
}
else if (Mode == 001) {
...

```

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

Vote: 13-19

Absolutely not. Very, very bad idea. This would require ALL POTENTIAL target BS in the list to provision CIDs from their limited pool in anticipation of a HO that may never occur. Indeed, for all except one, no handover will ever occur. Actually, there is little guarantee that any handover will result from the messaging.

Also would require a lot of other mechanics you don't provide. How does the serving BS notify target BS that the MS finally does not elect to HO to that they can de-allocate their provisioned CIDs? Much more not specified. Not good.

CID_update has to occur at some point in the handover transaction; either during handover setup, or during actual handover consummation. It is better that it only occur at the one Target BS the MS actually conducts handover to; and at the Target BS where it will likely have better link quality/burst profile than on the degrading performance with Serving BS that MS is leaving.

Active set update through handover management messages on SHO/FBSS is similar to network re-entry process, so the updated CIDs during active set update are used to communicate between MS and active set BS(of anchor BS).

But in normal handover case, unlike in case SHO/FBSS, MS shall select only one neighbor BS as a target BS through handover management message handshaking process.

Therefore, when we adopt the comment, the CIDs pre-allocated by other neighbor BSs, which are not selected as a target BS, through the handshaking process will be finally useless. And whenever MS tries normal handover, same procedures recur.

Therefore the CID preallocation for HHO wastes the CID resource.

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6087**

Comment submitted by: Kiseon

Ryu

Other

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **114** Starting Line # **22** Fig/Table# **108l** Section **6.3.2.3.52**

Clarification :

In PKMv2 EAP authorization, AK is derived from the function as $AK = \text{Dot16KDF}(\text{PMK}, \text{SSID} \mid \text{BSID} \mid \text{"AK"}, 160)$.

Is it possible for an MS to have the same AK regardless of the changed BSID due to HO?

AK Change Indicator should be replaced with Re-authentication Indicator to indicate whether a MS should conduct re-authentication procedure with the new Anchor BS .

Suggested Remedy

1. Modify all "AK Change Indicator" fields in Table 108l.MOB_BSHO-REQ as follows :

Syntax	Size(bits)	Notes
AK Change Indicator <u>Re-authentication Indicator</u>	1	To indicate whether the AK being used <u>re-authentication</u> should change be conducted when switching to a new Anchor BS. If set to 0, the MS should continue to use the AK currently in use. <u>does not need to be re-authenticated</u> . If set to 1, the MS should use the AK derived for <u>use</u> <u>conduct re-authentication procedure</u> with the new Anchor BS.

2. Modify the description of "AK Change Indicator" at page 120, line 14-17 as follows :

~~AK Change Indicator~~ Re-authentication Indicator

To indicate whether the ~~AK being used~~ re-authentication should ~~change be conducted~~ when switching to a new Anchor BS. If set to 0, the MS ~~should continue to use the AK currently in use.~~ does not need to be re-authenticated. If set to 1, the MS should ~~use the AK derived for use~~ conduct re-authentication procedure with the new Anchor BS.

3. Modify all "AK Change Indicator" fields in Table 108n.MOB_BSHO-RSP as follows :

Syntax	Size(bits)	Notes
AK Change Indicator <u>Re-authentication Indicator</u>	1	To indicate whether the AK being used <u>re-authentication</u> should change be conducted when switching to a new Anchor BS. If set to 0, the MS should continue to use the AK currently in use. <u>does not need to be re-authenticated</u> . If set to 1, the MS should use the AK derived for <u>use</u> <u>conduct re-authentication procedure</u> with the new Anchor BS.

4. Modify the description of "AK Change Indicator" at page 131, line 44-47.

~~AK Change Indicator~~ Re-authentication Indicator

To indicate whether the ~~AK being used~~ re-authentication should ~~change~~ be conducted when switching to a new Anchor BS. If set to 0, the MS ~~should continue to use the AK currently in use~~ does not need to be re-authenticated. If set to 1, the MS should ~~use the AK derived for use~~ conduct re-authentication procedure with the new Anchor BS.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Withdrawn**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6088**

Comment submitted by: Yigal

Leiba

Member

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	118	Starting Line #	14	Fig/Table#	Section	6.3.2.3.52
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The parameter 'action time' is mentioned, but it is not defined from what time it's measurement starts

Suggested Remedy

Add the text on line 61:

"A value of 1 in this parameter indicates that the Target BS will allocates the dedicated transmission opportunity in the frame following the one in which this message has been received"

Note the same comment also applies to:

page 130, line 42

page 132, line 47

page 133, line 23

page 361, line 53

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

Add the text on line 61:

"A value of 1 in this parameter indicates that the Target BS will allocates the dedicated transmission opportunity in the frame following the one in which this message has been received"

Note the same comment also applies to:

page 130, line 42

page 132, line 47

page 133, line 23

page 361, line 53

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

It is 'defined as number of frames until the Target BS allocates a dedicated transmission opportunity for RNG-REQ message to be transmitted by the MS using Fast_Ranging_IE.'

In any event, the proposed remedy is wrong since the time allocated for the dedicated transmission opportunity would, by necessity, be at some point at least some few frames in the future, to allow the MS to negotiate a Scanning & Association interval to test the connection to the proposed target BS. So it cannot start 'in the frame following...'

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

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6089**

Comment submitted by: Phillip

Barber

Member

2005/07/14

Comment Type Technical, Satisfied (was Starting Page # **120** Starting Line # **30** Fig/Table# Section **6.3.2.3.53**

Handover can be initiated either by BS or MS independently based on information they collect. Therefore, it is highly possible that the MS and BS may initiate the HO by sending HO request to each other at the same time (in the same frame) without knowledge that the peer is also initiating HO request, creating a race condition.

Suggested Remedy

Adopt the remedy in the contribution "C80216e-05_335"(John Lee).

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Withdrawn**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6090**

Comment submitted by: Yigal

Leiba

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **120** Starting Line # **54** Fig/Table# Section **6.3.2.3.53**

Fields could be better aligned to ease implementation

Suggested Remedy

Change 'Report metric' field size to 7 bits (line 49 on page 120), and change 'Padding' field size to 5 bits (line 6 on page 121)

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Change 'Report metric' field size to 7 bits (line 49 on page 120), and change 'Padding' field size to 5 bits (line 6 on page 121)

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change 'Report metric' field size to 7 bits (line 49 on page 120), and change 'Padding' field size to 5 bits (line 6 on page 121)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

This change was not necessary after extensive edits by other contributions.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6091**

Comment submitted by: Yigal

Leiba

Member

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	121	Starting Line #	57	Fig/Table#	Section	6.3.2.3.53
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It seems like lines 3 to 26 will repeat information already sent on the message, since for non-SHO/FBSS MSS, the number of current BS should be set to 1.

Suggested Remedy

Change the text to read:

"When FBSS/SHO is not supported or the MS has an empty active set, N_current_BSs is set to ~~4~~0"**Proposed Resolution**Recommendation: **Accepted**

Recommendation by

Change the text to read:

"When FBSS/SHO is not supported or the MS has an empty active set, N_current_BSs is set to ~~4~~0"**Reason for Recommendation****Resolution of Group**Decision of Group: **Rejected****Reason for Group's Decision/Resolution**

Vote: 0-2

For non-FBSS/soft handover case, you need at least one BS which is the serving BS (there is always an active set of at least 1).

Group's Notes**Group's Action Items****Editor's Notes**

Editor's Actions |) none needed

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6092**

Comment submitted by: Phillip

Barber

Member

2005/07/14

Comment Type **Technical, Satisfied (was** Starting Page # **124** Starting Line # **44** Fig/Table# Section **6.3.2.3.54**

In the current IEEE802.16e/D9, the BS is required to respond to MS handover messaging MOB_MSHO-REQ with a MOB_BSHO-RSP. However, unlike with MS ability to reject a contemplated handover as expressed through MS use of the HO-IND with the reject code, the BS enjoys no similar rights. The BS has no method to indicate to the MS that a considered handover may not be in the best interest of network or MS performance.

Suggested Remedy

Adopt the remedy in the contribution "C80216e-05_324"(John Lee).

Proposed ResolutionRecommendation: **Accepted-Modified**

Recommendation by

Adopt the remedy in the contribution "C80216e-05_324r1"

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

Adopt the remedy in the contribution "C80216e-05_324r1"

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

Document under Review: 802.16e/D9

Ballot Number: 0001056

Comment Date

Comment # 6093

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type Technical, Non-binding Starting Page # 125 Starting Line # 25 Fig/Table# Section 6.3.2.3.54

I object to the resolution of comment #5208, because the 'Resource Retain Type' in MOB_BSHO-RSP message is the information related to only Serving BS, not related to the recommended neighbor BSs. Therefore the field 'Resource Retain Type' should be moved to another low.

Suggested Remedy

Delete "Resource Retain Type" field at line 25 page 125

Change 'Reserved' field at line 45 page 125 as following :

Reserved | 5.4 | Shall be set to zero.

Add Resource Retain Type and reserved bit as following at page 125 line 4

N_Recommended	8	-
<u>Resource Retain Type</u>	<u>1</u>	<u>0: Release connection information</u> <u>1: Retain connection information</u>
<u>Reserved</u>	<u>7</u>	<u>Shall be set to zero</u>
For(j=0; j<N_Recommended; j++) {	-	Neighbor base stations shall be presented in an order such that the first presented is the one most recommended and the last presented is the least recommended
Neighbor BSID	48	
...

Proposed Resolution

Recommendation: Accepted

Recommendation by

Delete "Resource Retain Type" field at line 25 page 125

Change 'Reserved' field at line 45 page 125 as following :

Reserved | 5.4 | Shall be set to zero.

Add Resource Retain Type and reserved bit as following at page 125 line 4

N_Recommended	8	-
---------------	---	---

N_Recommended	8	-
<u>Resource Retain Type</u>	<u>1</u>	<u>0: Release connection information</u> <u>1: Retain connection information</u>
<u>Reserved</u>	<u>7</u>	<u>Shall be set to zero</u>
For(j=0; j<N_Recommended; j++) {	-	Neighbor base stations shall be presented in an order such that the first presented is the one most recommended and the last presented is the least recommended
Neighbor BSID	48	
...

Reason for Recommendation

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

Delete "Resource Retain Type" field at line 25 page 125
 Change 'Reserved' field at line 45 page 125 as following :
 Reserved | 5 | Shall be set to zero.

Add Resource Retain Type and reserved bit as following at page 125 line 4

N_Recommended	8	-
<u>Resource Retain Type</u>	<u>1</u>	<u>0: Release connection information</u> <u>1: Retain connection information</u>
<u>Reserved</u>	<u>7</u>	<u>Shall be set to zero</u>
For(j=0; j<N_Recommended; j++) {	-	Neighbor base stations shall be presented in an order such that the first presented is the one most recommended and the last presented is the least recommended
Neighbor BSID	48	
...

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6094**

Comment submitted by: **Lei**

Wang

Member

2005/07/14

Comment Type **Editorial**
typo

Starting Page # **129**

Starting Line # **18**

Fig/Table# **108n**

Section **6**

Suggested Remedy
change "he" to "the"

Proposed Resolution
change "he" to "the"

Recommendation: **Accepted**

Recommendation by

Reason for Recommendation

Resolution of Group
change "he" to "the"

Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6095**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment Type **Technical, Non-binding**
HO-IND is essentially a response to request

Starting Page # **132** Starting Line # **9**

Fig/Table# Section **6**

Suggested Remedy
Change

0b00: HO request
0b01: SHO/FBSS request: Anchor BS update
0b10: SHO/FBSS request: Active Set update
0b11: reserved

Proposed Resolution Recommendation: **Accepted**
Change

Recommendation by

0b00: HO request
0b01: SHO/FBSS request: Anchor BS update
0b10: SHO/FBSS request: Active Set update
0b11: reserved

Reason for Recommendation

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

0b00: HO request
0b01: SHO/FBSS request: Anchor BS update
0b10: SHO/FBSS request: Active Set update
0b11: reserved

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6096**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	133	Starting Line #	61	Fig/Table#	Section	6
---------	------	------------------------	-----------------	-----	-----------------	----	------------	---------	---

What does it mean "This may include the serving BS"?
 Target BS ID [which is 48 bits address] may include serving BS [ID?] ?
 Or the intention was to say that it may be identical to Serving BS ID?

Suggested Remedy

Change

Target_BS_ID

Same as the Base Station ID parameter in the DL-MAP message of target BS. ~~This may include the serving BS.~~

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Change

Target_BS_ID

Same as the Base Station ID parameter in the DL-MAP message of target BS. ~~This may include the serving BS.~~

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change

Target_BS_ID

Same as the Base Station ID parameter in the DL-MAP message of target BS. ~~This may include the serving BS.~~

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6097**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	134	Starting Line #	1	Fig/Table#	Section	6
---------	------	------------------------	-----------------	-----	-----------------	---	------------	---------	---

What is the purpose of transmitting this information in HO-IND message? Which device and how can use it?
 E.g. in messages NBR-ADV and BSHO-REQ it is very much usable as provides information from network
 to the MS. But in opposite direction?

Suggested Remedy

Change

For the SCa and OFDMA PHY this parameter **is not valid and shall be set to 0** defines the PHY-specific preamble for the target
~~BS~~. For the OFDM PHY the 5 LSB contain the DL subchannel index (as defined in Table 211)
 used in the target BS sector. The 3 MSB shall be Reserved and set to 0.

Proposed ResolutionRecommendation: **Withdrawn**

Recommendation by

Reason for Recommendation**Resolution of Group**Decision of Group: **Withdrawn****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes**

Editor's Actions |) none needed

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6098**

Comment submitted by: Kiseon

Ryu

Other

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	135	Starting Line #	41	Fig/Table#	Section	6.3.2.3.56
---------	------	------------------------	-----------------	-----	-----------------	----	------------	---------	------------

Clarification :

Dedicated CDMA code and transmission opportunity can be assigned only for the Idle MS except with action code "No Action Required".

Suggested Remedy

Add the text at page 135, line 41, as follows :

For OFDMA PHY, one of the following TLV may be included in the MOB_PAG-ADV management message:

CDMA code and transmission opportunity assignment (11.18.1)

OFDMA-PHY specific parameter used to indicate CDMA code and transmission opportunity assigned to one or more MSs being paged in this message. One CDMA code and transmission opportunity assignment in the TLV corresponds to one MS paged. The order of the assignments is the same as the order of appearance of MS MAC address hash [except with action code "No Action Required"](#) in this message.

Proposed Resolution Recommendation: Accepted**Recommendation by**

Add the text at page 135, line 41, as follows :

For OFDMA PHY, one of the following TLV may be included in the MOB_PAG-ADV management message:

CDMA code and transmission opportunity assignment (11.18.1)

OFDMA-PHY specific parameter used to indicate CDMA code and transmission opportunity assigned to one or more MSs being paged in this message. One CDMA code and transmission opportunity assignment in the TLV corresponds to one MS paged. The order of the assignments is the same as the order of appearance of MS MAC address hash [except with action code "No Action Required"](#) in this message.

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

Add the text at page 135, line 41, as follows :

For OFDMA PHY, one of the following TLV may be included in the MOB_PAG-ADV management message:

CDMA code and transmission opportunity assignment (11.18.1)

OFDMA-PHY specific parameter used to indicate CDMA code and transmission opportunity assigned to one or more MSs being paged in this message. One CDMA code and transmission opportunity assignment in the TLV corresponds to one MS paged. The order of the assignments is the same as the order of appearance of MS MAC address hash [except with action code "No Action Required"](#) in this message.

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

2005/08/12

IEEE 802.16-045r4

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6099**

Comment submitted by: Jaehwan

Chang

Other

2005/07/14

Comment	Type	Editorial	Starting Page #	148	Starting Line #	54	Fig/Table#	Section	6.3.2.3.60
---------	------	-----------	-----------------	-----	-----------------	----	------------	---------	------------

This is an editorial clarification for already existing capability negotiation TLVs.

Suggested Remedy

[Add the following clarifying sentence.]

The SUB-DL-UL-MAP message can be located in the first zone of the frame or in any of the zones within the frame. [The Sub map capability for the first zone or other zones are specified and negotiated using SBC-REQ/RSP messages.](#)

Proposed ResolutionRecommendation: **Accepted**

Recommendation by

[Add the following clarifying sentence.]

The SUB-DL-UL-MAP message can be located in the first zone of the frame or in any of the zones within the frame. [The Sub map capability for the first zone or other zones are specified and negotiated using SBC-REQ/RSP messages.](#)

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

[Add the following clarifying sentence.]

The SUB-DL-UL-MAP message can be located in the first zone of the frame or in any of the zones within the frame. [The Sub map capability for the first zone or other zones are specified and negotiated using SBC-REQ/RSP messages.](#)

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

Editor's Actions k) done

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6100**

Comment submitted by: **Mark**

Cudak

Member

2005/07/14

Comment Type **Editorial** Starting Page # **150** Starting Line # **4**

Fig/Table# Section **6.3.4.3.4**

Section seems to be misplaced in heading-tree

Suggested Remedy

Insert parent-headings as follows:

"6.3.4 ARQ mechanism
6.3.4.3 ARQ parameters
[Change subclause 6.3.4.3.4 as indicated:]
6.3.4.3.4 ARQ_RETRY_TIMEOUT
"

Proposed Resolution Recommendation: **Accepted**

Recommendation by

Insert parent-headings as follows:
"6.3.4 ARQ mechanism
6.3.4.3 ARQ parameters
[Change subclause 6.3.4.3.4 as indicated:]
6.3.4.3.4 ARQ_RETRY_TIMEOUT
"

Reason for Recommendation

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

Insert parent-headings as follows:
"6.3.4 ARQ mechanism
6.3.4.3 ARQ parameters
[Change subclause 6.3.4.3.4 as indicated:]
6.3.4.3.4 ARQ_RETRY_TIMEOUT
"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6101**

Comment submitted by: Brian

Johnson

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **151** Starting Line # **33** Fig/Table# Section **6.3.9.5.1**

In the current draft text (802.16e/D9) (6.3.10.3.1), after receiving a RNG-RSP with status "continue," the SS shall continue ranging in the initial ranging region using codes from the periodic ranging domain. This is good in that it allows the BS to recognize an SS that has already received at least one RNG-RSP message. However, it means that we must be able to detect ranging codes from both the initial and periodic ranging code domains which adds complexity.

We propose instead that the BS send the SS a specific ranging code in the RNG-RSP message. This code shall be outside of the initial ranging domain. The SS shall use this code for the next ranging transmission. The SS still uses random backoff making it extremely unlikely that two SSs that previously collided and used the same CDMA code will be confused again.

Suggested Remedy

Adopt the text changes in the latest revision of contribution C802.16-05/338

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

At the request of the commentor

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6102**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **151** Starting Line # **54** Fig/Table# Section **6.3.9**

In current draft, there is no way to force MSs to re-enter for reset of BS. When a BS is reset, its associated information will be expired and removed regardless of duplexing. Therefore, BS cannot inform each MS to re-enter with CID. And also there may be many MSs in sleep mode or Idle mode.

Consequently, we need the scheme to inform MSs to re-enter by BS

Suggested Remedy

[Adopt contribution C802.16e-05/343](#)

Proposed Resolution Recommendation: Accepted**Recommendation by**

[Adopt contribution C802.16e-05/343](#)

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

[Adopt contribution C802.16e-05/343](#)

Reason for Group's Decision/Resolution

Vote:1: 3-5

Vote 2: 0-1

Vote 3: 15-4

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6103**

Comment submitted by: Jaehee

Cho

Other

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	151	Starting Line #	59	Fig/Table#	Section	6.3.10.3.2
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For the closed loop power control, tx power conly can be controled by BS even for periodic ranging.
When MS did not have opportunity to send UL transmission, MS may not have appropriate Tx power level for the periodic ranging.

To solve this problem, we propose to allow MS to adjust it periodic ranging transmission under the following constraints.

1. MS can adjust its Tx power only when MS sends periodic ranging code and fails to receive RNG-RSP.
2. the SS can adjust its power level below $P_{TX_IR_MAX}$ (6.3.9.5.1)

Suggested Remedy

6.3.10.3.2 Periodic ranging and automatic adjustments

[Change the following text as indicated:]

An SS that wishes to perform periodic ranging shall take the following steps:

. The SS, shall choose randomly a Ranging Slot (with the use of a binary truncated exponent algorithm to avoid possible re-collisions) at the time to perform the ranging, then it chooses randomly a Periodic Ranging Code (~~from the Periodic Ranging domain~~) and sends it to the BS (as a CDMA code).

If the SS does not receive a response, the SS shall send a new CDMA code at the next appropriate periodic Ranging transmission opportunity and adjust its power level below $P_{TX_IR_MAX}$ (6.3.9.5.1).

The BS cannot tell which SS sent the CDMA ranging request; therefore, upon successfully receiving a CDMA Periodic Ranging Code, the BS broadcasts a Ranging Response message that advertises the received Periodic Ranging Code as well as the ranging slot (OFDMA symbol number, subchannel, etc.) where the CDMA Periodic Ranging Code has been identified. This information is used by the SS that sent the CDMA Periodic Ranging Code to identify the Ranging Response message that corresponds to its ranging request. The Ranging Response message contains all the needed adjustment (e.g., time, power, and possibly frequency corrections) and a status notification.

8.4.10.3.1 Closed loop power control

[Insert the following text including direction before table 334 on page 485]

Insert the following text after the paragraph including eq. 138:

For the periodic ranging, once MS sends periodic ranging code and fails to receive RNG-RSP, MS may adjust its Tx power for the subsequent periodic ranging codes transmissstion below $P_{TX_IR_MAX}$ (6.3.9.5.1)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

6.3.10.3.2 Periodic ranging and automatic adjustments

[Change the following text as indicated:]

An SS that wishes to perform periodic ranging shall take the following steps:

. The SS, shall choose randomly a Ranging Slot (with the use of a binary truncated exponent algorithm to avoid possible re-collisions) at the time to perform the ranging, then it chooses randomly a [Periodic Ranging Code](#) (~~from the Periodic Ranging domain~~) and sends it to the BS (as a CDMA code).

If the MS does not receive a response, the MS may send a new CDMA code at the next appropriate periodic Ranging transmission opportunity and adjust its power level up to $P_{TX_IR_MAX}$ (6.3.9.5.1).

The BS cannot tell which SS sent the CDMA ranging request; therefore, upon successfully receiving a CDMA [Periodic Ranging Code](#), the BS broadcasts a Ranging Response message that advertises the received [Periodic Ranging Code](#) as well as the ranging slot (OFDMA symbol number, subchannel, etc.) where the CDMA [Periodic Ranging code](#) has been identified. This information is used by the SS that sent the CDMA [Periodic ranging code](#) to identify the Ranging Response message that corresponds to its ranging request. The Ranging Response message contains all the needed adjustment (e.g., time, power, and possibly frequency corrections) and a status notification.

8.4.10.3.1 Closed loop power control

[Insert the following text including direction before table 334 on page 485]

Insert the following text after the paragraph including eq. 138:

For the periodic ranging, once MS sends periodic ranging code and fails to receive RNG-RSP, MS may adjust its Tx power for the subsequent periodic ranging codes transmissstion up to $P_{TX_IR_MAX}$ (6.3.9.5.1). For the bandwidth request ranging, once MS sends bandwidth request ranging code and fails to receive CDMA allocation IE or RNG-RSP, MS may adjust its Tx power for the subsequent bandwidth request ranging codes transmissstion up to $P_{TX_IR_MAX}$ (6.3.9.5.1).

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6104**

Comment submitted by: Phillip

Barber

Member

2005/07/14

Comment	Type	Technical, Satisfied (was	Starting Page #	152	Starting Line #	37	Fig/Table#	Section	6.3.13
---------	------	---------------------------	-----------------	-----	-----------------	----	------------	---------	--------

I object to the resolution of comment 5221 & 4001.

Almost. So very close. But my remedy was not clear enough. Still, the deliniation between SS & MS support of Single-BS MBS and Multi-BS MBS is muddled. Need to clarify this. Legacy SS can only support Single-BS MBS. MS can support both Single-BS MBS and Multi-BS MBS.

Suggested Remedy

In 6.3.13 Multicast and broadcast services (MBS), page 152, lines 48-58, modify as:]

Two types of access to multicast and broadcast services (MBS) may be supported: single-BS access and multi-BS access. Single-BS access is implemented over multicast and broadcast transport connections within one BS, while multi-BS access is implemented by transmitting data from Service Flow(s) over multiple BS. ~~Single-BS access is optional for SS~~ may support Single-BS access. ~~Multi-BS access is optional for MS~~ may support both Single-BS and Multi-BS access. ARQ is not applicable to either single-BS-MBS or multi-BS-MBS. Initiation of MBS with respect to specific SS is always performed in registered state by creation of multicast connection carrying MBS data. During such initiation the SS learns the Service Flow ID that identifies the service. For multi-BS-MBS, each BS capable of providing MBS belongs to a certain MBS Zone, which is a set of BSs where the same CID and same SA is used for transmitting content of certain Service Flow(s). MBS Zone is identified by a unique MBS_ZONE identifier.

Proposed Resolution**Recommendation: Accepted-Modified****Recommendation by**

In 6.3.13 Multicast and broadcast services (MBS), page 152, lines 48-58, modify as:]

Two types of access to multicast and broadcast services (MBS) may be supported: single-BS access and multi-BS access. Single-BS access is implemented over multicast and broadcast transport connections within one BS, while multi-BS access is implemented by transmitting data from Service Flow(s) over multiple BS. ~~Single-BS access is optional for SS~~. ~~Multi-BS access is optional for MS~~ may support both Single-BS and Multi-BS access. ARQ is not applicable to either single-BS-MBS or multi-BS-MBS. Initiation of MBS with respect to specific SS is always performed in registered state by creation of multicast connection carrying MBS data. During such initiation the SS learns the Service Flow ID that identifies the service. For multi-BS-MBS, each BS capable of providing MBS belongs to a certain MBS Zone, which is a set of BSs where the same CID and same SA is used for transmitting content of certain Service Flow(s). MBS Zone is identified by a unique MBS_ZONE identifier.

[Editor to restore 6.3.13 from 802.16-2004 by un-deleting the text and removing reference to 6.3.13 in the 16e draft.]

[Move all of the material for MBS added in 6.3.13 to a new section 6.3.22.]

[In new section 6.3.22, replace all references to 'SS' with 'MS' as required.]

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

In 6.3.13 Multicast and broadcast services (MBS), page 152, lines 48-58, modify as:]

Two types of access to multicast and broadcast services (MBS) may be supported: single-BS access and multi-BS access. Single-BS access is implemented over multicast and broadcast transport connections within one BS, while multi-BS access is implemented by transmitting data from Service Flow(s) over multiple BS. ~~Single-BS access is optional for SS~~. ~~Multi-BS access is optional for MS~~ may support both Single-BS and Multi-BS access. ARQ is not applicable to either single-BS-MBS or multi-BS-MBS. Initiation of MBS with respect to specific SS is always performed in registered state by creation of multicast connection carrying MBS data. During such initiation the SS learns the Service Flow ID that

performed in registered state by creation of multicast connection carrying MBS data. During each initiation the UE learns the Service Flow ID that identifies the service. For multi-BS-MBS, each BS capable of providing MBS belongs to a certain MBS Zone, which is a set of BSs where the same CID and same SA is used for transmitting content of certain Service Flow(s). MBS Zone is identified by a unique MBS_ZONE identifier.

[Editor to restore 6.3.13 from 802.16-2004 by un-deleting the text and removing reference to 6.3.13 in the 16e draft.]

[Move all of the material for MBS added in 6.3.13 to a new section 6.3.22.]

[In new section 6.3.22, replace all references to 'SS' with 'MS' as required.]

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6105**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **152** Starting Line # **41** Fig/Table# Section **6**

"Some globally defined service flows may carry broadcast or multicast information that should be delivered to a plurality of **SS** or MS."

Does not it contribute a new feature to fixed terminals? If yes, does it fit mandate [PAR] of 802.16e?

Suggested Remedy

Dependently on the answer to above question either do nothing or delete "SS or"

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

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

Reason for Group's Decision/Resolution

See 6104.

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6106**

Comment submitted by: Jaehwan

Chang

Other

2005/07/14

Comment Type **Editorial**

Starting Page # **159**

Starting Line # **56**

Fig/Table#

Section **6.3.17**

The number of HARQ channels is one of the things that is negotiated during capability negotiation. There are TLVs for this and the sentence should have been corrected accordingly.

Suggested Remedy

[Modify the text as indicated.]

The number of ~~H-ARQ~~HARQ channels in use is determined by ~~BS~~through capability negotiation.

Proposed Resolution

Recommendation: **Accepted-Modified**

Recommendation by

[Modify the text as indicated.]

The number of ~~H-ARQ~~HARQ channels in use per connection is determined through DSA-REQ/DSA-RSP handshake, or REG-REQ/REG-RSP handshake. ~~by BS~~ The total number of HARQ channels in use per terminal is determined through capability negotiation using SBC-REQ/SBC-RSP handshake.

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

[Modify the text as indicated.]

The number of ~~H-ARQ~~HARQ channels in use per connection is determined through DSA-REQ/DSA-RSP handshake, or REG-REQ/REG-RSP handshake. ~~by BS~~ The total number of HARQ channels in use per terminal is determined through capability negotiation using SBC-REQ/SBC-RSP handshake.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6107**

Comment submitted by: Mark

Cudak

Member

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	160	Starting Line #	12	Fig/Table#	Section	6.3.17.4
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I object to the resolution of comment #5030 in IEEE 802.16-05/035r4 because link adaptation is still not adequately supported. The text describing the CINR measurement does define the measurement procedure necessary to create interoperable SS. Therefore, a minimal set of measurement options should be defined. Moreover, there is no mechanism for REP-REQ/RSP to provide any information about the frequency selectivity or time selectivity of the channel. This information is critical (in addition to CINR), for supporting accurate link adaptation algorithms at the BS. Therefore, additional message types should be added to provide the BS with sufficient information to properly schedule channel quality feedback rates (e.g., periodicity of CQICH) and perform link adaptation.

Suggested Remedy

Adopt contribution C80216e-05_331.pdf or its latest revision

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6108**

Comment submitted by: Vladimir Yanover

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **163** Starting Line # **37** Fig/Table# Section **6**

Must be typo. Data rate over Minimum Reserved Traffic Rate is not guaranteed

Suggested Remedy

Change

In the case when the amount of data submitted to the transmitter's MAC SAP exceeds ~~(Maximum Sustained Traffic Rate)~~ **(Minimum Reserved Traffic Rate)*** T, delivery of each specific SDU is not guaranteed.

Make same change at the page 164, line 7

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Change

In the case when the amount of data submitted to the transmitter's MAC SAP exceeds ~~(Maximum Sustained Traffic Rate)~~ **(Minimum Reserved Traffic Rate)*** T, delivery of each specific SDU is not guaranteed.

Make same change at the page 164, line 7

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change

In the case when the amount of data submitted to the transmitter's MAC SAP exceeds ~~(Maximum Sustained Traffic Rate)~~ **(Minimum Reserved Traffic Rate)*** T, delivery of each specific SDU is not guaranteed.

Make same change at the page 164, line 7

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6109**

Comment submitted by: Yerang

Hur

Other

2005/07/14

Comment Type Editorial Starting Page # 164 Starting Line # 40

Fig/Table# 132f Section 6.3.19.1.5

Incorrect table name of Table 132f.

Suggested Remedy

[Change the title of the table as indicated:]

Table 132f - ~~Best-Effort~~ Extended Real-Time Variable Rate Service ParametersProposed Resolution Recommendation: **Accepted**

Recommendation by

[Change the title of the table as indicated:]

Table 132f - ~~Best-Effort~~ Extended Real-Time Variable Rate Service Parameters

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

[Change the title of the table as indicated:]

Table 132f - ~~Best-Effort~~ Extended Real-Time Variable Rate Service Parameters

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6110**

Comment submitted by: Kiseon

Ryu

Other

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	166	Starting Line #	20	Fig/Table#	Section	6.3.20.1
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Clarification :

At the last BRC, a contribution (C80216e-05_219r2) which proposes a method of MS supporting event-triggered actions was accepted. The contribution defines a few compound TLVs which are supposed to be included in DCD and NBR-ADV message and define conditions triggering corresponding actions MS has to perform.

However, the contribution seems not consider Sleep MS in detail. According to the current specification of IEEE P802.16e/D9, an MS, even in Sleep Mode, receives DCD and NBR-ADV message, which means MS's Sleep Mode operation may be affected by the TLVs directing event-triggered actions. The first purpose of Sleep Mode is to minimize MS's power consumption so that those event-triggered actions may not be always useful for Sleep Mode.

Although this function is negotiated through SBC-REQ/RSP (it seems not incorporated in D9), the negotiation is for trigger metric, not for action in Sleep Mode. Obviously, there may be a case where a MS may support the function in Normal Operation but does not want to perform event-triggered actions while it is in Sleep Mode.

Suggested Remedy

Discuss and adopt the contribution C80216e-05_334 (Clarification of Triggered Action in Sleep Mode).

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Adopt the contribution C80216e-05_334 (Clarification of Triggered Action in Sleep Mode).

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Adopt the contribution C80216e-05_334 (Clarification of Triggered Action in Sleep Mode).

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6111**

Comment submitted by: Ron

Murias

Member

2005/07/14

Comment Type **Technical, Satisfied (was** Starting Page # **168** Starting Line # **31** Fig/Table# Section **6.3.2.3.58**

I object to the resolution of comment 5244 in C80216-05_035r3 because the group stated that more text was required to properly resolve the comment, but they did not provide that text. The text required by the group is provided in Contribution C802.16e-05/312r0

Suggested Remedy

Adopt contribution C.802.16e-05_312.

Proposed Resolution Recommendation: **Accepted-Modified**

Recommendation by

Adopt contribution C.802.16e-05_312r1.

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Adopt contribution C.802.16e-05_312r1.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6112**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment	Type Technical, Non-binding	Starting Page # 171	Starting Line # 7	Fig/Table#	Section 6
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Neighbor BS is not a target yet at the time of network topology acquisition

Suggested Remedy
Change

Availability of this information facilitates MS synchronization with neighboring BS by removing the need to monitor transmission from the ~~target~~ neighboring BS for DCD/UCD broadcasts

Proposed Resolution **Recommendation: Accepted** **Recommendation by**
Change

Availability of this information facilitates MS synchronization with neighboring BS by removing the need to monitor transmission from the ~~target~~ neighboring BS for DCD/UCD broadcasts

Reason for Recommendation

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

Availability of this information facilitates MS synchronization with neighboring BS by removing the need to monitor transmission from the ~~target~~ neighboring BS for DCD/UCD broadcasts

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6113**

Comment submitted by: Mark

Cudak

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **172** Starting Line # **44** Fig/Table# Section **6.3.21.1.3**

I object to the new addition in section 6.3.21.1.3 line 40-45, because it is not clear if a mobile that performs directed scanning will be able to handle scanning and association request even after it has sent a MOB_MSSHO-REQ.

In the current version of the standard (D9) when the mobile station (MS) requests a handover (HO), by sending the MOB_MSHO_REQ message, it is unclear if the serving BS can arrange further scans with association after receipt of the MS HO REQ. To expedite HO in many instances it will be optimal for a serving BS to arrange for such scan with association to expedite reentry and enable the MSS to make use of invited ranging.

Suggested Remedy

[Add following paragraph in section 6.3.21.1.3, page 172, line 45]

When a handover is initiated by a MS that supports directed association, the serving BS may enable the MS obtain updated ranging parameters by scheduling a scan period with association. If a MS receives a SCN-RSP after sending a MOB_MSHO_REQ message it shall cancel its T41 timer and complete the scanning as indicated in the SCN-RSP message. It shall then restart the T41 timer after returning back to its serving BS

Proposed Resolution

Recommendation: Accepted-Modified

Recommendation by

[Add following paragraph in section 6.3.21.1.3, page 172, line 45]

When a handover is initiated by a MS that supports directed association, the serving BS may enable the MS obtain updated ranging parameters by scheduling a scan period with association. If a MS receives a SCN-RSP after sending a MOB_MSHO_REQ message it shall cancel its ~~T41 timer~~MS handover retransmission timer and complete the scanning as indicated in the SCN-RSP message. It shall then restart the ~~T41 timer~~MS handover retransmission timer after returning back to its serving BS

Reason for Recommendation

Resolution of Group

Decision of Group: Superseded

Reason for Group's Decision/Resolution

See 6133.

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions () none needed

2005/08/12

IEEE 802.16-045r4

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6114**

Comment submitted by: Ron

Murias

Member

2005/07/14

Comment	Type	Editorial	Starting Page #	172	Starting Line #	53	Fig/Table#	Section	6.3.21.1.3.2
---------	------	-----------	-----------------	-----	-----------------	----	------------	---------	--------------

The HO Association Level 1 (Association with Coordination) is restricted only to the OFDMA implementation.

Suggested Remedy

Replace:

"When "Dedicated ranging indicator" is set to 1, then the ranging region and ranging method defined shall be used for the purpose of ranging using dedicated CDMA code and transmit opportunity assigned in the MOB-PAG-ADV message (for location update in idle mode) or in the MOB-SCN-RSP message (for coordinated association)."

with

"When "Dedicated ranging indicator" is set to 1, then the ranging region and ranging method defined ~~shall~~ could be used for the purpose of ranging using dedicated CDMA code and transmit opportunity assigned in the MOB-PAG-ADV message (for location update in idle mode) or in the MOB-SCN-RSP message (for coordinated association)."

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

Replace:

"When "Dedicated ranging indicator" is set to 1, then the ranging region and ranging method defined shall be used for the purpose of ranging using dedicated CDMA code and transmit opportunity assigned in the MOB-PAG-ADV message (for location update in idle mode) or in the MOB-SCN-RSP message (for coordinated association)."

with

"When "Dedicated ranging indicator" is set to 1, then the ranging region and ranging method defined ~~shall~~ could be used for the purpose of ranging using dedicated CDMA code and transmit opportunity assigned in the MOB-PAG-ADV message (for location update in idle mode) or in the MOB-SCN-RSP message (for coordinated association)."

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

Replace:

"When "Dedicated ranging indicator" is set to 1, then the ranging region and ranging method defined shall be used for the purpose of ranging using dedicated CDMA code and transmit opportunity assigned in the MOB-PAG-ADV message (for location update in idle mode) or in the MOB-SCN-RSP message (for coordinated association)."

with

"When "Dedicated ranging indicator" is set to 1, then the ranging region and ranging method defined shall ~~not~~ could be used for the purpose of ranging using dedicated CDMA code and transmit opportunity assigned in the MOB-PAG-ADV message (for location update in idle mode) or in the MOB-SCN-RSP message (for coordinated association)."

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6115**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **172** Starting Line # **60** Fig/Table# Section **6**
 Clarification

Suggested Remedy
 Change

After the BS successfully receives ranging code and sends RNG-RSP message with ranging status 'success', it will provide uplink **allocation** of adequate size for the MS to transmit RNG-REQ message with TLV parameters (Serving BS ID, MS MAC address) related to the association ranging.

Proposed Resolution Recommendation: **Accepted** Recommendation by
 Change

After the BS successfully receives ranging code and sends RNG-RSP message with ranging status 'success', it will provide uplink **allocation** of adequate size for the MS to transmit RNG-REQ message with TLV parameters (Serving BS ID, MS MAC address) related to the association ranging.

Reason for Recommendation

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

After the BS successfully receives ranging code and sends RNG-RSP message with ranging status 'success', it will provide uplink **allocation** of adequate size for the MS to transmit RNG-REQ message with TLV parameters (Serving BS ID, MS MAC address) related to the association ranging.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6116**

Comment submitted by: Ron

Murias

Member

2005/07/14

Comment Type **Editorial** Starting Page # **173** Starting Line # **19** Fig/Table# Section **6.3.21.1.3.3**

The HO Association Level 2 (NW Assisted Association Reporting) is restricted only to the sOFDMA implementation.

Suggested Remedy

Replace:
"Using this association type, the MS is required only to transmit the CDMA ranging code at the Target BS."

with

"Using this association type, the MS is required ~~only~~ to transmit the CDMA ranging code at the Target BS, for OFDMA implementations.

Proposed Resolution Recommendation: Accepted

Recommendation by

Replace:
"Using this association type, the MS is required only to transmit the CDMA ranging code at the Target BS."

with

"Using this association type, the MS is required ~~only~~ to transmit the CDMA ranging code at the Target BS, for OFDMA implementations.

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Replace:
"Using this association type, the MS is required only to transmit the CDMA ranging code at the Target BS."

with

"Using this association type, the MS is required ~~only~~ to transmit the CDMA ranging code at the Target BS, for OFDMA implementations.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6117**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	173	Starting Line #	30	Fig/Table#	Section	6
Text clarification									

Suggested Remedy
Change

The Serving BS (of the associating MS), will coordinate to assure that the neighboring BSs do not assign overlapping "rendezvous times" to the MS, i.e. allocating or too close in time to each other ranging windows regions. in frames that are too close in time to each other (or even concurrent).

Proposed Resolution **Recommendation: Accepted** **Recommendation by**
Change

The Serving BS (of the associating MS), will coordinate to assure that the neighboring BSs do not assign overlapping "rendezvous times" to the MS, i.e. allocating or too close in time to each other ranging windows regions. in frames that are too close in time to each other (or even concurrent).

Reason for Recommendation

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

The Serving BS (of the associating MS), will coordinate to assure that the neighboring BSs do not assign overlapping "rendezvous times" to the MS, i.e. allocating or too close in time to each other ranging windows regions. in frames that are too close in time to each other (or even concurrent).

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6118**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **173** Starting Line # **37** Fig/Table# Section **6**
 "When" sounds as a condition

Suggested Remedy
 Change

The ranging region will be allocated via UIUC=12 in the UL-MAP, ~~when~~ with the "Dedicated ranging indicator" bit is set to 1.

Proposed Resolution Recommendation: **Accepted-Modified** Recommendation by
 Change

When the Dedicated ranging indicator is set to 1, ~~The ranging region will be allocated via UIUC=12 in the UL-MAP, ~~when with the "Dedicated ranging indicator" bit is set to 1.~~~~

Reason for Recommendation

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

When the Dedicated ranging indicator is set to 1, ~~The ranging region will be allocated via UIUC=12 in the UL-MAP, ~~when with the "Dedicated ranging indicator" bit is set to 1.~~~~

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6119**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment	Type Technical, Non-binding	Starting Page # 173	Starting Line # 40	Fig/Table#	Section 6.3.21.1.3.2
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This section is about association, not paging. Paging section contains similar instruction [p.198]

Suggested Remedy

Change

When "Dedicated ranging indicator" is set to 1, then the ranging region and ranging method defined shall be used for the purpose of ranging using dedicated CDMA code and transmit opportunity assigned in the ~~MOBPAG-ADV message or in the~~ MOB-SCN-RSP message (for coordinated association).

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Change

When "Dedicated ranging indicator" is set to 1, then the ranging region and ranging method defined shall be used for the purpose of ranging using dedicated CDMA code and transmit opportunity assigned in the ~~MOBPAG-ADV message or in the~~ MOB-SCN-RSP message (for coordinated association).

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change

When "Dedicated ranging indicator" is set to 1, then the ranging region and ranging method defined shall be used for the purpose of ranging using dedicated CDMA code and transmit opportunity assigned in the ~~MOBPAG-ADV message or in the~~ MOB-SCN-RSP message (for coordinated association).

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6120**

Comment submitted by: Kiseon

Ryu

Other

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	173	Starting Line #	42	Fig/Table#	Section	6.3.21.1.3.2
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Correction :
Dedicated CDMA code and transmission opportunity for coordinated association shall be assigned via MOB-SCN-RSP message not MOB_PAG-ADV message.

Suggested Remedy

Modify the text in 6.3.21.1.3.2 Association Level 1- Association with coordination, at page 173, line 40-43, as follows :

When "Dedicated ranging indicator" is set to 1, then the ranging region and ranging method defined shall be used for the purpose of ranging using dedicated CDMA code and ~~transmit transmission~~ opportunity assigned ~~in the MOB_PAG-ADV message or~~ in the MOB-SCN-RSP message (for coordinated association).

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

See 6119

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6121**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **173** Starting Line # **51** Fig/Table# Section **6**

"Earliest" makes impression that there may be many of them, but the MS does not have any information which dedicated ranging opportunities are for this specific MS

Suggested Remedy

Change

"Rendezvous time" specifies the **earliest** frame in which the neighbor BS will transmit a UL_MAP containing the definition of the dedicated ranging region **CDMA code and transmit opportunity** where the MS can use the assigned CDMA ranging code. "Rendezvous time" is provided in units of frames, beginning at the frame where the MOB_SCN_RSP message is transmitted

Proposed ResolutionRecommendation: **Accepted-Modified**

Recommendation by

Change

"Rendezvous time" specifies the **earliest** frame in which the neighbor BS will transmit a UL_MAP containing the definition of the dedicated ranging region where the MS can use the assigned CDMA ranging code. "Rendezvous time" is provided in units of frames, beginning at the frame where the MOB_SCN_RSP message is transmitted

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

Change

"Rendezvous time" specifies the **earliest** frame in which the neighbor BS will transmit a UL_MAP containing the definition of the dedicated ranging region where the MS can use the assigned CDMA ranging code. "Rendezvous time" is provided in units of frames, beginning at the frame where the MOB_SCN_RSP message is transmitted

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6122**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	173	Starting Line #	56	Fig/Table#	Section	6
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Suggest to delete redundant text: no need to explain here how to interpret UL-MAP IEs.
 Also the name of the field is **Uplink** Allocation Start Time
 Cleanup for the explanation of what happens if the BS decides to allocate a regular (non-dedicated) ranging region instead of a ranging region with "Dedicated ranging indicator" set to 0

Last paragraph is not clear: if dedicated allocation was not provided, the MS may use
 MS may use this allocation [which?] for the coordination process

Suggested Remedy

The MS shall synchronize to the neighbor BS at the first frame immediately following the "rendezvous time", read the UL_MAP transmitted at this frame, and extract the description of the dedicated ranging region (ranging region with "Dedicated ranging indicator" bit set to 1). ~~The dedicated ranging region will appear after the time specified by the Resource Allocation Start Time field in the UL_MAP.~~ The MS shall determine the specific region it should use for transmission of the dedicated CDMA code by applying the offset defined by the "transmission opportunity offset" field in MOB_SCN_RSP, which was received from the serving BS, to the dedicated ranging region definition in the UL_MAP of the neighbor BS. **In case The neighbor BS decides to provide a regular (non-dedicated) ranging region with "Dedicated ranging indicator" set to 0** the MS may transmit the allocated CDMA code in the **regular ranging** region defined in the regular ranging window. The MS shall also in this case ignore the value of the "transmission opportunity offset" field of the MOB_SCN_RSP message it received from the serving BS ~~during the association negotiation. The neighbor BS that decides to provide a regular (non-dedicated) ranging region instead of a ranging region with "Dedicated ranging indicator" set to 1, should expect to receive the allocated CDMA code in the regular (non-dedicated) ranging region.~~
~~If no ranging window exists with "Dedicated ranging indicator" set to 1 but a regular (non-dedicated) ranging window is allocated by the BS at the Rendezvous time, then MS may use this allocation for the coordination process.~~

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

The MS shall synchronize to the neighbor BS at the first frame immediately following the "rendezvous time", read the UL_MAP transmitted at this frame, and extract the description of the dedicated ranging region (ranging region with "Dedicated ranging indicator" bit set to 1). ~~The dedicated ranging region will appear after the time specified by the Resource Allocation Start Time field in the UL_MAP.~~ The MS shall determine the specific region it should use for transmission of the dedicated CDMA code by applying the offset defined by the "transmission opportunity offset" field in MOB_SCN_RSP, which was received from the serving BS, to the dedicated ranging region definition in the UL_MAP of the neighbor BS. **In case The neighbor BS decides to provide a regular (non-dedicated) ranging region with "Dedicated ranging indicator" set to 0** the MS may transmit the allocated CDMA code in the **regular ranging** region defined in the regular ranging window. The MS shall also in this case ignore the value of the "transmission opportunity offset" field of the MOB_SCN_RSP message it received from the serving BS ~~during the association negotiation. The neighbor BS that decides to provide a regular (non-dedicated) ranging region~~

during the association negotiation. The neighbor BS that decides to provide a regular (non-dedicated) ranging region instead of a ranging region with "Dedicated ranging indicator" set to 1, should expect to receive the allocated CDMA code in the regular (non-dedicated) ranging region.
 If no ranging window exists with "Dedicated ranging indicator" set to 1 but a regular (non-dedicated) ranging window is allocated by the BS at the Rendezvous time, then MS may use this allocation for the coordination process.

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

The MS shall synchronize to the neighbor BS at the first frame immediately following the "rendezvous time", read the UL_MAP transmitted at this frame, and extract the description of the dedicated ranging region (ranging region with "Dedicated ranging indicator" bit set to 1). ~~The dedicated ranging region will appear after the time specified by the Resource Allocation Start Time field in the UL_MAP.~~ The MS shall determine the specific region it should use for transmission of the dedicated CDMA code by applying the offset defined by the "transmission opportunity offset" field in MOB_SCN_RSP, which was received from the serving BS, to the dedicated ranging region definition in the UL_MAP of the neighbor BS. ~~In this case,~~ **In case The neighbor BS decides to provide a regular (non-dedicated) ranging region with "Dedicated ranging indicator" set to 0** the MS may transmit the allocated CDMA code in the **regular ranging** region defined in the regular ranging window. The MS shall also in this case ignore the value of the "transmission opportunity offset" field of the MOB_SCN_RSP message it received from the serving BS ~~during the association negotiation. The neighbor BS that decides to provide a regular (non-dedicated) ranging region instead of a ranging region with "Dedicated ranging indicator" set to 1, should expect to receive the allocated CDMA code in the regular (non-dedicated) ranging region.~~
~~If no ranging window exists with "Dedicated ranging indicator" set to 1 but a regular (non-dedicated) ranging window is allocated by the BS at the Rendezvous time, then MS may use this allocation for the coordination process.~~

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6123**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment	Type	Editorial	Starting Page #	174	Starting Line #	23	Fig/Table#	Section	6
Editorial									

Suggested Remedy
Change

The Serving BS will then coordinate the association procedure with the requested neighboring BS's in a fashion similar to association level 1. However, when using this association type, **the MS is required only to transmit the CDMA ranging code at the Target BS.** Then the MS does not have to wait for RNG-RSP from the Target BS. Instead, the RNG-RSP info (i.e. PHY corrections) will be sent by each Target BS to the Serving BS (over the backbone). The Serving BS may aggregate all the RNG-RSP messages to a single message, namely MOB_ASC_REPORT, which the Serving BS then sends to the MS. When receiving this message, the MS updates its association database (PHY offsets and CID's) and timers for each associated BS.

~~Using this association type, the MS is required only to transmit the CDMA ranging code at the Target BS.~~

Proposed Resolution **Recommendation: Accepted** **Recommendation by**
Change

The Serving BS will then coordinate the association procedure with the requested neighboring BS's in a fashion similar to association level 1. However, when using this association type, **the MS is required only to transmit the CDMA ranging code at the Target BS.** Then the MS does not have to wait for RNG-RSP from the Target BS. Instead, the RNG-RSP info (i.e. PHY corrections) will be sent by each Target BS to the Serving BS (over the backbone). The Serving BS may aggregate all the RNG-RSP messages to a single message, namely MOB_ASC_REPORT, which the Serving BS then sends to the MS. When receiving this message, the MS updates its association database (PHY offsets and CID's) and timers for each associated BS.

~~Using this association type, the MS is required only to transmit the CDMA ranging code at the Target BS.~~

Reason for Recommendation

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

Change

The Serving BS will then coordinate the association procedure with the requested neighboring BS's in a fashion similar to association level 1. However, when using this association type, **the MS is required only to transmit the CDMA ranging code at the Target BS.** Then the MS does not have to wait for RNG-RSP from the Target BS. Instead, the RNG-RSP info (i.e. PHY corrections) will be sent by

each Target BS to the Serving BS (over the backbone). The Serving BS may aggregate all the RNG-RSP messages to a single message, namely MOB_ASC_REPORT, which the Serving BS then sends to the MS. When receiving this message, the MS updates its association database (PHY offsets and CID's) and timers for each associated BS.

~~Using this association type, the MS is required only to transmit the CDMA ranging code at the Target BS.~~

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6124**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment	Type	Starting Page #	Starting Line #	Fig/Table#	Section
	Technical, Non-binding	174	37		6

There is no definition of "ranging window" in the standard. This expression is erroneously used instead of "ranging region" or "ranging channel" [see e.g. 8.4.7]

Suggested Remedy

Change all appearance of "ranging window" to "ranging region"

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

Change all appearance of "ranging window" to "ranging region"

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

Change all appearance of "ranging window" to "ranging region"

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6125**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **174** Starting Line # **37** Fig/Table# Section **6**

This probably was the intention

Suggested Remedy

Change

If no ranging window **does not** exists with "Dedicated ranging indicator" set to 1 but a regular (non-dedicated) ranging window is allocated by the BS at the Rendezvous time, then MS may use this allocation for the **association ranging** ~~coordination~~ process.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Withdrawn**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6126**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **175** Starting Line # **11** Fig/Table# Section **6**

There is no "Authorizing Station" defined in the standard

Suggested Remedy

Change

Regardless of having received MS information from serving BS, target BS may request MS information from an ~~an Authorizing Station via the backbone~~ network. Network re-entry proceeds per 6.3.9.5 except as may be

Proposed Resolution

Recommendation: **Accepted-Modified**

Recommendation by

Change

Regardless of having received MS information from serving BS, target BS may request MS information from an ~~an Authorizing Station via~~ the backbone network. Network re-entry proceeds per 6.3.9.5 except as may be

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Change

Regardless of having received MS information from serving BS, target BS may request MS information from an ~~an Authorizing Station via~~ the backbone network. Network re-entry proceeds per 6.3.9.5 except as may be

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6127**

Comment submitted by: Vladimir Yanover

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **175** Starting Line # **17** Fig/Table# Section **6.3.21.2**
 Align text in 6.3.21.2 with definition of HO Process Optimization TLV (Table 367)

Suggested Remedy

Change

Depending on the amount of that information Target BS may decide to skip one or several of the following Network Entry steps:

- 1) Negotiate basic capabilities (Bit #0 in HO Process Optimization TLV in RNG-RSP is set)
- 2) ~~Authorize SS-PKM Authentication phase~~ **Authorize TEK phase** (Bit #1 in HO Process Optimization TLV is set)
- 3) ~~TEK creation phase~~ **TEK establishment phase** (Bit #2 in HO Process Optimization TLV is set)
- 3) ~~Perform key exchange via Key Request / Key Reply~~ (Bit #2 in HO Process Optimization TLV is set)
- 4) Send REG-REQ (Bit #9 in HO Process Optimization TLV is set)

In case bit #6 in HO Process Optimization TLV is set, full service and operational state transfer or sharing between Serving BS and Target BS is assumed (ARQ state, all timers, counters, MAC state machines, CIDs, Service Flows information and other connection information), so BS and MS do not exchange network re-entry messages after ranging before resuming normal operations.

BS may also send unsolicited REG-RSP message with updated capabilities information (Bit #10 in HO Process Optimization TLV is set)
Full list of optimization capabilities is provided in definition of HO Process Optimization TLV (Table 367)

Proposed Resolution**Recommendation: Accepted-Modified****Recommendation by**

Change

Depending on the amount of that information Target BS may decide to skip one or several of the following Network Entry steps:

- 1) Negotiate basic capabilities (Bit #0 in HO Process Optimization TLV in RNG-RSP is set)
- 2) ~~Authorize SS-PKM Authentication phase~~ **Authorize TEK phase** (Bit #1 in HO Process Optimization TLV is set)
- 3) ~~TEK establishment phase~~ **TEK establishment phase** (Bit #2 in HO Process Optimization TLV is set)
- 3) ~~Perform key exchange via Key Request / Key Reply~~ (Bit #2 in HO Process Optimization TLV is set)
- 4) Send REG-REQ (Bit #9 in HO Process Optimization TLV is set)
- 5) **BS may send unsolicited REG-RSP message with updated capabilities information or skip REG-RSP message when no TLV information to be updated** (Bit #10 in HO Process Optimization TLV is set)

In case bit #6 in HO Process Optimization TLV is set, full service and operational state transfer or sharing between Serving BS and Target BS is assumed (ARQ state, all timers, counters, MAC state machines, CIDs, Service Flows information and other connection information), so BS and MS do not exchange network re-entry messages after ranging before resuming normal operations.

Full list of optimization capabilities is provided in definition of HO Process Optimization TLV (Table 367)

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

Change

Depending on the amount of that information Target BS may decide to skip one or several of the following Network Entry steps:

- 1) Negotiate basic capabilities (Bit #0 in HO Process Optimization TLV in RNG-RSP is set)
- 2) ~~Authorize SS-PKM Authentication phase~~ (Bit #1 in HO Process Optimization TLV is set)
- 3) **TEK establishment phase (Bit #2 in HO Process Optimization TLV is set)**
- 3) ~~Perform key exchange via Key Request / Key Reply (Bit #2 in HO Process Optimization TLV is set)~~
- 4) Send REG-REQ (Bit #9 in HO Process Optimization TLV is set)
- 5) **BS may send unsolicited REG-RSP message with updated capabilities information or skip REG-RSP message when no TLV information to be updated**(Bit #10 in HO Process Optimization TLV is set)

In case bit #6 in HO Process Optimization TLV is set, full service and operational state transfer or sharing between Serving BS and Target BS is assumed (ARQ state, all timers, counters, MAC state machines, CIDs, Service Flows information and other connection information), so BS and MS do not exchange network re-entry messages after ranging before resuming normal operations.

Full list of optimization capabilities is provided in definition of HO Process Optimization TLV (Table 367)

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6128**

Comment submitted by: **Mark**

Cudak

Member

2005/07/14

Comment Type **Editorial**

Starting Page # **175** Starting Line # **20**

Fig/Table# Section **6.3.21.2**

Typo

Suggested Remedy

Change text as follows:

"TLV_is set"

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Change text as follows:

"TLV_is set"

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change text as follows:

"TLV_is set"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6129**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **175** Starting Line # **32** Fig/Table# Section **6**

It is incorrect to say that the step of setting up connections shall be omitted. It just shall not use DSA-REQ/RSP.

Suggested Remedy

Change

Step of setting up connections shall be omitted if TLVs for re-establishment of service flows (11.7.9) are used in RNG-RSP or REG-RSP. In this case BS shall provide sufficient time to the MS to process connections information as specified by MS HO connections parameters processing time TLV.

to

In case TLVs for re-establishment of connections (11.7.9) appear in RNG-RSP (REG-RSP), DSA-REQ/RSP procedure shall not be used for this purpose. In this case re-establishment of connections starts immediately after RNG-RSP (REG-RSP); the BS shall provide sufficient time to the MS to process connections information as specified by MS HO connections parameters processing time TLV.

Proposed ResolutionRecommendation: **Accepted-Modified**

Recommendation by

Change

Step of setting up connections shall be omitted if TLVs for re-establishment of service flows (11.7.9) are used in RNG-RSP or REG-RSP. In this case BS shall provide sufficient time to the MS to process connections information as specified by MS HO connections parameters processing time TLV.

to

If TLVs for re-establishment of connections (11.7.9) appear in RNG-RSP (REG-RSP), DSA-REQ/RSP procedure shall not be used for this purpose. In this case re-establishment of connections starts immediately after RNG-RSP (REG-RSP); the BS shall provide sufficient time to the MS to process connections information as specified by MS HO connections parameters processing time TLV.

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

Change

Step of setting up connections shall be omitted if TLVs for re-establishment of service flows (11.7.9) are used in RNG-RSP or REG-RSP. In this case BS shall provide sufficient time to the MS to process connections information as specified by MS HO connections parameters processing time TLV.

to

If TLVs for re-establishment of connections (11.7.9) appear in RNG-RSP (REG-RSP), DSA-REQ/RSP procedure shall not be used for this purpose. In this case re-establishment of connections starts immediately after RNG-RSP (REG-RSP); the BS shall provide sufficient time to the MS to process connections information as specified by MS HO connections parameters processing time TLV.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6130**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **175** Starting Line # **38** Fig/Table# Section **6**

It is not really termination of service as the MS typically left the BS way before the context should be destroyed

Suggested Remedy

Change

Termination of ~~Service~~ **MS Context** — The final step in hand-over is ~~any termination of MS services with previous serving BS.~~ Termination of **MS Context Service** is defined as serving BS termination of **context of** all connections belonging to the MS and the context associated with them (i.e., information in queues, ARQ state-machine, counters, timers, header suppression information, etc. is discarded).

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Change

Termination of ~~Service~~ **MS Context** — The final step in hand-over is ~~any termination of MS services with previous serving BS.~~ Termination of **MS Context Service** is defined as serving BS termination of **context of** all connections belonging to the MS and the context associated with them (i.e., information in queues, ARQ state-machine, counters, timers, header suppression information, etc. is discarded).

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change

Termination of ~~Service~~ **MS Context** — The final step in hand-over is ~~any termination of MS services with previous serving BS.~~ Termination of **MS Context Service** is defined as serving BS termination of **context of** all connections belonging to the MS and the context associated with them (i.e., information in queues, ARQ state-machine, counters, timers, header suppression information, etc. is discarded).

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6131**Comment submitted by: **Yerang****Hur****Other**

2005/07/14

Comment

Type **Editorial**Starting Page # **175**Starting Line # **43**

Fig/Table#

Section **6.3.21.2****Editorial****Suggested Remedy**

[Change line 45, p.175 as indicated:]

- HO Cancellation . an MS may cancel HO at any time prior to expiration of Resource_Retain_Time interval after transmission of MOB_~~MS~~HO-IND message.

Proposed Resolution Recommendation: **Accepted**

Recommendation by

[Change line 45, p.175 as indicated:]

- HO Cancellation . an MS may cancel HO at any time prior to expiration of Resource_Retain_Time interval after transmission of MOB_~~MS~~HO-IND message.

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

[Change line 45, p.175 as indicated:]

- HO Cancellation . an MS may cancel HO at any time prior to expiration of Resource_Retain_Time interval after transmission of MOB_~~MS~~HO-IND message.

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6132**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment Type **Editorial**

Starting Page # **175**

Starting Line # **43**

Fig/Table#

Section **6**

The text says:

"The HO process consists of the stages:

.....
— HO Cancellation — an MS may cancel HO at any time prior to expiration of Resource_Retain_Time interval after transmission of MOB_MSHO-IND message."

Thus it looks like HO Cancellation is a necessary stage in the end of HO process. Actually it is not necessary and may happen at each stage.

Suggested Remedy

Change

~~— HO Cancellation —~~

An MS may cancel HO at any time prior to expiration of Resource_Retain_Time interval after transmission of MOB_MSHO-IND message.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Rejected

Reason for Group's Decision/Resolution

Termination of Service is distinct from HO Cancellation; they should be written as separate points.

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6133**

Comment submitted by: Phillip

Barber

Member

2005/07/14

Comment	Type	Technical, Satisfied (was	Starting Page #	178	Starting Line #	12	Fig/Table#	Section	6.3.21.2.2
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According to the current IEEE802.16e/D9, There is a problem in HO decision & initiation.

Suggested Remedy

Adopt the remedy in the contribution "C80216e-05_323"(John Lee).

Proposed Resolution **Recommendation: Accepted-Modified** **Recommendation by**

Adopt the remedy in the contribution "C80216e-05_323r1" with the following changes:

MS_handover_retransmission_timer. MS shall deactivate timer ~~MS_handover_initiation_timer~~ MS_handover_retransmission_timer on MS transmit of MOB_HO-IND of ...

Make the same change (~~MS_handover_initiation_timer~~ --> MS_handover_retransmission_timer) throughout the contribution.

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

Adopt the remedy in the contribution "C80216e-05_323r1" with the following changes:

MS_handover_retransmission_timer. MS shall deactivate timer ~~MS_handover_initiation_timer~~ MS_handover_retransmission_timer on MS transmit of MOB_HO-IND of ...

Make the same change (~~MS_handover_initiation_timer~~ --> MS_handover_retransmission_timer) throughout the contribution.

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

Actually did not find any other instances of T41 in the document.

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6134**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **178** Starting Line # **56** Fig/Table# Section **6**
text clarification

Suggested Remedy
Change

Serving BS may notify one or more **potential** target BS over the backbone network of MS intent to hand-over to target ~~BS~~. Serving BS may also send MS information to **potential** target BS over the backbone to expedite hand-over.

Proposed Resolution Recommendation: **Accepted** Recommendation by
Change

Serving BS may notify one or more **potential** target BS over the backbone network of MS intent to hand-over to target ~~BS~~. Serving BS may also send MS information to **potential** target BS over the backbone to expedite hand-over.

Reason for Recommendation

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

Serving BS may notify one or more **potential** target BS over the backbone network of MS intent to hand-over to target ~~BS~~. Serving BS may also send MS information to **potential** target BS over the backbone to expedite hand-over.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6135**

Comment submitted by: Phillip

Barber

Member

2005/07/14

Comment	Type	Technical, Satisfied (was	Starting Page #	179	Starting Line #	6	Fig/Table#	Section	6.3.21.2.6
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The change to Drop recovery during handover is broken and needs fixing. Change to the list of candidate BS for re-entry now restricts the MS to selection of candidate target BS from those presented in a previous 'MOB_BSHO-REQ or MOB_BSHO-RSP' message. Period. It is not going to be uncommon for MS to experience a drop before ever having received either of these messages from the BS. Regardless, it is unnecessarily restrictive since the MS has means to identify itself in RNG-REQ during network re-entry from drop, identify its serving BS, and the target BS for re-entry can go and get MS context from the serving BS via the backbone, thus salvaging a drop in many circumstances. So specifying the BS from a list that the MS may never have obtained at the least is unnecessarily restrictive, at the most, breaks the functionality of drop recovery.

Suggested Remedy

In 6.3.21.2.6 Drops during HO, page 180, lines 6-11, modify as:]

When the MS has detected a drop during network re-entry with a target BS, it may attempt network re-entry with its preferred target BS as ~~presented in MOB_BSHO-REQ or MOB_BSHO-RSP~~ through Cell Reselection (see 6.3.21.2.1), and may include resuming communication with the Serving BS by sending MOB_HO-IND message with HO_IND type = 0b01 (HO cancel). If ~~it~~the MS fails network re-entry with its preferred Target BS, the MS shall perform initial entry procedure.

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

In 6.3.21.2.6 Drops during HO, page 180, lines 6-11, modify as:]

When the MS has detected a drop during network re-entry with a target BS, it may attempt network re-entry with its preferred target BS as ~~presented in MOB_BSHO-REQ or MOB_BSHO-RSP~~ through Cell Reselection (see 6.3.21.2.1), and may include resuming communication with the Serving BS by sending MOB_HO-IND message with HO_IND type = 0b01 (HO cancel). If ~~it~~the MS fails network re-entry with its preferred Target BS, the MS shall perform initial entry procedure.

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

In 6.3.21.2.6 Drops during HO, page 180, lines 6-11, modify as:]

When the MS has detected a drop during network re-entry with a target BS, it may attempt network re-entry with its preferred target BS as ~~presented in MOB_BSHO-REQ or MOB_BSHO-RSP~~ through Cell Reselection (see 6.3.21.2.1), and may include resuming communication with the Serving BS by sending MOB_HO-IND message with HO_IND type = 0b01 (HO cancel). If ~~it~~the MS fails network re-entry with its preferred Target BS, the MS shall perform initial entry procedure.

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

Editor's Action Items

Document under Review:	802.16e/D9	Ballot Number:	0001056	Comment Date	
Comment #	6136	Comment submitted by:	Vladimir Yanover	Member	2005/07/14
Comment	Type Technical, Non-binding	Starting Page #	179	Starting Line #	11
		Fig/Table#		Section	6

Suggested Remedy
Change

When MS transmits and serving BS receives MOB_HO-IND message with the HO cancel option (HO_IND_type=0b01) during Resource Retain Time **after reception of MOB_HO_IND** (when Resource Retain Type=1), regardless of MS attempt at HO, the MS and serving BS shall resume Normal Operation communication.

Proposed Resolution
ChangeRecommendation: **Accepted-Modified**

Recommendation by

When MS transmits and serving BS receives MOB_HO-IND message with the HO cancel option (HO_IND_type=0b01) during Resource Retain Time **after reception of MOB_HO-IND** (when Resource Retain Type=1), regardless of MS attempt at HO, the MS and serving BS shall resume Normal Operation communication.

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Resource Retain Time only exists after reception of MOB_HO-IND. So transmission of MOB_HO-IND is implied.

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6137**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **179** Starting Line # **41** Fig/Table# Section **6**

There is no such procedure "close connections". The text certainly does not refer to DSD process as the MS has already left the cell

Suggested Remedy

Change

Regardless of Resource retain timer, the serving BS shall **destroy MAC context** ~~close all connections and discard MAC state machine~~ and MAC PDUs associated with the MS upon reception of a backbone message from the target BS indicating MS Network Attachment at target BS.

Proposed Resolution

Recommendation: **Accepted-Modified**

Recommendation by

Change

Regardless of Resource retain timer, the serving BS shall **remove MAC context** ~~close all connections and discard MAC state machine~~ and MAC PDUs associated with the MS upon reception of a backbone message from the target BS indicating MS Network Attachment at target BS.

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Change

Regardless of Resource retain timer, the serving BS shall **remove MAC context** ~~close all connections and discard MAC state machine~~ and MAC PDUs associated with the MS upon reception of a backbone message from the target BS indicating MS Network Attachment at target BS.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6138**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **180** Starting Line # **36** Fig/Table# Section **6**
 Very messy text including misleading references to non-existing "Invited Initial Ranging"

Suggested Remedy

Change

An MS and a target BS shall conduct Ranging per 6.3.9.5 to begin network entry/re-entry management message handshaking process except an MS may take advantage of a non-contention based MS Initial Ranging opportunity if present. Non-contention based MS Initial Ranging, as part of the MS re-entry process, shall be considered the same as Invited Initial Ranging as defined in 6.3.9.5, except that the MS RNG-REQ message will use the HO_ID, if HO_ID is assigned in MOB-BSHO-REQ or MOB-BSHO-RSP, or MS MAC Address if HO_ID is not assigned in MOB-BSHO-REQ or MOB-BSHO-RSP instead of the Basic CID, which will not have been sent at the time of the RNG-REQ management message, and the target BS shall return the MS Basic CID and Primary CID in the RNG-RSP management message.

to

An MS and a target BS shall conduct Ranging per 6.3.9.5 except when dedicated Ranging opportunity is available in which case procedure described in 6.3.21.2.4 shall be employed. For identification of the MS RNG-REQ message may include MS MAC Address or HO_ID (if assigned in MOB-BSHO-REQ or MOB-BSHO-RSP). The target BS shall assign to the MS Basic CID and Primary CID in the RNG-RSP management message.

f present. Non-contention based MS Initial Ranging, as part of the MS re-entry process, shall be considered the same as Invited Initial Ranging as defined in 6.3.9.5, except that the MS RNG-REQ message will use the HO_ID, if HO_ID is assigned in MOB-BSHO-REQ or MOB-BSHO-RSP, or MS MAC Address if HO_ID is not assigned in MOB-BSHO-REQ or MOB-BSHO-RSP instead of the Basic CID, which will not have been sent at the time of the RNG-REQ management message, and the target BS shall return the MS Basic CID and Primary CID in the RNG-RSP management message.

Proposed Resolution**Recommendation: Accepted-Modified****Recommendation by**

Change

An MS and a target BS shall conduct Ranging per 6.3.9.5 to begin network entry/re-entry management message handshaking process except an MS may take advantage of a non-contention based MS Initial Ranging opportunity if present. Non-contention based MS Initial Ranging, as part of the MS re-entry process, shall be considered the same as Invited Initial Ranging as defined in 6.3.9.5, except that the MS RNG-REQ message will use the HO_ID, if HO_ID is assigned in MOB-BSHO-REQ or MOB-BSHO-RSP, or MS MAC Address if HO_ID is not assigned in MOB-BSHO-REQ or MOB-BSHO-RSP instead of the Basic CID, which will not have been sent at the time of the RNG-REQ management message, and the target BS shall return the MS

not have been sent at the time of the RNG-REQ management message, and the target BS shall return the MS Basic CID and Primary CID in the RNG-RSP management message.

to

An MS and a target BS shall conduct Ranging per 6.3.9.5 except when dedicated Ranging opportunity is available in which case procedure described in 6.3.21.2.4 shall be employed. For identification of the MS RNG-REQ message may include MS MAC Address or HO_ID (if assigned in MOB-BSHO-REQ or MOB-BSHO-RSP). The target BS shall assign to the MS Basic CID and Primary CID in the RNG-RSP management message.

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

Change

An MS and a target BS shall conduct Ranging per 6.3.9.5 to begin network entry/re-entry management message handshaking process except an MS may take advantage of a non-contention based MS Initial Ranging opportunity if present. Non-contention based MS Initial Ranging, as part of the MS re-entry process, shall be considered the same as Invited Initial Ranging as defined in 6.3.9.5, except that the MS RNG-REQ message will use the HO_ID, if HO_ID is assigned in MOB-BSHO-REQ or MOB-BSHO-RSP, or MS MAC Address if HO_ID is not assigned in MOB-BSHO-REQ or MOB-BSHO-RSP instead of the Basic CID, which will not have been sent at the time of the RNG-REQ management message, and the target BS shall return the MS Basic CID and Primary CID in the RNG-RSP management message.

to

An MS and a target BS shall conduct Ranging per 6.3.9.5 except when dedicated Ranging opportunity is available in which case procedure described in 6.3.21.2.4 shall be employed. For identification of the MS RNG-REQ message may include MS MAC Address or HO_ID (if assigned in MOB-BSHO-REQ or MOB-BSHO-RSP). The target BS shall assign to the MS Basic CID and Primary CID in the RNG-RSP management message.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6139**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	180	Starting Line #	44	Fig/Table#	Section	6
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Very messy text including misleading references to non-existing "Invited Initial Ranging".

"Just as in the Invited Initial Ranging request/response sequence, the non-contention based MS Initial Ranging sequence need only comprise a single RNG-REQ/RSP management message pair. However, additional RNG-REQ/RSP management message sequences, as part of a subsequent non-contention based initial ranging allocation or normal bandwidth allocation, may be necessary as defined in 6.3.9.5. Unlike Initial Ranging in 6.3.9.5, the target BS may elect to delay additional refinement of the physical link quality parameter settings through additional RNG-REQ/RSP sequencing in order to expedite HO processing."

Looks like the sense is that the BS, after received [in dedicated UL allocation] a RNG-REQ may decide to delay further RNG-RSP messages that would fix PHY offsets for the MS.

If this interpretation is correct, the whole paragraph is redundant as it is always at the discretion of the BS where to stop and when to restart sending unsolicited RNG-RSP messages to fix PHY offsets.

Suggested Remedy

Delete cited paragraph

Proposed Resolution Recommendation: Accepted**Recommendation by**

Delete cited paragraph on page 180, line 44:

~~"Just as in the Invited Initial Ranging request/response sequence, the non-contention based MS Initial Ranging sequence need only comprise a single RNG-REQ/RSP management message pair. However, additional RNG-REQ/RSP management message sequences, as part of a subsequent non-contention based initial ranging allocation or normal bandwidth allocation, may be necessary as defined in 6.3.9.5. Unlike Initial Ranging in 6.3.9.5, the target BS may elect to delay additional refinement of the physical link quality parameter settings through additional RNG-REQ/RSP sequencing in order to expedite HO processing."~~

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

Delete cited paragraph on page 180, line 44:

~~"Just as in the Invited Initial Ranging request/response sequence, the non-contention based MS Initial Ranging sequence need only comprise a single RNG-REQ/RSP management message pair. However, additional RNG-REQ/RSP management message sequences, as part of a subsequent non-contention based initial ranging allocation or normal bandwidth allocation, may be necessary as defined in 6.3.9.5. Unlike Initial Ranging in 6.3.9.5, the target BS may elect to delay additional refinement of the physical link quality parameter settings through additional RNG-REQ/RSP sequencing in order to expedite HO processing."~~

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6140**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	180	Starting Line #	54	Fig/Table#	Section	6
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Delete redundant text: if the TLV signal something [that current ranging process is a part of HO], no need to say that the signal should not be sent if it is not the case

Suggested Remedy

Change

The MS shall signal the target BS of a current HO attempt by including a serving BSID TLV and Ranging Purpose Indication TLV with bit #0 set to 1 in the RNG-REQ management message. ~~The MS shall not include a Ranging Purpose Indication TLV with bit #0 set to 1 in the RNG-REQ management message unless actually in the process of conducting an HO or Network Re-entry from Idle Mode attempt.~~

Proposed ResolutionRecommendation: **Accepted-Modified**

Recommendation by

Change

The MS shall signal the target BS of a current HO attempt by including a serving BSID TLV and Ranging Purpose Indication TLV with bit #0 set to 1 in the RNG-REQ management message. The MS shall not include a Ranging Purpose Indication TLV ~~with bit #0 set to 1~~ in the RNG-REQ management message unless actually in the process of conducting an HO, location update, or Network Re-entry from Idle Mode attempt.

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

Change

The MS shall signal the target BS of a current HO attempt by including a serving BSID TLV and Ranging Purpose Indication TLV with bit #0 set to 1 in the RNG-REQ management message. The MS shall not include a Ranging Purpose Indication TLV ~~with bit #0 set to 1~~ in the RNG-REQ management message unless actually in the process of conducting an HO, location update, or Network Re-entry from Idle Mode attempt.

Reason for Group's Decision/Resolution

Actually, in this case, the specification is important. There are many instances where the standard prescribes specific inclusion of TLVs and other values. The document says that, under certain conditional circumstances, a certain TLV SHALL be included. But the document is effectively mute on all other circumstances. This can lead to implementations that attempt to optimize based on these areas of lack of specification. So, in this particular instance, because it would cause substantial harm if the TLV were included inappropriately at any time, it is best to indicate that the TLV shall not be included unless specifically called for.

Group's Notes

2005/08/12

IEEE 802.16-045r4

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6141**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	181	Starting Line #	9	Fig/Table#	Section	6
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Two questions to the following text;

"The target BS shall not direct the omission of any re-entry process management messages that would compromise the security or integrity of Normal Operation of the communications as established through an unabridged Initial Entry. The MS shall complete the processing of all indicated messages before entering Normal Operation with target BS."

1. What specifically the BS should or should not do to avoid compromising "the security or integrity of Normal Operation"?
2. What specifically the BS or MS should or should not do to ensure that the MS has sufficient time to "complete the processing of all indicated messages before entering Normal Operation"

Suggested Remedy

Either clarify or remove cited paragraph

Proposed Resolution

Recommendation: **Accepted-Clarified**

Recommendation by

1. What specifically the BS should or should not do to avoid compromising "the security or integrity of Normal Operation"?

Security and Integrity are established as a part of the unabridged Initial Entry process. 'as established in Initial Entry'. Initial Entry is a specific, enumerated process in 802.16-2004 that results in SS achievement of Normal Operation with the BS. So, for instance, the BS shall not direct the MS to skip the PKM-REQ/RSP stage of Initial Entry when the BS does not have security context for the MS. Similar for the other enumerated steps.

2. What specifically the BS or MS should or should not do to ensure that the MS has sufficient time to "complete the processing of all indicated messages before entering Normal Operation"

I fail to understand your reference to time as a constraint. The sentence reads 'MS shall complete...processing...all indicated messages.' The indicated messages are the ones the BS tells the MS it must complete through the Optimization Flags TLV in RNG-RSP. This sentence is absolutely required to ensure that MS comply with BS Optimization Flags and that MS not attempt to determine for themselves which Initial Entry steps they may skip, and which they may not.

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Clarified**

1. What specifically the BS should or should not do to avoid compromising "the security or integrity of Normal Operation"?

Security and Integrity are established as a part of the unabridged Initial Entry process. 'as established in Initial Entry'. Initial Entry is a specific, enumerated process in 802.16-2004 that results in SS achievement of Normal Operation with the BS. So, for instance, the BS shall not direct the MS to skip the PKM-REQ/RSP stage of Initial Entry when the BS does not have security context for the MS. Similar for the other enumerated steps.

2. What specifically the BS or MS should or should not do to ensure that the MS has sufficient time to "complete the processing of all indicated messages before entering Normal Operation"

I fail to understand your reference to time as a constraint. The sentence reads 'MS shall complete...processing...all indicated messages.' The indicated messages are the ones the BS tells the MS it must complete through the Optimization Flags TLV in RNG-RSP. This sentence is absolutely required to ensure that MS comply with BS Optimization Flags and that MS not attempt to determine for themselves which Initial Entry steps they may skip, and which they may not.

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

NOTE: No change required.

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6142**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **181** Starting Line # **19** Fig/Table# Section **6**

Trying to decipher D9 text ...

Suggested Remedy

Change

The target BS may ignore only the first corresponding REQ management message received if it sends an unsolicited SBC-RSP or unsolicited REGRSP message.

to

In case the target BS sent unsolicited SBC-RSP (REG-RSP) message and the MS sends SBC-REQ (REG-REQ) message, the BS shall discard content of unsolicitedly sent message and accomplish SBC-REQ/RSP (REG-REQ/RSP) handshake

Proposed ResolutionRecommendation: **Accepted-Modified**

Recommendation by

Change

The target BS may ignore only the first corresponding REQ management message received if it sends an unsolicited SBC-RSP or unsolicited REGRSP message.

to

If the target BS sends an unsolicited SBC-RSP or unsolicited REG-RSP message and the MS sends the corresponding SBC-REQ (REG-REQ) message, the BS may ignore only the first corresponding REQ management message received.

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

Change

The target BS may ignore only the first corresponding REQ management message received if it sends an unsolicited SBC-RSP or unsolicited REGRSP message.

to

If the target BS sends an unsolicited SBC-RSP or unsolicited REG-RSP message and the MS sends the corresponding SBC-REQ (REG-REQ) message, the BS may ignore only the first corresponding REQ management message received.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6143**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	181	Starting Line #	34	Fig/Table#	Section	6.3.21.2.7
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COMMENT:
 HO Process Optimization TLV in RNG-RSP indicates whether a target BS supports an optimized network reentry when a target BS has the MS's service and operational context information. By properly setting the indicator bits of the TLV, the target BS can control the required reentry procedure and expedite MS's transition to normal operation. Generally the optimized reentry message transactions until successful registration follows one of the following cases. The PKM-related message transactions are not taken into consideration here.

- 1) Only RNG-REQ/RSP handshake (in case where the RNG-RSP includes REG-RSP specific TLV items)
- 2) RNG-REQ/RSP handshake followed by unsolicited REG-RSP message transmission
- 3) RNG-RES/RSP followed by both SBC-RSP and REG-RSP message transmissions

Though the above optimized reentry registration cases can clearly shorten the time taken for the reentry registration procedure, it comes with ambiguities from message omissions and REQ/RSP handshake context violations. Without any acknowledgement message, the BS could not be sure whether the MS successfully receives RNG-RSP (case 1) or unsolicited REG-RSP (case 2 & 3) and when the MS is ready to receive DL data traffic. In order to reduce unnecessary delay incurred by those ambiguities, we propose an acknowledgement/notification of the MS's successful re-entry registration by a BR header transmission with its BR field set to zero.

Suggested Remedy

[Insert the following text as a separate paragraph to Line 34 in Page 181:]

If the MS finishes the re-entry registration procedure by successfully receiving either an unsolicited REG-RSP message or a RNG-RSP message including REG-RSP specific TLV items, the MS shall send a Bandwidth Request header with zero BR field. If the BS receives a Bandwidth Request header with zero BR after sending either the unsolicited REG-RSP message or the RNG-RSP message including REG-RSP specific TLV items, the BS regards the Bandwidth Request header as a notification of MS's successful re-entry registration.

Proposed Resolution

Recommendation: **Accepted-Modified**

Recommendation by

[Insert the following text as a separate paragraph to Line 34 in Page 181:]

If the MS finishes the re-entry registration procedure by successfully receiving either an unsolicited REG-RSP message or a RNG-RSP message including REG-RSP specific TLV items, the MS shall send a Bandwidth Request header with zero BR field when bit #12 of the HO Process Optimization TLV in the RNG-RSP message is set to one. If the BS receives a Bandwidth Request header with zero BR after sending either the unsolicited REG-RSP message or the RNG-RSP message including REG-RSP specific TLV items, the BS regards the Bandwidth Request header as a notification of MS's successful re-entry registration.

[Change the following in Table 367 - RNG-RSP message encoding (page 522 line 44):]

Bit #12: MS shall send Bandwidth Request header with zero BR as a notification of MS's successful re-entry registration.

#4213-15: Reserved

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-modified

[Insert the following text as a separate paragraph to Line 34 in Page 181:]

If the MS finishes the re-entry registration procedure by successfully receiving either an unsolicited REG-RSP message or a RNG-RSP message including REG-RSP specific TLV items, the MS shall send a Bandwidth Request header with zero BR field when bit #12 of the HO Process Optimization TLV in the RNG-RSP message is set to one. If the BS receives a Bandwidth Request header with zero BR after sending either the unsolicited REG-RSP message or the RNG-RSP message including REG-RSP specific TLV items, the BS regards the Bandwidth Request header as a notification of MS's successful re-entry registration.

[Change the following in Table 367 - RNG-RSP message encoding (page 522 line 44):]

Bit #12: MS shall send Bandwidth Request header with zero BR as a notification of MS's successful re-entry registration.

#4213-15: Reserved

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6144**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **181** Starting Line # **54** Fig/Table# Section **6**
 What is " post-HO re-entry MS DL data pending"? No explanation in the text

Suggested Remedy

Either clarify or do the following changes;

During HO, the target BS may notify the MS, through the Bit#7 MS DL data pending element of the HO Process Optimization TLV item in RNG-RSP, of post-HO re-entry MS DL data pending. Upon MS successful re-entry at the target BS, now the new serving BS, and the new serving BS completing reception of any HO pending MS DL data retained and forwarded, the MS may re-establish IP connectivity and the new serving BS may send a backbone message to request the old serving BS or other network entity to stop forwarding pre-HO pending MS DL data.

Change definition bit #7 in Table 367, HO Process Optimization, to "reserved"

Proposed ResolutionRecommendation: **Accepted-Modified**

Recommendation by

Make the following changes;

During HO, the target BS may notify the MS, through the Bit#7 MS DL data pending element of the HO Process Optimization TLV item in RNG-RSP, of post-HO re-entry MS DL data pending. Upon MS successful re-entry at the target BS, now the new serving BS, ~~and~~ the new serving BS can transmit forwarded data (called "pre-HO pending MS DL data") to the MS. After completing reception of any HO pending MS DL data retained and forwarded, the MS may re-establish IP connectivity and the new serving BS may send a backbone message to request the old serving BS or other network entity to stop forwarding pre-HO pending MS DL data.

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

Make the following changes;

During HO, the target BS may notify the MS, through the Bit#7 MS DL data pending element of the HO Process Optimization TLV item in RNG-RSP, of post-HO re-entry MS DL data pending. Upon MS successful re-entry at the target BS, now the new serving BS, ~~and~~ the new serving BS can transmit forwarded data (called "pre-HO pending MS DL data") to the MS. After completing reception of any HO pending MS DL data retained and forwarded, the MS may re-establish IP connectivity and the new serving BS may send a backbone message to request the old serving BS or other network entity to stop forwarding pre-HO pending MS DL data.

2005/08/12

IEEE 802.16-045r4

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6145**

Comment submitted by: Vladimir Yanover

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **181** Starting Line # **62** Fig/Table# Section **6**

Isn't completion of network entry / re-entry process BY DEFINITON the same as establishment of MS Normal Operations?

Suggested Remedy
Change

Network entry/re-entry process completes with **establishment/re-establishment of MAC connections**
~~establishment of MS Normal Operations.~~

Proposed Resolution Recommendation: **Accepted-Modified** Recommendation by
Change as indicated:

Network entry/re-entry process completes with establishment/~~re-establishment of provisioned connection~~of ~~MS Normal Operations~~.

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted-Modified**
Change as indicated:

Network entry/re-entry process completes with establishment/~~re-establishment of provisioned connection~~of ~~MS Normal Operations~~.

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6146**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	182	Starting Line #	5	Fig/Table#	Section	6
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The following text is about upper layer operations thus out of 802.16 scope.
 Notably the text also does not sound normative [Which steps should be taken by MS?]

"For a managed MS, there is the possibility that entry at the new BS necessitates layer 3 protocol exchanges in order to retain IP connectivity. Such an MS should take appropriate steps to detect and respond to the change of BS (e.g. by performing Mobile IPv4 move detection and re-registration [RFC 3344], or Mobile IPv6 Binding Update [draft-ietf-mobileip-ipv6-24.txt])."

Suggested Remedy

Delete the cited text

Proposed Resolution Recommendation: Accepted**Recommendation by**

Delete the text as indicated:

~~"For a managed MS, there is the possibility that entry at the new BS necessitates layer 3 protocol exchanges in order to retain IP connectivity. Such an MS should take appropriate steps to detect and respond to the change of BS (e.g. by performing Mobile IPv4 move detection and re-registration [RFC 3344], or Mobile IPv6 Binding Update [draft-ietf-mobileip-ipv6-24.txt])."~~

Delete it from the References section (remove reference to RFC 3344, [draft-ietf-mobileip-ipv6-24.txt])

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

Delete the text as indicated:

~~"For a managed MS, there is the possibility that entry at the new BS necessitates layer 3 protocol exchanges in order to retain IP connectivity. Such an MS should take appropriate steps to detect and respond to the change of BS (e.g. by performing Mobile IPv4 move detection and re-registration [RFC 3344], or Mobile IPv6 Binding Update [draft-ietf-mobileip-ipv6-24.txt])."~~

Delete it from the References section (remove reference to RFC 3344, [draft-ietf-mobileip-ipv6-24.txt])

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

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6147**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	182	Starting Line #	15	Fig/Table#	Section	6
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Bit #11 is not about the capability, but on actual intent of the Target BS to apply SDU_SN procedure [certainly it cannot be applied if the BS has no such capability]

Suggested Remedy

If both Serving BS and the Target BS are involved in HO process can support continuity of ARQ or SDU_SN enabled connections, the BSs and the MS may perform MS-Assisted coordination of DL transmission during HO as described in this section. **Target BS may signal to the MS on the intention to apply this procedure using This capability is identified by bit #11 of 'HO Process Optimization' flag in the RNG-RSP message from the Target BS, which is sent to the MS during HO.**

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

If both Serving BS and the Target BS are involved in HO process can support continuity of ARQ or SDU_SN enabled connections, the BSs and the MS may perform MS-Assisted coordination of DL transmission during HO as described in this section. **Target BS may signal to the MS on the intention to apply this procedure using This capability is identified by bit #11 of 'HO Process Optimization' flag in the RNG-RSP message from the Target BS, which is sent to the MS during HO.**

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

If both Serving BS and the Target BS are involved in HO process can support continuity of ARQ or SDU_SN enabled connections, the BSs and the MS may perform MS-Assisted coordination of DL transmission during HO as described in this section. **Target BS may signal to the MS on the intention to apply this procedure using This capability is identified by bit #11 of 'HO Process Optimization' flag in the RNG-RSP message from the Target BS, which is sent to the MS during HO.**

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6148**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	182	Starting Line #	34	Fig/Table#	Section	6
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Clarification of the text: it says "the following procedures shall be performed ..." and we immediately learn that for ARQ connections there is nothing to do

Suggested Remedy

Change

~~For the connections that have SN Feedback enabled, the following procedures shall be performed by the BS and the MS:~~

For ARQ connections, the ARQ block sequence number is already available at the MS.

— For non-ARQ connections **the following procedures shall be performed by the BS and the MS:** the old Serving BS shall include a SDU SN extended subheader at least once every 2p MAC PDUs, where p is specified in the SN Feedback support TLV (11.7.8.9). Upon transmitting MOB_BSHO-RSP (in response to receiving MOB_MSHO-REQ, in case of MS initiated HO) or upon transmitting MOB_BSHO-RSP (in case of BS initiated HO), the old Serving BS shall include SDU SN extended subheader in MAC PDU at least before "Estimated HO time" (the first time that MS is expected to communicate with the Target BS). The MS shall maintain MAC SDU sequence number based on the information received from the BS. When the MS receives a MAC PDU without SDU SN extended subheader, the MS shall increment the MAC SDU sequence number by one for every SDU received. When the MS receives MAC SDU sequence number from the BS, it shall reset the MAC SDU sequence number based on the value included in SDU SN extended subheader.

Proposed Resolution	Recommendation: Accepted-Modified	Recommendation by
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Change

~~For the connections that have SN Feedback enabled, the following procedures shall be performed by the BS and the MS:~~

For ARQ connections, the ARQ block sequence number is already available at the MS.

— For non-ARQ connections **the following procedures shall be performed by the BS and the MS:** the old Serving BS shall include a SDU SN extended subheader at least once every 2p MAC PDUs, where p is specified in the SN Feedback support TLV (11.7.8.9). Upon transmitting MOB_BSHO-RSP (in response to receiving MOB_MSHO-REQ, in case of MS initiated HO) or upon transmitting MOB_BSHO-RSPREQ (in case of BS initiated HO), the old Serving BS shall include SDU SN extended subheader in MAC PDU at least before "Estimated HO time" (the first time that MS is expected to communicate with the Target BS). The MS shall maintain MAC SDU sequence number based on the information received from the BS. When the MS receives a MAC PDU without SDU SN extended subheader, the MS shall increment the MAC SDU sequence number by one for every SDU received. When the MS receives MAC SDU sequence number from the BS, it shall reset the MAC SDU sequence number based on the value included in SDU SN extended subheader.

Reason for Recommendation

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

Change

~~For the connections that have SN Feedback enabled, the following procedures shall be performed by the BS and the MS:~~

For ARQ connections, the ARQ block sequence number is already available at the MS.

— For non-ARQ connections **the following procedures shall be performed by the BS and the MS:** the old Serving BS shall include a SDU SN extended subheader at least once every 2^p MAC PDUs, where p is specified in the SN Feedback support TLV (11.7.8.9). Upon transmitting MOB_BSHO-RSP (in response to receiving MOB_MSHO-REQ, in case of MS initiated HO) or upon transmitting MOB_BSHO-RSPREQ (in case of BS initiated HO), the old Serving BS shall include SDU SN extended subheader in MAC PDU at least before "Estimated HO time" (the first time that MS is expected to communicate with the Target BS). The MS shall maintain MAC SDU sequence number based on the information received from the BS. When the MS receives a MAC PDU without SDU SN extended subheader, the MS shall increment the MAC SDU sequence number by one for every SDU received. When the MS receives MAC SDU sequence number from the BS, it shall reset the MAC SDU sequence number based on the value included in SDU SN extended subheader.

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6149**

Comment submitted by: **Yerang**

Hur

Other

2005/07/14

Comment Type **Technical non-binding**

Starting Page # **182**

Starting Line # **38**

Fig/Table#

Section **6.3.21.2.8**

Incorrect period of SDU SN reporting.

Suggested Remedy

[Change line 38-40 as indicated:]

For non-ARQ connections, the old Serving BS shall include a SDU SN extended subheader at least once every ~~2p~~^{2^p} MAC PDUs, where p is specified in the SN Feedback support TLV (11.7.8.9).

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

See 6150

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6150**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **182** Starting Line # **38** Fig/Table# Section **6**
 Typo fix and clarification

Suggested Remedy

Change

For non-ARQ connections, the old Serving BS shall include a SDU SN extended subheader at least once every ~~2p~~ ^{2^p} MAC PDUs, where p is specified in the SN Feedback support TLV (11.7.8.9). Upon transmitting MOB_BSHO-RSP (in response to receiving MOB_MSHO-REQ, in case of MS initiated HO) or upon transmitting MOB_BSHO-RSP (in case of BS initiated HO), the old Serving BS shall include SDU SN extended subheader in MAC PDU at least before "Estimated HO time" (the first time that MS is expected to communicate with the Target BS). The MS shall maintain MAC SDU sequence number based on the information received from the BS. When the MS receives a MAC PDU without SDU SN extended subheader, the MS shall increment the MAC SDU sequence number by one for every SDU received. When the MS receives MAC SDU sequence number from the BS, it shall reset the MAC SDU sequence number to based on the value included in SDU SN extended subheader

Proposed ResolutionRecommendation: **Accepted-Modified**

Recommendation by

Change the paragraph as indicated:

For non-ARQ connections, the old Serving BS shall include a SDU SN extended subheader at least once every ~~2p~~ ^{2^p} MAC PDUs, where p is specified in the SN Feedback support TLV (11.7.8.9). Upon transmitting MOB_BSHO-RSP (in response to receiving MOB_MSHO-REQ, in case of MS initiated HO) or upon transmitting MOB_BSHO-REQ (in case of BS initiated HO), if the old serving BS continues trasmission of data to the MS, it shall include SDU SN extended subheader in MAC PDU at least once before "Estimated HO time" (the first time that MS is expected to communicate with the Target BS). The MS shall maintain MAC SDU sequence number based on the information received from the BS. When the MS receives a MAC PDU without SDU SN extended subheader, the MS shall increment the MAC SDU sequence number by one for every SDU received. When the MS receives MAC SDU sequence number from the BS, it shall reset the MAC SDU sequence number to based on the value included in SDU SN extended subheader

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

Change the paragraph as indicated:

For non-ARQ connections, the old Serving BS shall include a SDU SN extended subheader at least once every ~~2p~~ ^{2^p} MAC PDUs, where p is specified in the SN Feedback support TLV (11.7.8.9). Upon transmitting MOB_BSHO-RSP (in response to receiving MOB_MSHO-REQ, in case of MS initiated HO) or upon transmitting MOB_BSHO-REQ (in case of BS initiated HO), if the old serving BS continues trasmission of data to the MS, it shall

include SDU SN extended subheader in MAC PDU at least once before "Estimated HO time" (the first time that MS is expected to communicate with the Target BS). The MS shall maintain MAC SDU sequence number based on the information received from the BS. When the MS receives a MAC PDU without SDU SN extended subheader, the MS shall increment the MAC SDU sequence number by one for every SDU received. When the MS receives MAC SDU sequence number from the BS, it shall reset the MAC SDU sequence number to based on the value included in SDU SN extended subheader

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6151**

Comment submitted by: **Panyuh**

Joo

Member

2005/07/14

Comment Type **Editorial**

Starting Page # **182** Starting Line # **42**

Fig/Table# Section **6.3.21.2.8**

Suggested Remedy

Replace 'MOB_BSHO-RSP' with 'MOB_BSHO-REQ'

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Replace 'MOB_BSHO-RSP' with 'MOB_BSHO-REQ'

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Replace 'MOB_BSHO-RSP' with 'MOB_BSHO-REQ'

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6152**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment	Type	Editorial	Starting Page #	182	Starting Line #	51	Fig/Table#	Section	6.3.21.2.8
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This section describes 'MS-Assisted coordination of DL transmission at Target BS' for hard handover case. But it includes improper words for SHO/FBSS related.

Suggested Remedy

Change the sentences from line 51 to line 65 as follows:

Upon completion of network re-entry, the Target BS (now new Serving BS) should provide UL allocation for the MS sufficient for transmission of SN Report MAC header with LSBs of the sequence number(s) of ARQ block or virtual MAC SDU. After reception of SN Report MAC header BS shall resume transmission of the data of the corresponding DL Service Flow starting from MAC SDUs pointed by the sequence number. At the completion of network re-entry ~~expiration of the Anchor switch timer~~, the MS shall send up to two SN Report MAC headers (with Last = 0 and Last = 1 as described in 6.3.2.1.2.1.7) that include the next ARQ Block (or virtual MAC SDU) sequence number that it is expecting for each of its connections that have SN feedback enabled. The MS shall send the sequence number in numerical ascending order of the values of the SFIDs values. The new Serving BS ~~anchor BS~~ may send the SN request extended subheader to explicitly request a MS to send additional SN report header. After receiving the SN request extended subheader, the MS shall send the requested SN report header. The new Serving BS ~~anchor BS~~ may assign UL resource through UL-MAP_IE for the MS to send the additional SN report header.

Proposed ResolutionRecommendation: **Accepted**

Recommendation by

Change the sentences from line 51 to line 65 as follows:

Upon completion of network re-entry, the Target BS (now new Serving BS) should provide UL allocation for the MS sufficient for transmission of SN Report MAC header with LSBs of the sequence number(s) of ARQ block or virtual MAC SDU. After reception of SN Report MAC header BS shall resume transmission of the data of the corresponding DL Service Flow starting from MAC SDUs pointed by the sequence number. At the completion of network re-entry ~~expiration of the Anchor switch timer~~, the MS shall send up to two SN Report MAC headers (with Last = 0 and Last = 1 as described in 6.3.2.1.2.1.7) that include the next ARQ Block (or virtual MAC SDU) sequence number that it is expecting for each of its connections that have SN feedback enabled. The MS shall send the sequence number in numerical ascending order of the values of the SFIDs values. The new Serving BS ~~anchor BS~~ may send the SN request extended subheader to explicitly request a MS to send additional SN report header. After receiving the SN request extended subheader, the MS shall send the requested SN report header. The new Serving BS ~~anchor BS~~ may assign UL resource through UL-MAP_IE for the MS to send the additional SN report header.

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

Change the sentences from line 51 to line 65 as follows:

Upon completion of network re-entry, the Target BS (now new Serving BS) should provide UL allocation for the MS sufficient for transmission of SN Report MAC header with LSBs of the sequence number(s) of ARQ block or virtual MAC SDU. After reception of SN Report MAC header

BS shall resume transmission of the data of the corresponding DL Service Flow starting from MAC SDUs pointed by the sequence number. At the completion of network re-entry ~~expiration of the Anchor switch timer~~, the MS shall send up to two SN Report MAC headers (with Last = 0 and Last = 1 as described in 6.3.2.1.2.1.7) that include the next ARQ Block (or virtual MAC SDU) sequence number that it is expecting for each of its connections that have SN feedback enabled. The MS shall send the sequence number in numerical ascending order of the values of the SFIDs values. The new Serving BS ~~anchor BS~~ may send the SN request extended subheader to explicitly request a MS to send additional SN report header. After receiving the SN request extended subheader, the MS shall send the requested SN report header. The new Serving BS ~~anchor BS~~ may assign UL resource through UL-MAP_IE for the MS to send the additional SN report header.

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6153**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	182	Starting Line #	51	Fig/Table#	Section	6.3.21.2.7
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I object to the resolution of comment #5268, #5306, #5638, #5641, because CID update operation during network re-entry is for mapping CIDs used in old serving BS to new CIDs used in new serving BS, there is no reason that SFID is used instead of old CID on CID update. Furthermore since the byte length of SFID is twice as long as that of CID, SFID is not useful and overburden. Therefore Old CID should replace SFID in CID update TLV encodings.

Suggested Remedy

Page 181 line 51 and page 201 line 29, replace 'SFID' with 'Old_CID'.

Page 527 line 55, replace all 'SFID' with 'old CID' in 'Value' description of 'Compressed CID update'.

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

Vote: 24-11

SFID is across network whereas CID is per BS. Therefore using SFID avoid any ambiguity or the need for the old serving BS to inform new serving BS, in particular for fast HO, the communication between BSs should be minimized to reduce latency. Although it is true that there is additional two bytes overhead of using SFID, however, this operation is only carried out in frequently during network re-entry or HO.

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6154**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	182	Starting Line #	51	Fig/Table#	Section	6
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Clarification of the text

Suggested Remedy

Change

Upon completion of network re-entry, the Target BS (now new Serving BS) should provide UL allocation for the MS sufficient for transmission of SN Report MAC headers with LSBs of the sequence number(s) of ARQ block or virtual MAC SDU.

After reception of SN Report MAC header BS shall resume transmission of the data of the corresponding DL Service Flow starting from MAC SDUs pointed by the sequence number. **The MS shall send the sequence numbers in numerical ascending order of the values of the SFIDs values. The new Serving BS may send the SN request extended subheader to explicitly request a MS to send an SN report header. After receiving the SN request extended subheader, the MS shall send the requested SN report header.**

In the process of Anchor switching during SHO or FBSS, at the expiration of the Anchor switch timer, the MS shall send **sufficient number of up to two** SN Report MAC headers **(with Last = 0 and Last = 1 as described in 6.3.2.1.2.1.7)** that include the next ARQ Block (or virtual MAC SDU) sequence number that it is expecting for each of its connections **that with have** SN feedback enabled.

Proposed Resolution**Recommendation: Accepted-Modified****Recommendation by**

Upon completion of network re-entry, the Target BS (now new Serving BS) should provide UL allocation for the MS sufficient for transmission of SN Report MAC headers with LSBs of the sequence number(s) of ARQ block or virtual MAC SDU **number**. After reception of SN Report MAC header BS shall resume transmission of the data of the corresponding DL Service Flow starting from MAC SDUs pointed by the sequence number. ~~At the expiration of the Anchor switch timer~~ **After the HO** the MS shall send **up to two** SN Report MAC headers **(with Last = 0 and Last = 1 as described in 6.3.2.1.2.1.7)** that include the next ARQ Block (or virtual MAC SDU) sequence number that it is expecting for each of its connections that have SN feedback enabled. The MS shall send the sequence number in numerical ascending order of the values of the SFIDs values. The new ~~anchor~~ **Serving** BS may send the SN request extended subheader to explicitly request a MS to send additional SN report header. After receiving the SN request extended subheader, the MS shall send the requested SN report header. The new ~~anchor~~ **Serving** BS may ~~assign UL resource~~ **provide allocation** through UL-MAP_IE for the MS to send the additional SN report header

Change in Table 7f

Last 1 **If set to 0, this header contains the SDU or ARQ block sequence numbers of the first 3 connections with SN feedback enabled. If set to 1, this header contains the SDU or ARQ block sequence numbers of the fourth, fifth and sixth connections with SN feedback enabled. SN feedback can be supported for up to 6 connections. If set to 1, this is the last SN report header. Set to 0 to indicate that this is the**

~~first of the maximum of two consecutive SN report headers.~~

~~first of the maximum of two consecutive SN report headers.~~

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

Upon completion of network re-entry, the Target BS (now new Serving BS) should provide UL allocation for the MS sufficient for transmission of SN Report MAC headers with LSBs of the sequence number(s) of ARQ block or virtual MAC SDU number. After reception of SN Report MAC header BS shall resume transmission of the data of the corresponding DL Service Flow starting from MAC SDUs pointed by the sequence number. ~~At the expiration of the Anchor switch timer~~ After the HO the MS shall send up to two SN Report MAC headers (with Last = 0 and Last = 1 as described in 6.3.2.1.2.1.7) that include the next ARQ Block (or virtual MAC SDU) sequence number that it is expecting for each of its connections that have SN feedback enabled. The MS shall send the sequence number in numerical ascending order of the values of the SFIDs values. The new anchor Serving BS may send the SN request extended subheader to explicitly request a MS to send additional SN report header. After receiving the SN request extended subheader, the MS shall send the requested SN report header. The new anchor Serving BS may assign UL resource provide allocation through UL-MAP_IE for the MS to send the additional SN report header

Change in Table 7f

Last 1 If set to 0, this header contains the SDU or ARQ block sequence numbers of the first 3 connections with SN feedback enabled. If set to 1, this header contains the SDU or ARQ block sequence numbers of the fourth, fifth and sixth connections with SN feedback enabled. SN feedback can be supported for up to 6 connections. ~~If set to 1, this is the last SN report header. Set to 0 to indicate that this is the~~
~~first of the maximum of two consecutive SN report headers.~~

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6155**

Comment submitted by: Hang

Zhang

Member

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	182	Starting Line #	52	Fig/Table#	Section	6.3.21.2.8
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I object to the text change in this section because there is some error that needs to be fixed.

Suggested Remedy

[Make the following text change to page 182, lines 52-65]

Upon completion of network re-entry, the Target BS (now new Serving BS) should provide UL allocation for the MS sufficient for transmission of SN Report MAC header with LSBs of the sequence number(s) of ARQ block or virtual MAC SDU. ~~After reception of SN Report MAC header BS shall resume transmission of the data of the corresponding DL Service Flow starting from MAC SDUs pointed by the sequence number.~~ ~~At the expiration of the Anchor switch timer, t~~ The MS shall send up to two SN Report MAC headers (with Last = 0 and Last = 1 as described in 6.3.2.1.2.1.7) that include the next ARQ Block (or virtual MAC SDU) sequence number that it is expecting for each of its connections that have SN feedback enabled. The MS shall send the sequence number in numerical ascending order of the values of the SFIDs values. **After reception of SN Report MAC header BS shall resume transmission of the data of the corresponding DL Service Flow starting from MAC SDUs pointed by the sequence number.** The new anchor BS may send the SN request extended subheader to explicitly request a MS to send additional SN report header. After receiving the SN request extended subheader, the MS shall send the requested SN report header. The new anchor Serving BS may assign UL resource through UL-MAP_IE for the MS to send the additional SN report header.

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

See 5154

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6156**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **183** Starting Line # **1** Fig/Table# Section **6**

Redundant fragment of the text that actually says nothing

The MS must use CIDs as assigned by the new Serving BS during HO via REG-RSP TLV's and include in the SN_REPORT only CIDs for connections that are continued at the new Serving BS. Acknowledgement and/or retransmission of any outstanding ARQ blocks is handled per the ARQ mechanism defined in 6.3.4

Suggested Remedy
Delete the fragment

Proposed Resolution Recommendation: **Accepted** Recommendation by
Delete the text as inciated:

~~The MS must use CIDs as assigned by the new Serving BS during HO via REG-RSP TLV's and include in the SN_REPORT only CIDs for connections that are continued at the new Serving BS. Acknowledgement and/or retransmission of any outstanding ARQ blocks is handled per the ARQ mechanism defined in 6.3.4~~

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**
Delete the text as inciated:

~~The MS must use CIDs as assigned by the new Serving BS during HO via REG-RSP TLV's and include in the SN_REPORT only CIDs for connections that are continued at the new Serving BS. Acknowledgement and/or retransmission of any outstanding ARQ blocks is handled per the ARQ mechanism defined in 6.3.4~~

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6157**

Comment submitted by: Phillip

Barber

Member

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	186	Starting Line #	50	Fig/Table#	Section	6.3.21.3
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the statement about SHO condition is ambiguous. it is not definite whether all BSs in the active set should allocate the same DL/UL frequency and time resource to the MSS. and it's ambiguous about how to allocate the resource to the MSS in SHO. I think it's good idea that all BSs in active set afford the same resource to the MSS involving in SHO . since the same UL allocation means less power consuming and the same DL allocation can simplify the implementation of diversity combination .

but in some conditions , the SHO occurs between the BSs at different sites, these BSs may have different permutation , i.e. they have different mapping relations between subcarrier and subchannel , that leads to the same logical subchannel from different BS correspond to different physical subcarriers, these subcarriers may only partially overlap . therefore, the BSs can't allocate the same frequency and time resource to the MSS involving in SHO.

In other conditions , the soft handover occurs between the different sector at the same site (i.e. softer handover), although the different sector has the same permutation, but they use the different subchannel groups, so they can't afford the same frequency resource to the MSS involving in SHO either.

Suggested Remedy

[In 6.3.21.3 Soft handover and fast BS switching, page 187, line 19; insert as:]

All BSs in the active set should allocate the same frequency and time resource to MS involved in SHO. If the soft handover occurs between BSs located at different sites and having different mapping relations between subchannel and subcarrier, then the BSs should negotiate over the backbone a special duration (zone) in the UL/DL subframe. In this duration zone, all BS in the active set adopt the same permutation and allocate the same subchannel to the MS such that MSs involved in SHO get the same time/frequency resource from all BSs in the active set.

If the soft handover occurs between different sectors of BS at the same site, one of these BS sectors is regarded as the primary sector (i.e. Anchor BS). Other BSs allocate the same time and frequency resource in the DL/UL subframe as the Anchor BS to MS involved in SHO. In otherwords, other sectors can use the same subchannel as the primary sector in this situation such that all sectors transmit in the same time/frequency resource to MS involved in SHO.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Withdrawn**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6158**

Comment submitted by: Ron

Murias

Member

2005/07/14

Comment Type **Editorial** Starting Page # **187** Starting Line # **49** Fig/Table# Section **6.3.21.3.3**
 When adding a new BS to the MSs' Active Set, the MS may initiate ranging with newly added BS. This procedure is also described in #8.4.13.3

Suggested Remedy

If the MS is operating in FBSS, when adding a new BS to the MSs' Active Set, the MS may initiate ranging with newly added BS. See also #8.4.13.1.3.

Proposed Resolution

Recommendation: **Accepted-Modified**

Recommendation by

Change the sentence as indicated.

When adding a new BS to the MSs' Active Set, the MS may initiate ranging with newly added BS. ~~This procedure is also described in #8.4.13.3~~

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Change the sentence as indicated.

When adding a new BS to the MSs' Active Set, the MS may initiate ranging with newly added BS. ~~This procedure is also described in #8.4.13.3~~

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6159**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	195	Starting Line #	20	Fig/Table#	Section	6.3.22.1
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I have been asked several times to answer whether the ARQ state is restored or not during quick connection setup after idle mode. Apparently according to current draft, in Idle mode, the resource allocated to MS, that is, MAC and PHY resource shall be released. As a result, ARQ state information in MAC layer will be removed when MS enters idle mode. Therefore, ARQ state need to be automatically reset as default when MS enters idle mode. In order to help clear understanding for current specification, I suggest to add it on the current text.

Suggested Remedy

Insert the following text at line 20 page 195

When MS enters idle mode, ARQ state information and parameters between MS and BS are removed and ARQ is reset when connection is setup during network re-entry after idle mode.

Proposed Resolution **Recommendation: Accepted**

Recommendation by

Insert the following text at line 20 page 195

When MS enters idle mode, ARQ state information and parameters between MS and BS are removed and ARQ is reset when connection is setup during network re-entry after idle mode.

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Insert the following text at line 20 page 195

When MS enters idle mode, ARQ state information and parameters between MS and BS are removed and ARQ is reset when connection is setup during network re-entry after idle mode.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6160**

Comment submitted by: Jungnam

Yun

Other

2005/07/14

Comment	Type	Starting Page #	Starting Line #	Fig/Table#	Section
	Technical, Non-binding	196	31		6.3.18

The newly inserted sub-clause, '6.3.18 Band AMC operations using 6-bit CQICH encoding' explains basic band AMC operations for different FFT sizes and, at the same time, introduces 6-bit CQICH encoding, which was designed to enhance the band AMC operation. However, current text may mislead readers such that 6-bit CQICH encoding must be used in Band AMC operations when the FFT size is smaller than 2048.

Suggested Remedy

review and adopt C802.16e-05/325

Proposed ResolutionRecommendation: **Accepted-Modified**

Recommendation by

Adopt **Option 1** of the remedy in C802.16e-05/325.**Reason for Recommendation****Resolution of Group**Decision of Group: **Accepted-Modified**Adopt **Option 1** of the remedy in C802.16e-05/325.**Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes**

Editor's Actions k) done

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6161**

Comment submitted by: Mark

Cudak

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **196** Starting Line # **43** Fig/Table# Section **6.3.22.6**

The standard uses the term "Transmission Interval" in several locations. It is not defined, but seems to be equivalent to the (defined) BS Paging Interval.

Suggested Remedy

Change last two sentences of Section 6.3.22.6 (page 196, line 43) as follows:

"A BS may broadcast one or more BS Broadcast Paging messages during the ~~Transmission-BS Paging~~ Interval. Different BS may, but need not synchronize their ~~Transmission-BS Paging~~ Intervals."

Change last sentence of first paragraph of Section 6.3.22.7 (page 196, line 58) as follows:

"A paging message shall be transmitted during the ~~Transmission-BS Paging~~ Interval if there is any MS that need paging."

Change first sentence of sixth paragraph of Section 6.3.22.7 (page 197, line 28) as follows:

"After transmitting the Broadcast Paging message with Action Code 'Perform Ranging' or 'Enter Network', if the BS does not receive RNG-REQ from the MS paged until the next ~~Transmission-BS Paging~~ Interval, the BS shall retransmit the Broadcast Paging message."

Change Section 6.3.22.9.1.1 (page 199, line 1) as follows:

"The MS shall perform Location Update process when the MS detects a change in paging group. The MS shall detect the change of paging group by monitoring the paging group identifier, PG_ID, which is transmitted by the Preferred BS in the DCD message or MOB_PAG-ADV broadcast message during the ~~Transmission-BS Paging~~ Interval. If the PG_ID detected does not match the Paging Group to which the MS belongs, the MS shall determine that paging group has changed."

Proposed Resolution Recommendation: **Accepted-Modified** Recommendation by

1. Remove title of section

[Insert new subclause 6.3.22.6:]

6.3.22.6 BS Paging Interval

2. Replace "BS Paging Interval" throughout the document by "MS Paging Listening Interval"

3. Do the following [correction of suggested by Mark]

Change last two sentences of Section 6.3.22.6 (page 196, line 43) as follows:

"A BS may broadcast one or more BS Broadcast Paging messages during the ~~Transmission-BS Paging~~ Interval. Different BS may, but need not synchronize their ~~Transmission-BS Paging~~ Intervals."

Change last sentence of first paragraph of Section 6.3.22.7 (page 196, line 58) as follows:

"A paging message shall be transmitted during the ~~Transmission-BS Paging~~ Interval if there is any MS that need paging."

Change first sentence of sixth paragraph of Section 6.3.22.7 (page 197, line 28) as follows:

"After transmitting the Broadcast Paging message with Action Code 'Perform Ranging' or 'Enter Network' if the BS does not receive RNG-REQ

After transmitting the Broadcast Paging message with Action Code 'Perform Ranging' or 'Enter Network', if the BS does not receive RNG-REQ from the MS paged until the next ~~Transmission-MS Paging Listening~~ Interval, the BS shall retransmit the Broadcast Paging message."

Change Section 6.3.22.9.1.1 (page 199, line 1) as follows:

"The MS shall perform Location Update process when the MS detects a change in paging group. The MS shall detect the change of paging group by monitoring the paging group identifier, PG_ID, which is transmitted by the Preferred BS in the DCD message or MOB_PAG-ADV broadcast message during the ~~Transmission-MS Paging Listening~~ Interval. If the PG_ID detected does not match the Paging Group to which the MS belongs, the MS shall determine that paging group has changed."

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

1. Remove title of section
[Insert new subclause 6.3.22.6:]
6.3.22.6 BS Paging Interval
2. Replace "BS Paging Interval" throughout the document by "MS Paging Listening Interval"
3. Do the following [correction of suggested by Mark]

Change last two sentences of Section 6.3.22.6 (page 196, line 43) as follows:

"A BS may broadcast one or more BS Broadcast Paging messages during the ~~Transmission-MS Paging Listening~~ Interval. Different BS may, ~~but~~ need not synchronize their ~~Transmission-MS Paging Listening~~ Intervals."

Change last sentence of first paragraph of Section 6.3.22.7 (page 196, line 58) as follows:

"A paging message shall be transmitted during the ~~Transmission-MS Paging Listening~~ Interval if there is any MS that need paging."

Change first sentence of sixth paragraph of Section 6.3.22.7 (page 197, line 28) as follows:

"After transmitting the Broadcast Paging message with Action Code 'Perform Ranging' or 'Enter Network', if the BS does not receive RNG-REQ from the MS paged until the next ~~Transmission-MS Paging Listening~~ Interval, the BS shall retransmit the Broadcast Paging message."

Change Section 6.3.22.9.1.1 (page 199, line 1) as follows:

"The MS shall perform Location Update process when the MS detects a change in paging group. The MS shall detect the change of paging group by monitoring the paging group identifier, PG_ID, which is transmitted by the Preferred BS in the DCD message or MOB_PAG-ADV broadcast message during the ~~Transmission-MS Paging Listening~~ Interval. If the PG_ID detected does not match the Paging Group to which the MS belongs, the MS shall determine that paging group has changed."

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

2005/08/12

IEEE 802.16-045r4

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6162**

Comment submitted by: Kiseon

Ryu

Other

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	197	Starting Line #	17	Fig/Table#	Section	6.3.22.7
---------	------	------------------------	-----------------	-----	-----------------	----	------------	---------	----------

Clarification :

MAC Hash Skip Threshold is used for a BS to inform an MS of the specified rule for inclusion of MS MAC Address Hash in MOB_PAG-ADV message. If a BS wants to omit MS MAC Address with 'No Action Required' from MOB_PAG-ADV message, the BS can inform this to the MS through MAC Hash Skip Threshold set to 0xFF.

Suggested Remedy

Modify the text at page 197, line 17-20, as follows :

~~Except w~~When MAC Hash Skip Threshold set to 0xFF is included in DREG-CMD message at MS Idle Mode Initiation, MAC Address Hash of an MS ~~may shall~~ be omitted in ~~any every~~ MOB_PAG-ADV message for which the MS need not be paged, and as would result in MOB_PAG-ADV notification of the MS with Action Code=0b00, 'No Action Required'.

Proposed Resolution Recommendation: **Accepted**

Recommendation by

Modify the text at page 197, line 17-20, as follows :

~~Except w~~When MAC Hash Skip Threshold set to 0xFF is included in DREG-CMD message at MS Idle Mode Initiation, MAC Address Hash of an MS ~~may shall~~ be omitted in ~~any every~~ MOB_PAG-ADV message for which the MS need not be paged, and as would result in MOB_PAG-ADV notification of the MS with Action Code=0b00, 'No Action Required'.

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Modify the text at page 197, line 17-20, as follows :

~~Except w~~When MAC Hash Skip Threshold set to 0xFF is included in DREG-CMD message at MS Idle Mode Initiation, MAC Address Hash of an MS ~~may shall~~ be omitted in ~~any every~~ MOB_PAG-ADV message for which the MS need not be paged, and as would result in MOB_PAG-ADV notification of the MS with Action Code=0b00, 'No Action Required'.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6163**

Comment submitted by: Yerang

Hur

Other

2005/07/14

Comment Type **Technical non-binding** Starting Page # **198** Starting Line # **56** Fig/Table# Section **6.3.22.9.1**

In idle mode operation of the current draft, there is no notion of Zone Update. Instead Paging Group Update is used. Refer to 6.3.22.9.1.1.

Suggested Remedy

[Change line 57 of page 198 as indicated:]

There are four location update evaluation conditions: ~~Zone~~-Paging Group Update, Timer Update, Power Down Update, and MAC Hash Skip Threshold Update.

Proposed Resolution Recommendation: Accepted

Recommendation by

[Change line 57 of page 198 as indicated:]

There are four location update evaluation conditions: ~~Zone~~-Paging Group Update, Timer Update, Power Down Update, and MAC Hash Skip Threshold Update.

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

[Change line 57 of page 198 as indicated:]

There are four location update evaluation conditions: ~~Zone~~-Paging Group Update, Timer Update, Power Down Update, and MAC Hash Skip Threshold Update.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6164**

Comment submitted by: **Jeff**

Mandin

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **205** Starting Line # **1**

Fig/Table# Section **7**

Key lifetime issues described in IETF review item 7a are still open

Suggested Remedy

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

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

Reason for Group's Decision/Resolution

See 6172

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6165**

Comment submitted by: Haixiang

He

Member

2005/07/14

Comment Type **Technical, Non-binding**

Starting Page # **213** Starting Line # **39**

Fig/Table# Section **7.2.1.6.1**

Sentence clarification

Suggested Remedy

Change

"Once the PKMv2 SA-TEK 3-way hand shake is successfully completed, the BS and SS shall start using the new AK matching the new PMK context for transmitting packets".

to

"Once the PKMv2 SA-TEK 3-way hand shake begins, the BS and SS shall start using the new AK matching the new PMK context for all messages exchanged during the 3-way hand shake and for all subsequent messages".

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

Change

"Once the PKMv2 SA-TEK 3-way hand shake is successfully completed, the BS and SS shall start using the new AK matching the new PMK context for transmitting packets".

to

"Once the PKMv2 SA-TEK 3-way handshake begins, the BS and SS shall use the new AK matching the new PMK context for the 3 way handshake messages. Other messages shall continue to use the old AK until the 3 way handshake completes successfully. Upon successful completion of the 3 way handshake, all messages shall use the new AK."

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6166**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Editorial**

Starting Page # **214** Starting Line # **16**

Fig/Table#

Section **7.2.2.8**

MTK derivation methods described in the text is not consistent with the one in the figure 135.

Suggested Remedy

[Change line 16 to:]

MTK <= Dot16KDF(MAK, MGTEK||"MTK", 128)

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

[Change line 16 to:]

MTK <= Dot16KDF(MAK, MGTEK||"MTK", 128)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6167**Comment submitted by: **Seokheon****Cho**

Other

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **214** Starting Line # **25** Fig/Table# Section **7.2.2.2.9**

A PKMv2 Authenticated-EAP-Transfer message includes CMAC/HMAC-Digest. CMAC/HMAC-Digest in this message is generated with EIK.

However, there is no definition how to generate CMAC/HMAC authentication keys by using EIK.

Suggested Remedy

Adopt the contribution C802.16e-05/339.

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

Adopt the contribution C802.16e-05/339r1

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6168**

Comment submitted by: **Seokheon**

Cho

Other

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **215** Starting Line # **2**

Fig/Table# Section **7.2.2.2.10**

The corresponding commentary (#5330) was already accepted.
But, some parts of contribution #281r3 are not fully applied in the P802.16e/D9.

Suggested Remedy

1. Apply Figure 131, Figure 132, and Figure 133 exactly as shown in the contribution #281r3.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

1. Apply Figure 131, Figure 132, and Figure 133 as shown in the contribution #281r3 with the following changes to figure captions:

Figure 131 - AK ~~with the only~~ from PAK **only** (from RSA-based authorization process)

Figure 132 - AK ~~with~~ from PAK and PMK (RSA-based and EAP-based authorization process)

Figure 133 - AK ~~with the only~~ from PMK (from EAP-based authorization process)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6169**

Comment submitted by: David

Castelow

Member

2005/07/14

Comment	Type	Editorial	Starting Page #	215	Starting Line #	27	Fig/Table#	131	Section	7.2.2.2.10
---------	------	-----------	-----------------	-----	-----------------	----	------------	-----	---------	------------

Fix missing cross references and incorrect figure numbers.
 Figures 131, 132, 133, 134, 135,

Suggested Remedy

Page 214, line 54
 Replace "Figure 131" by "Figure 130k"
 Page 215, line 27
 Replace "Figure 131" by "Figure 130k"
 Page 215, line 31
 Replace "Figure 132" by "Figure 130l"
 Page 216, line 33
 Replace "Figure 132" by "Figure 130l"
 Page 216, line 37,
 Replace "Figure 133" by "Figure 130m"
 Page 216, line 62,
 Replace "Figure 133" by "Figure 130m"
 Page 217, line 1,
 Replace "Figure outlines" by "Figure 130n outlines"
 Page 217, line 27,
 Replace "Figure 134" by "Figure 130n"
 Page 217, line 31,
 Replace "Figure outlines" by "Figure 130o outlines"
 Page 217, line 50,
 Replace "Figure 135" by "Figure 130o"

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

Page 214, line 54
 Replace "Figure 131" by "Figure 130k"
 Page 215, line 27
 Replace "Figure 131" by "Figure 130k"
 Page 215, line 31
 Replace "Figure 132" by "Figure 130l"
 Page 216, line 33

Replace "Figure 132" by "Figure 130l"

Page 216, line 37,

Replace "Figure 133" by "Figure 130m"

Page 216, line 62,

Replace "Figure 133" by "Figure 130m"

Page 217, line 1,

Replace "Figure outlines" by "Figure 130n outlines"

Page 217, line 27,

Replace "Figure 134" by "Figure 130n"

Page 217, line 31,

Replace "Figure outlines" by "Figure 130o outlines"

Page 217, line 50,

Replace "Figure 135" by "Figure 130o"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

I had to sort out a few other figures and numbering, but it looks correct now.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6170**

Comment submitted by: Haixiang

He

Member

2005/07/14

Comment Type **Technical, Non-binding**

Starting Page # **216**

Starting Line # **40**

Fig/Table#

Section **7.2.2.2.4**

PAK usage is still wrong.

Suggested Remedy

remove "PAK" from SSID|BSID|PAK|"AK" in line 40, line 47 and figure 134.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

see 6168

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6171**

Comment submitted by: Yigal

Eliaspur

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **219** Starting Line # **63** Fig/Table# Section **7.2.2.4.1**
 D9 draft does not define well the validity of the PMK and context if a cached AK derived from PMK is lost.

Suggested Remedy

Add the following to the paragraph:
 If cached AK and context is lost by either side, It immediately invalidate PMK and context which lost AK was derived from.
 Invalidating PMK means that no new AKs can be derived from this PMK (even if the HO optimization bit is set).
 Chached AK that were derived from the invalidated PKM can continue to be used in HO.
 If an non cached AK is needed to be derived from PMK - re-authentication should be done in order to obtain a new valid PMK.

Proposed Resolution Recommendation: **Accepted-Modified** Recommendation by

Add the following to the paragraph:

If the cached AK and associated context is lost by either BS or MS, no new AKs can be derived from this PMK on handover.
 Cached AKs that were derived from the PMK can continue to be used in HO.
 Reauthentication is required to obtain a new PMK so as to derive new AKs.

Reason for Recommendation

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

Add the following to the paragraph:

If the cached AK and associated context is lost by either BS or MS, no new AKs can be derived from this PMK on handover.
 Cached AKs that were derived from the PMK can continue to be used in HO.
 Reauthentication is required to obtain a new PMK so as to derive new AKs.

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

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: 802.16e/D9

Ballot Number: 0001056

Comment Date

Comment # 6172

Comment submitted by: Yigal

Eliaspur

Member

2005/07/14

Comment Type Technical, Non-binding Starting Page # 219 Starting Line # 63 Fig/Table# Section 7.2.2.4.1

D9 draft does not define well the lifetime of PMK:
The PMK become valid only after 3-way handshake but is created before.
If the PMK will have a very long lifetime before it is valid it can cause a a long period of failed 3-way handshake while it is obvious that continues unsuccessful 3-way handshake implies a problem.
The PMK lifetime until validated should be short in order to avoid DoS attack on 3-way HandShake

Suggested Remedy

Add the following to the standard:

7.2.2.4.1 AK context

The PMK key has to phases of lifetime: the first is once created and the second is after it was validated by the 3-way handshake.
The phases ensures that when PMK is created it will be defined with the default lifetime and after successful 3-way handshake, this lifetime may be enlarged using the PMK life time TLV within the 3-way handshake.

10.2 PKM parameter values

Insert to table 343

Table with 4 columns: System, Name, Description, Min value, Default value, Max value. Row 1: SS+BS, PMK lifetime, The lifetime assigned to PMK when created, 5sec, 10sec, 15min.

11.9.19 PKM configuration settings

Table with 4 columns: Type, Length, Value, Scope. Row 1: 27, Variable, Compound, Auth replay, PMKv2-rsa reply, sa-tek-response.

11.9.19.8 PMK lifetime

Table with 3 columns: Type, Length, value. Row 1: 27.8, 4, Updates the lifetime of PMK.

Proposed Resolution

Recommendation: Accepted-Modified

Recommendation by

Add the following to the standard:

Add the following to the standard.

7.2.2.4.1 AK context

The PMK key has two phases of lifetime: the first begins at PMK creation and the second begins after validation by the 3-way handshake. The phases ensure that when the PMK is created it will be defined with the PMK or PAK pre-handshake lifetime and after successful 3-way handshake, this lifetime may be enlarged using the PMK lifetime TLV within the 3-way handshake.

10.2 PKM parameter values

Insert to table 343:

System	Name	Description	Min value	Default value	Max value
MS+BS	PMK or PAK pre-handshake lifetime	The lifetime assigned to PMK when created	5sec	10sec	15min

11.9.19 PKM configuration settings

Type	Length	Value	Scope
27	Variable	Compound	Auth replay, PMKv2-rsa reply, sa-tek-response

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

Add the following to the standard:

7.2.2.4.1 AK context

The PMK key has two phases of lifetime: the first begins at PMK creation and the second begins after validation by the 3-way handshake. The phases ensure that when the PMK is created it will be defined with the PMK or PAK pre-handshake lifetime and after successful 3-way handshake, this lifetime may be enlarged using the PMK lifetime TLV within the 3-way handshake.

10.2 PKM parameter values

Insert to table 343:

System	Name	Description	Min value	Default value	Max value
MS+BS	PMK or PAK pre-handshake lifetime	The lifetime assigned to PMK when created	5sec	10sec	15min

11.9.19 PKM configuration settings

Type	Length	Value	Scope
27	Variable	Compound	Auth replay, PMKv2-rsa reply, sa-tek-response

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6173**

Comment submitted by: Sangwoo

Doe

Other

2005/07/14

Comment Type **Technical non-binding**

Starting Page # **229**

Starting Line # **34**

Fig/Table#

Section **7.4.1.5**

Figure 134 of 802.16-2204 is incorrect.

Suggested Remedy

Adopt changes in C80216e-05_330.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

Vote: 0-1

Belongs in corrigenda

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions l) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6174**

Comment submitted by: Phillip

Barber

Member

2005/07/14

Comment Type **Technical, Satisfied (was** Starting Page # **229** Starting Line # **49** Fig/Table# Section **7.5.2.4**

According to section 7.5.1.2.4 in IEEE802.16e/D9, PN window has been defined for SA and it can be negotiated during SBC exchanges. But since no SA is created for basic and primary management connections which also need PN window to protect against replay attack, PN window for the two management connections shall be also defined and negotiated.

Suggested Remedy

Adopt the remedy in the contribution "C80216e-05_315"(John Lee).

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

Adopt the remedy in the contribution C80216e-05_315r2

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6175**

Comment submitted by: Jeff

Mandin

Member

2005/07/14

Comment Type **Technical, Non-binding**Starting Page # **230**Starting Line # **30**

Fig/Table#

Section **7.5.4**

CMAC has been approved by NIST

Suggested Remedy

Modify page 230 line 30:

A BS or MS may support management message integrity protection based on Cipher-based MAC (~~currently under consideration by NIST~~) together with the AES block cipher. The CMAC construction as specified in ~~Draft~~ Special Publication 800-38B - Recommendation for Block Cipher Modes of Operation: the CMAC Mode for Authentication: ~~May~~ July 2005 shall be used.

Proposed ResolutionRecommendation: **Accepted**

Recommendation by

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

Modify page 230 line 30:

A BS or MS may support management message integrity protection based on Cipher-based MAC (~~currently under consideration by NIST~~) together with the AES block cipher. The CMAC construction as specified in ~~Draft~~ Special Publication 800-38B - Recommendation for Block Cipher Modes of Operation: the CMAC Mode for Authentication: ~~May~~ July 2005 shall be used.

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

Editor's Actions k) done

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6176**

Comment submitted by: Phillip

Barber

Member

2005/07/14

Comment Type **Technical, Satisfied (was** Starting Page # **230** Starting Line # **31** Fig/Table# Section **7.5.4.1**

To avoid replay attack, it should be ensured that the CMAC_PN_* in the management message received by the BS or MS is always incremented and never repeated, So the standard should stress that MS shall complete the re-authentication with BS and obtain a new AK before the CMAC_PN_* is expired.

Suggested Remedy

Adopt the remedy in the contribution "C80216e-05_320"(John Lee).

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

Add to the end of the paragraph at page 230 line 64:

Any tuple value of {CMAC_PN_*, AK} shall not be used more than once. The reauthentication process should be initiated (by BS or MS) to establish a new AK before the CMAC_PN_* reaches the end of its number space.

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6177**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **233** Starting Line # **48** Fig/Table# Section **7.5.7.1**

The Dot16KDF algorithm used for deriving HMAC keys and KEK in HMAC case has a critical problem: It can not generate a key stream longer than 160 bits due to the nature of the SHA-1 function.

Suggested Remedy

replace the text from line 44 through 58 with the following text :

```
Dot16KDF(key, astring, keylength)
{
    result = null;
    Kin = Truncate (key, 160);
    For (i=0; i <= int( (keylength-1)/160 ); i++) {
        result <= result | truncate (SHA-1( | astring | keylength | Kin), 160);
    }
    return Truncate (SHA-1(astring | Kin), keylength);
}
```

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

replace the text from line 44 through 58 with the following text :

```
Dot16KDF(key, astring, keylength)
{
    result = null;

    Kin = Truncate (key, 160 );

    For (i=0; i <= int( (keylength-1)/160 ); i++) {
        result <= result | truncate (SHA-1( | astring | keylength | Kin), 160);
    }

    return Truncate (result, keylength);
}
```

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6178**Comment submitted by: **Seokheon****Cho**

Other

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **234** Starting Line # **55** Fig/Table# Section **7.8.1**

In case of omitting the authorization procedure during network re-entry or HO, it is not efficient to use the SA Challenge Tuple included in RNG-RSP message, the PKMv2 SA-TEK-Request message. It is enough to use the PKMv2 SA-TEK-Response message

Suggested Remedy

Adopt the contribution C802.16e-05/340.

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

Remedy 1 vote: Rejected 8-12 votes

Remedy 2 vote: Rejected 5-16 votes

BS can know whether MS is fake through SA-TEK Calleng. If use scheme in this contribution, MS can attack BS by replay SA-TEK Resposne because of noChalleng .

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6179**

Comment submitted by: **Panyuh**

Joo

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **234** Starting Line # **55** Fig/Table# Section **7.8.1**

PKMv2 SA-TEK 3-way handshake sequence procedure needs the following parameters, but it's not defined in the current text.

- SACHallengeTimer
- SACHallengeMaxResends
- SATEKTimer
- SATEKRequestMaxResends

Suggested Remedy

[Insert the following rows into the table 343 of section 10.2 in page 503]

BS,MS	SACHallengeTimer	Time prior to re-send SA-TEK-Challenge (in seconds)	0.5	120	1.0	
BS,MS	SACHallengeMaxResends	Maximum number of sending SA-TEK-Challenge message	1	3	3	
MS,BS	SATEKTimer	Time prior to re-send SA-TEK-Request (in seconds)	0.1	0.3	1.0	
MS,BS	SATEKRequestMaxResends	Maximum number of sending SA-TEK-Request	1	3	3	

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

[Insert the following rows into the table 343 of section 10.2 in page 503]

BS,MS	SACHallengeTimer	Time prior to re-send of SA-TEK-Challenge (in seconds)	0.5	1.0	2.0	
BS,MS	SACHallengeMaxResends	Maximum number of transmissions of SA-TEK-Challenge	1	3	3	
MS,BS	SATEKTimer	Time prior to re-send of SA-TEK-Request (in seconds)	0.1	0.3	1.0	
MS,BS	SATEKRequestMaxResends	Maximum number of transmissions of SA-TEK-Request		1	3	3

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6180**

Comment submitted by: David

Castelow

Member

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	235	Starting Line #	3	Fig/Table#	Section	7.8.1
---------	------	------------------------	-----------------	-----	-----------------	---	------------	---------	-------

The phrase "during initial network entry or reauthorization" and the fact that the SA-TEK-Challenge is part of RNG-RSP suggests use of the SA components during a phase of network entry that precedes the determination of basic capabilities. This seems to be the wrong way round, as authorisation is done only after basic capability exchange (see 802.16-2004, page 168, figure 55).

Suggested Remedy

Replace "During initial network entry" with "During network entry"

Move the SA-TEK challenge out of RNG-REQ/RSP and place in (???) SBC.
Note that it could still appear in RNG-RSP as a result of the HO Process Optimization capabilities.

Alternatively, rework all diagrams showing network entry (e.g. Figure 55), indicating the process by which the BS acquires knowledge of the SS (e.g. through backbone messaging from serving BS) and the SS of the BS.

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

Reason for Recommendation

Resolution of Group	Decision of Group: Rejected
----------------------------	------------------------------------

Reason for Group's Decision/Resolution

Figure 55 describes initial network entry only.
The TLV on RNG-RSP is included only after handover, therefore Figure 55 is correct.

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

Editor's Notes	Editor's Actions	1) none needed
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Editor's Questions and Concerns**Editor's Action Items**

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6181**

Comment submitted by: David

Castelow

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **235** Starting Line # **5** Fig/Table# Section **7.8.1**

The term "SACheckTimer" is not defined other than within section 7.8.1. A diagram showing state transitions is required to indicated the behaviour of both SS and BS in the event of timer expiry, and in addition the time value needs to be stated (Table 342, Section 10.1) or negotiated (section 11).

Suggested Remedy

Rework section 7.8.1 to remove "may" and to define or eliminate terms, including:

SACheckTimer

SATEKTimer

SATEKRequestMaxResends

Proposed Resolution**Recommendation: Accepted-Modified****Recommendation by**

[Modify text on page 235, line 3 as indicated:]

1. During initial network entry or reauthorization, the BS shall send PKMv2 SA-TEK-Challenge (including a random number BS_Random) to the MS after protecting it with the CMAC/HMAC tuple. If the BS does not receive PKMv2 SA-TEK-Request from the MS within SACheckTimer, it shall resend the previous PKMv2 SA-TEK-Challenge:
~~The BS may send PKMv2 SA-TEK-Challenge~~, up to SACheckMaxResends times. If the BS reaches its maximum number of resends, it ~~mayshall~~ initiate ~~another~~ full ~~re~~-authentication or drop the MS.

See 6179 for parameter definitions.

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

[Modify text on page 235, line 3 as indicated:]

1. During initial network entry or reauthorization, the BS shall send PKMv2 SA-TEK-Challenge (including a random number BS_Random) to the MS after protecting it with the CMAC/HMAC tuple. If the BS does not receive PKMv2 SA-TEK-Request from the MS within SACheckTimer, it shall resend the previous PKMv2 SA-TEK-Challenge:
~~The BS may send PKMv2 SA-TEK-Challenge~~, up to SACheckMaxResends times. If the BS reaches its maximum number of resends, it ~~mayshall~~ initiate ~~another~~ full ~~re~~-authentication or drop the MS.

See 6179 for parameter definitions.

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review:	802.16e/D9	Ballot Number:	0001056	Comment Date	
Comment #	6182	Comment submitted by:	David Castelow	Member	2005/07/14
Comment	Type <u>Technical</u> , Satisfied (was	Starting Page #	<u>235</u>	Starting Line #	<u>9</u>
	Inappropriate language for a standard: do not use "may".	Fig/Table#		Section	<u>7.8.1</u>

Also the counter "SAChallengeMaxResends" is an implementation specific number that need not be referenced in the standard: indeed the only place where it is referenced is in this sentence. Remove it.

Suggested Remedy

Page 235, line 9, Replace as indicated:

The BS may shall either send a PKMv2 SA-TEK-Challenge up to SAChallengeMaxResends times. If the BS reaches its maximum number of resends, it may or initiate full re-authentication or drop the MS.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

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

Reason for Group's Decision/Resolution

no text

The maximum retries should in fact be standardized.

Group's Notes
Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6183**

Comment submitted by: David

Castelow

Member

2005/07/14

Comment Type **Technical, Satisfied (was** Starting Page # **235** Starting Line # **25** Fig/Table# Section **7.8.1**

Re:

If the MS reaches its maximum number of resends, it may initiate full re-authentication or decide to connect to another BS or take some other action.

Could it make me a cup of tea?

I have struck out SATEKRequestMaxResends as this seems to be an implementation specific item that does not need standardising or negotiating.

Suggested Remedy

Page 235, line 25

Replace as indicated:

If the MS does not receive PKMv2 SA-TEK-Response from the BS within SATEKTimer, it shall either resend the request. ~~The MS may resend the PKMv2 SA-TEK-Request up to SATEKRequestMaxResends times. If the~~

~~MS reaches its maximum number of resends, it may or~~ initiate full re-authentication or decide attempt to connect to

another BS or disconnect from the network ~~take some other action~~. The MS ~~must~~ shall include, through the Security Negotiation Parameters

attribute, the security capabilities that it included in the SBC-REQ message during the basic capabilities

negotiation phase.

negotiation phase.

Proposed Resolution**Recommendation: Accepted-Modified****Recommendation by**

Page 235, line 25

Replace as indicated:

If the MS does not receive PKMv2 SA-TEK-Response from the BS within SATEKTimer, it shall resend the request. The MS may resend the PKMv2 SA-TEK-Request up to SATEKRequestMaxResends times. If the

MS reaches its maximum number of resends, it shall ~~may~~ initiate another full re-authentication or ~~decide~~ attempt to connect to another BS ~~or take some~~

~~other action~~. The MS ~~must~~ shall include, through the Security Negotiation Parameters attribute, the security capabilities that it included in the

SBC-REQ message during the basic capabilities negotiation phase.

negotiation phase.

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

Page 235, line 25

Replace as indicated:

If the MS does not receive PKMv2 SA-TEK-Response from the BS within SATEKTimer, it shall resend the request. The MS may resend the PKMv2 SA-TEK-Request up to SATEKRequestMaxResends times. If the

MS reaches its maximum number of resends, it shall ~~may~~ initiate another full re-authentication or ~~decide~~ attempt to connect to another BS ~~or take some~~

~~other action~~. The MS ~~must~~ shall include, through the Security Negotiation Parameters attribute, the security capabilities that it included in the

SBC-REQ message during the basic capabilities negotiation phase.

negotiation phase.

2005/08/12

IEEE 802.16-045r4

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6184**

Comment submitted by: David

Castelow

Member

2005/07/14

Comment Type **Technical, Satisfied (was** Starting Page # **235** Starting Line # **39** Fig/Table# Section **7.8.1**

What does "should log the problem" mean?
For how long, in what format, for what purpose?
And if it doesn't, it will not break the standard: what does "should" mean?
This sounds like a management function, not an air-interface specification.

Suggested Remedy

Page 235, line 39: Delete "If security capabilities don't match, the BS should log the problem."

Proposed Resolution Recommendation: **Accepted-Modified** Recommendation by

Page 235, line 39: Modify "If security capabilities **negotiation parameters** don't match, the BS ~~should log the problem~~ **should report the discrepancy to higher layers**".

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

Page 235, line 39: Modify "If security capabilities **negotiation parameters** don't match, the BS ~~should log the problem~~ **should report the discrepancy to higher layers**".

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6185**

Comment submitted by: David

Castelow

Member

2005/07/14

Comment	Type	Technical, Satisfied (was	Starting Page #	236	Starting Line #	20	Fig/Table#	Section	7.8.1
Fix TBDs.									

Suggested Remedy

Page 236, line 20
 Replace
 as per section XXX.
 with
 as per section ???.
 What should ??? be: perhaps 7.2.2.2.10.

Proposed Resolution

Recommendation: Accepted-Modified

Recommendation by

Page 236, line 20
 Replace
 as per section XXX. Page 236, line 20
 Replace
 as per section XXX.
 with
 as per section 7.5.3 and 7.5.4.

In 7.2.2.2.11, replace as indicated:
 the switchover mechanism ~~described in this section using the messages in 6.3.2.3.9.20 defined in section xxx (Editor Note: see section from contribution 300).~~
 with
 as per section 7.5.3 and 7.5.4.

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

Page 236, line 20
 Replace
 as per section XXX.
 with
 as per section 7.5.3 and 7.5.4.

In 7.2.2.2.11, replace as indicated:

in 7.2.2.11, replace as indicated.

the switchover mechanism described in this section using the messages in 6.3.2.3.9.20 defined in section xxx (Editor Note: see section from ~~contribution 300~~).

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6186**Comment submitted by: **David****Castelow****Member****2005/07/14**Comment Type **Editorial**Starting Page # **236** Starting Line # **53**

Fig/Table#

Section **7.8.2**

too much space

Suggested Remedy

remove space/format paragraph at page 236, line 53.
Also add colon (:) at end of line 56.

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

remove space/format paragraph at page 236, line 53.
Also add colon (:) at end of line 56.

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6187**

Comment submitted by: Haixiang

He

Member

2005/07/14

Comment Type **Technical, Non-binding**

Starting Page # **238** Starting Line # **30**

Fig/Table# Section **7.5.3**

Clarification

Suggested Remedy

Change

"In the case of PKMv2, HMAC-Digest Calculations shall include the HMAC_PN_* that should be concatenated after the MAC Management message".

to

"In the case of PKMv2, Short-HMAC-Digest Calculations shall include the HMAC_PN_* that should be concatenated after the MAC Management message".

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Change

"In the case of PKMv2, HMAC-Digest Calculations shall include the HMAC_PN_* that should be concatenated after the MAC Management message".

to

"In the case of PKMv2, Short-HMAC-Digest Calculations shall include the HMAC_PN_* that should be concatenated after the MAC Management message".

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions c) instructions unclear

Could not find the indicated text.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6188**

Comment submitted by: Phillip

Barber

Member

2005/07/14

Comment	Type	Technical, Satisfied (was	Starting Page #	239	Starting Line #	30	Fig/Table#	Section	7.8.4.2
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According to section 7.8.4.2 in D9, if the final block size n is smaller than cipher block size, the next-to-last ciphertext block shall be AES encrypted for the second time, using the electronic code book (ECB) mode, and the most significant n bits of the result are XORed with the final n bits of the payload to generate the short final cipher block. There are two problem about the method .One is that the method has been proved not secure enough, though it was often used. Since the final block is not encrypted but XORed with a block, any modified bits can just affect the corresponding bits which means that the malicious attacker can easily predict the modification results. If the termination block does not contain important information, it may not matter much. However, if the termination block contains important information, it would be a serious security problem. The other is this mechanism requires the receiver supporting encryption algorithm in both ECB and CBC mode.

Suggested Remedy

Adopt the remedy in the contribution "C80216e-05_313"(John Lee).

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

Adopt the remedy in the contribution "C80216e-05_313"(John Lee).

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6189**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Editorial**

Starting Page # **241**

Starting Line # **3**

Fig/Table#

Section **7.9**

MBRA is an optional feature.

Suggested Remedy

[Please change the text as follows in line 3 of page 241:]

This MBRA ~~shall~~may be used to refresh traffic keying material efficiently not for the unicast service, but for the multicast service or the broadcast service.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

Change the title on page 241 line 1 as indicated:
Optional Multicast and broadcast rekeying algorithm (MBRA)

Change the text on page 241 line 3 as indicated:
When MBRA is supported, the ~~This MBRA shall-~~ be used to refresh traffic keying material efficiently not for the unicast service, but for the multicast service or the broadcast service.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6190**

Comment submitted by: Haixiang

He

Member

2005/07/14

Comment Type **Technical, Non-binding**

Starting Page # **244**

Starting Line # **36**

Fig/Table#

Section **7.8.1**

Draft is missing accepted change in Step 6.

Suggested Remedy

Fully adopt the change in contribution 309 especially on step 6.

Proposed Resolution

Recommendation: **Accepted-Modified**

Recommendation by

[On page 236, line 24, insert the following text as the last paragraph of the section:]

The MS also must verify the BS's security negotiation parameters TLV encoded in the Security Negotiation Parameters attribute against the security negotiation parameters TLV provided by the BS through the SBC-RSP message. If security capabilities do not match, the MS should report the discrepancy to upper layers. The MS may choose to continue the communication with the BS. In this case, the MS may adopt the security negotiation parameters encoded in SA-TEK-Response message.

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

[On page 236, line 24, insert the following text as the last paragraph of the section:]

The MS also must verify the BS's security negotiation parameters TLV encoded in the Security Negotiation Parameters attribute against the security negotiation parameters TLV provided by the BS through the SBC-RSP message. If security capabilities do not match, the MS should report the discrepancy to upper layers. The MS may choose to continue the communication with the BS. In this case, the MS may adopt the security negotiation parameters encoded in SA-TEK-Response message.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6191**

Comment submitted by: Rainer

Ullmann

Member

2005/07/14

Comment	Type	Starting Page #	Starting Line #	Fig/Table#	Section
	Technical, Non-binding	255			8.3.6.6.1

The tables describing the format of compressed and reduced private maps in OFDM (section 8.3.6.6 and 8.3.6.7) contain fields that are not relevant in context with OFDM and therefore should be removed. Also editorial clean-ups are necessary.

Suggested Remedy[See contribution C80216e-05_321](#)**Proposed Resolution** Recommendation: **Accepted**

Recommendation by

[See contribution C80216e-05_321](#)**Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**[See contribution C80216e-05_321](#)**Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes**Editor's Actions [k\) done](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6192**

Comment submitted by: **Lei**

Wang

Member

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	265	Starting Line #	6	Fig/Table#	Section	8.4.4.2
---------	------	------------------------	-----------------	-----	-----------------	---	------------	---------	---------

Another restriction is necessary for DL allocation, i.e.,

The MAC PDUs of the same CID shall not be transmitted on different DL bursts in the same frame.

Suggested Remedy

insert the following text in line 6 page 265:

e). The MAC PDUs of the same CID shall not be transmitted on different DL bursts in the same frame.

Proposed Resolution

Recommendation: Accepted-Modified

Recommendation by

insert the following text in line 6 page 265:

e). The MAC PDUs of the same CID shall not be transmitted on different DL bursts in the same frame. **It is not applied for the burst where H-ARQ CTC IR is applied.**

Reason for Recommendation

Resolution of Group

Decision of Group: Rejected

Reason for Group's Decision/Resolution

Vote: 3-8

Puts too much restriction on the BS scheduler.

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: 802.16e/D9

Ballot Number: 0001056

Comment Date

Comment # 6193

Comment submitted by: Peiyong

Zhu

Member

2005/07/14

Comment	Type	Starting Page #	265	Starting Line #	43	Fig/Table#	268	Section	8.4.4.3
To be consistent, make the following editorial change in Table 268									

Suggested Remedy

0b000: CC encoding used on DL-MAP
 0b001: BTC encoding used on DL-MAP
 0b010: CTC encoding used on DL-MAP
 0b011: ZT **encoding** CC used on DL-MAP
 0b100: LDPC encoding used on DL-MAP
 0b101 to 0b111 -Reserved

Proposed Resolution **Recommendation: Accepted-Modified** **Recommendation by**

0b000: CC encoding used on DL-MAP
 0b001: BTC encoding used on DL-MAP
 0b010: CTC encoding used on DL-MAP
 0b011: ZT CC **encoding** used on DL-MAP
 0b100: LDPC encoding used on DL-MAP
 0b101 to 0b111 -Reserved

Reason for Recommendation

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

0b000: CC encoding used on DL-MAP
 0b001: BTC encoding used on DL-MAP
 0b010: CTC encoding used on DL-MAP
 0b011: ZT CC **encoding** used on DL-MAP
 0b100: LDPC encoding used on DL-MAP
 0b101 to 0b111 -Reserved

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6194**

Comment submitted by: Lei

Wang

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **268** Starting Line # **12** Fig/Table# Section **8.4.4.5**

The restriction described in this paragraph is should be UL allocaiton with UIUC=1 to 10, not UL IEs, since the mini-subchannel allocation uses the extended IE.

Suggested Remedy

Change the paragraph as follows:

In the uplink, the BS shall not allocate to any MS more than one **UL allocation**~~UL-MAP-IE~~ with data burst profile UIUC (1-10) in a single frame, **including mini-subchannel allocation**. This limitation does not apply to HARQ data allocation regions.

Proposed Resolution Recommendation: Accepted

Recommendation by

Change the paragraph as follows:

In the uplink, the BS shall not allocate to any MS more than one **UL allocation**~~UL-MAP-IE~~ with data burst profile UIUC (1-10) in a single frame, **including mini-subchannel allocation**. This limitation does not apply to HARQ data allocation regions.

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Change the paragraph as follows:

In the uplink, the BS shall not allocate to any MS more than one **UL allocation**~~UL-MAP-IE~~ with data burst profile UIUC (1-10) in a single frame, **including mini-subchannel allocation**. This limitation does not apply to HARQ data allocation regions.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6195**

Comment submitted by: InSeok

Hwang

Other

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **268** Starting Line # **46** Fig/Table# Section **8.4.4.6.4**

In 8.4.4.6.4 AAS Uplink preamble,
The LowerBound_{AAS_PREAMBE} at line 46 p. 268 is a typo of UpperBound_{AAS_PREAMBE}

Suggested Remedy

Modify the texts as follows:
[At line 46 p. 268 in Sec. 8.4.4.6.4]

if (C/N) - 10 log10 (R) ~~< > LowerBound_{AAS_PREAMBE}~~ **UpperBound_{AAS_PREAMBE}**

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Modify the texts as follows:
[At line 46 p. 268 in Sec. 8.4.4.6.4]

if (C/N) - 10 log10 (R) ~~< > LowerBound_{AAS_PREAMBE}~~ **UpperBound_{AAS_PREAMBE}**

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Modify the texts as follows:
[At line 46 p. 268 in Sec. 8.4.4.6.4]

if (C/N) - 10 log10 (R) ~~< > LowerBound_{AAS_PREAMBE}~~ **UpperBound_{AAS_PREAMBE}**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6196**

Comment submitted by: Asaf

Matatyaou

Other

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **272** Starting Line # **34** Fig/Table# **278** Section **8.4.5.3.3**

The OFDMA AAS Downlink IE has an incorrect length value (should be 3 bytes, not 4 bytes) noted in the "Notes" column and is missing two fields, (1) the Preamble Type row and (2) the PRBS_ID row. The change will correct this IE for P802.16e, and will keep the IE aligned with P802.16-2004/Cor1/D3.

Suggested Remedy

Update table 278 with the following changes highlighted in red.

Table 278 - OFDMA ~~downlink~~ AAS downlink IE

Syntax	Size	Notes
AAS_DL_IE() {	-	-
Extended DIUC	4	AAS = 0x02
Length	4	Length = 0x0 <u>43</u>
OFDMA Symbol Offset	8	Denotes the start of the zone (counting from the frame preamble and starting from 0)
Permutation	3	0b000 = PUSC 0b001 = FUSC 0b010 = Optional FUSC 0b011 = AMC 0b100 = TUSC1 0b101 = TUSC2 0b110, 0b111 = reserved
DL_PermBase	6	
Downlink_preamble_coding	2	0b00 - 0 symbols 0b01 - 1 symbol 0b10 - 2 symbols 0b11 - 3 symbols
Preamble type	1	0 - Frequency shifted preamble is used in this DL AAS zone

		1 - Time shifted preamble is used in this DL AAS zone
PRBS_ID	2	Refer to 8.4.9.4.1
reserved	52	Shall be set to zero

Proposed Resolution **Recommendation: Accepted** **Recommendation by**
Update table 278 with the following changes highlighted in red.

Table 278 - OFDMA ~~downlink~~ AAS ~~downlink~~ IE

Syntax	Size	Notes
AAS_DL_IE() {	-	-
Extended DIUC	4	AAS = 0x02
Length	4	Length = 0x043
OFDMA Symbol Offset	8	Denotes the start of the zone (counting from the frame preamble and starting from 0)
Permutation	3	0b000 = PUSC 0b001 = FUSC 0b010 = Optional FUSC 0b011 = AMC 0b100 = TUSC1 0b101 = TUSC2 0b110, 0b111 = reserved
DL_PermBase	6	
Downlink_preamble_coding	2	0b00 - 0 symbols 0b01 - 1 symbol 0b10 - 2 symbols 0b11 - 3 symbols
Preamble type	1	0 - Frequency shifted preamble is used in this DL AAS zone 1 - Time shifted preamble is used in this DL AAS zone
PRBS_ID	2	Refer to 8.4.9.4.1
reserved	52	Shall be set to zero

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Resolution of Group

Decision of Group: Accepted

Update table 278 with the following changes highlighted in red.

Table 278 - OFDMA ~~downlink~~ AAS ~~downlink~~ IE

Syntax	Size	Notes
AAS_DL_IE() {	-	-
Extended DIUC	4	AAS = 0x02
Length	4	Length = 0x04 <u>3</u>
OFDMA Symbol Offset	8	Denotes the start of the zone (counting from the frame preamble and starting from 0)
Permutation	3	0b000 = PUSC 0b001 = FUSC 0b010 = Optional FUSC 0b011 = AMC 0b100 = TUSC1 0b101 = TUSC2 0b110, 0b111 = reserved
DL_PermBase	6	
Downlink_preamble_coding	2	0b00 - 0 symbols 0b01 - 1 symbol 0b10 - 2 symbols 0b11 - 3 symbols
Preamble type	1	0 - Frequency shifted preamble is used in this DL AAS zone
		1 - Time shifted preamble is used in this DL AAS zone
PRBS_ID	2	Refer to 8.4.9.4.1
reserved	<u>5</u>	Shall be set to zero

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6197**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **275** Starting Line # **51**Fig/Table# Section **8.4.5.3.4**

Correction and clarification on the description for STC field in STC_Zone_IE format is needed.

Suggested Remedy*[modify the text in line 51~57 page 275 (section 8.4.5.3.4) as following]***STC**

Indicates the STC mode that shall be used by the transmitter for allocations following this IE (see 8.4.8). All allocations ~~without STC~~ with STC='0b00' shall be transmitted ~~only from one antenna (antenna 0)~~ with non-STC pilot pattern. All allocations with STC ~~the BS shall transmit from both its antennas~~ not setting to '0b00' shall be transmitted with the corresponding pilot pattern in section 8.4.8.

Proposed Resolution**Recommendation: Accepted-Modified****Recommendation by***[modify the text in line 51~57 page 275 (section 8.4.5.3.4) as following]***STC**

Indicates the STC mode that shall be used by the transmitter for allocations following this IE (see 8.4.8). All allocations ~~without STC~~ with STC='0b00' shall be transmitted ~~only from one antenna (antenna 0)~~ with non-STC pilot pattern. All allocations with STC ~~the BS shall transmit from both its antennas~~ not setting to '0b00' shall be transmitted with the corresponding pilot pattern in section 8.4.8.

[On page 274, Table 279, change as indicated:]

STC Transmit Diversity	2	0b00 = No STC transmit diversity
		0b01 = STC using 2/3 antennas
		0b10 = STC using 4 antennas
		0b11 = FHDC using 2 antennas

Reason for Recommendation**Resolution of Group****Decision of Group: Accepted***[modify the text in line 51~57 page 275 (section 8.4.5.3.4) as following]***STC**

Indicates the STC mode that shall be used by the transmitter for allocations following this IE (see 8.4.8). All allocations ~~without STC~~ with STC='0b00' shall be transmitted ~~only from one antenna (antenna 0)~~ with non-STC pilot pattern. All allocations with STC ~~the BS shall transmit from both its antennas~~ not setting to '0b00' shall be transmitted with the corresponding pilot pattern in section 8.4.8.

~~first pattern in section 6.1.10.~~

[On page 274, Table 279, change as indicated:]

STCTransmit Diversity	2	0b00 = No STC transmit diversity
		0b01 = STC using 2/3 antennas
		0b10 = STC using 4 antennas
		0b11 = FHDC using 2 antennas

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6198**

Comment submitted by: Mark

Cudak

Member

2005/07/14

Comment	Type	Starting Page #	Starting Line #	Fig/Table#	Section
Inconsistent use of HARQ and H-ARQ	Editorial	279	26		8.4.5.3.10

Suggested Remedy

Change title of section as follows:

"8.4.5.3.10 H-ARQ and Sub-MAP Pointer IE"

Change caption of Table as follows:

"Table 285—H-ARQ MAP or Sub-MAP pointer IE format"**Proposed Resolution** Recommendation: **Accepted**

Recommendation by

Change title of section as follows:

"8.4.5.3.10 H-ARQ and Sub-MAP Pointer IE"

Change caption of Table as follows:

"Table 285—H-ARQ MAP or Sub-MAP pointer IE format"**Reason for Recommendation****Resolution of Group****Decision of Group: Superseded****Reason for Group's Decision/Resolution**

See 6199.

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6199**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Editorial** Starting Page # **279** Starting Line # **26**Fig/Table# **285** Section **8.4.5.3.10**

We need to match names of two titles which are section 8.4.5.3.10 and table 285.

Suggested Remedy*[Modify the caption in table 285 line 26 page 279(section 8.4.5.3.10) as follows]*Table 285 - H-ARQ ~~or~~ **and** Sub-MAP pointer IE format**Proposed Resolution**Recommendation: **Accepted**

Recommendation by

*[Modify the caption in table 285 line 26 page 279(section 8.4.5.3.10) as follows]*Table 285 - H-ARQ ~~or~~ **and** Sub-MAP pointer IE format**Reason for Recommendation****Resolution of Group**Decision of Group: **Accepted***[Modify the caption in table 285 line 26 page 279(section 8.4.5.3.10) as follows]*Table 285 - H-ARQ ~~or~~ **and** Sub-MAP pointer IE format**Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes**

Editor's Actions k) done

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6200**Comment submitted by: **Asaf****Matatyaou**

Other

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **281** Starting Line # **4** Fig/Table# **286** Section **8.4.5.3.11**

1. Remove the striked-out text for the "Preamble Time Shift Index" field, as it is the editorial removal of text from e/D8 and should not be confused with the actual removal of a field.
2. Add text to the notes column for the Pilot Pattern Index field.

Suggested Remedy

Replace Table 286 with:

Table 286 - OFDMA DL-MAP Physical Modifier IE format

Syntax	Size	Notes
...
}		
Pilot Pattern Modifier	1 bit	0: Not applied, 1: Applied
Pilot Pattern Index	2 bits	<u>Pilot pattern used for this allocation (see section 8.4.6.3.3(AMC), 8.4.6.1.2.6(TUSC)):</u> 00 - Pilot Pattern #A 01 - Pilot Pattern #B 10 - Pilot Pattern #C 11 - Pilot Pattern #D
Reserved	3 bits	
}		

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

Replace Table 286 with:

Table 286 - OFDMA DL-MAP Physical Modifier IE format

Syntax	Size	Notes
...

}		
Pilot Pattern Modifier	1 bit	0: Not applied, 1: Applied
Pilot Pattern Index	2 bits	<u>Pilot pattern used for this allocation (see section 8.4.6.3.3(AMC), 8.4.6.1.2.6(TUSC)):</u> 00 - Pilot Pattern #A 01 - Pilot Pattern #B 10 - Pilot Pattern #C 11 - Pilot Pattern #D
Reserved	3 bits	
}		

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Replace Table 286 with:

Table 286 - OFDMA DL-MAP Physical Modifier IE format

Syntax	Size	Notes
...
}		
Pilot Pattern Modifier	1 bit	0: Not applied, 1: Applied
Pilot Pattern Index	2 bits	<u>Pilot pattern used for this allocation (see section 8.4.6.3.3(AMC), 8.4.6.1.2.6(TUSC)):</u> 00 - Pilot Pattern #A 01 - Pilot Pattern #B 10 - Pilot Pattern #C 11 - Pilot Pattern #D
Reserved	3 bits	
}		

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

2005/08/12

IEEE 802.16-045r4

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6201**

Comment submitted by: Phillip

Barber

Member

2005/07/14

Comment Type Technical, Satisfied (was Starting Page # 282 Starting Line # 1 Fig/Table# 286a Section 8.4.5.3.12

If sleep mode class 3 is used for single BS MBS service, MBS_MAP_IE shall include the location of next MBS_MAP_IE instead of MBS_MAP. Because MBS-Data's location is always defined in MBS_MAP_IE instead of MBS_MAP.

Suggested Remedy

[Modify the Table 286a Multicast and Broadcast Service MAP IE(MBS_MAP_IE) formate on Page 282, as follows]

Table 286a-Multicast and Broadcast Service MAP IE

Syntax		Size(bits)	Notes
MBS_MAP_IE() {	-	-	
Extended-2 DIUC	4	-	
Length	8	-	
MBS Zone identifier	7		
Macro diversity enhanced	1	£≠	
If(Macro diversity enhanced = 1){	-	-	
Permutation	2	-	
DL PermBase	5		
PBRs ID	2		
OFDMA Symbol Offset		7	-
DIUC change indication	1		
Reserved	2		
if (DIUC change indication = 1) {	-	-	
Reserved	1		
Boosting	3		
DIUC	4		
No. Subchannels	6		
NO. OFDMA symbols		2	-
Repetition Coding Indication	2		
}			
} else {	-		
DIUC	4		
CID	16		
OFDMA Symbol Offset		8	-
Subchannel offset	6		
Boosting	3		
SLC_3_indication	1		
NO. OFDMA Symbols	6		-
NO. Subchannels	6		-
Repetition Coding Indication	2		-
if (SLC 3_indication = 01) {	-	-	
Next MBS_MAP_IE frame offset	8		

The Next MBS_MAP_IE frame offset value is lower 8 bits of the frame number in which the BS shall transmit the next

MBS_MAP_IE frame.

```

-Next MBS OFDMA Symbol offset
}
} - -
}
if !(byte boundary) {
  Padding Nibble
}
}
}

```

[Insert Parameters on Page 283, as follows]

Next MBS_MAP_IE frame offset

The Next MBS_MAP_IE frame offset value is lower 8 bits of the frame number in which the BS shall transmit the next MBS_MAP_IE frame.

Proposed Resolution Recommendation: Accepted Recommendation by

[Modify the Table 286a Multicast and Broadcast Service MAP IE(MBS_MAP_IE) formate on Page 282, as follows]

Table 286a-Multicast and Broadcast Service MAP IE

Syntax		Size(bits)	Notes
MBS_MAP_IE() {	-	-	-
Extended-2 DIUC	4	-	-
Length	8	-	-
MBS Zone identifier	7	-	-
Macro diversity enhanced	1	£≠	-
If(Macro diversity enhanced = 1){	-	-	-
Permutation	2	-	-
DL PermBase	5	-	-
PBRs ID	2	-	-
OFDMA Symbol Offset		7	-
DIUC change indication	1	-	-
Reserved	2	-	-
if (DIUC change indication = 1) {	-	-	-
Reserved	1	-	-
Boosting	3	-	-
DIUC	4	-	-
No. Subchannels	6	-	-
NO. OFDMA symbols		2	-
Repetition Coding Indication	2	-	-
}			
} else {	-	-	-
DIUC	4	-	-
CID	16	-	-
OFDMA Symbol Offset		8	-
Subchannel offset	6	-	-
Boosting	3	-	-

SLC_3_indication	1		
NO. OFDMA Symbols	6	-	
NO. Subchannels	6	-	
Repetition Coding Indication	2	-	
if (SLC_3_indication = 01) {	-	-	
Next MBS_MAP_IE frame offset	8		The Next MBS_MAP_IE frame offset value is lower 8 bits of the frame number in which the BS shall transmit the next MBS_MAP_IE frame.
 Next MBS OFDMA Symbol offset			
}	-	-	
}	-	-	
if !(byte boundary) {	-		
Padding Nibble			
}			
}			

[Insert Parameters on Page 283, as follows]

Next MBS_MAP_IE frame offset

The Next MBS_MAP_IE frame offset value is lower 8 bits of the frame number in which the BS shall transmit the next MBS_MAP_IE frame.

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

[Modify the Table 286a Multicast and Broadcast Service MAP IE(MBS_MAP_IE) format on Page 282, as follows]

Table 286a-Multicast and Broadcast Service MAP IE

Syntax		Size(bits)		Notes
MBS_MAP_IE() {			-	
Extended-2 DIUC		4	-	
Length		8	-	
MBS Zone identifier		7		
Macro diversity enhanced	1		£≠	
If(Macro diversity enhanced = 1){			-	
Permutation		2	-	
DL PermBase		5		
PBRs ID		2		
OFDMA Symbol Offset		7		-
DIUC change indication	1			
Reserved		2		
if (DIUC change indication = 1) {			-	
Reserved		1		
Boosting		3		
DIUC		4		
No. Subchannels		6		

```

    NO. Subchannels          0
    NO. OFDMA symbols        2
    Repetition Coding Indication  2
  }
} else {
  DIUC                      4
  CID                      16
  OFDMA Symbol Offset      8
  Subchannel offset        6
  Boosting                  3
  SLC_3_indication         1
  NO. OFDMA Symbols        6
  NO. Subchannels          6
  Repetition Coding Indication  2
  if (SLC_3_indication = 01) {
    Next MBS_MAP_IE frame offset  8
  }
  Next MBS_OFDMA_Symbol_offset
}
}
if !(byte boundary) {
  Padding Nibble

```

The Next MBS_MAP_IE frame offset value is lower 8 bits of the frame number in which the BS shall transmit the next MBS_MAP_IE frame.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6202**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **282** Starting Line # **31**Fig/Table# **286a** Section **8.4.5.3.12**

I object to the implementation of the comment 5422. There are still a few errors in MBS MAP IE:

(1) Size of 'PRBS' is missing and it induces wrong sizes for reserved bits for alignment

(2) Note of 'OFDMA Symbol Offset' is wrong

Suggested Remedy

Adopt the following editorial changes :

Table 286a - Multicast and Broadcast Service MAP IE

Syntax	Size	Notes
MBS_MAP_IE () {		
...
PRBS_ID	<u>2</u>	
OFDMA Symbol Offset	7	OFDMA symbol offset with respect to start of the MBS region The offset of the OFDMA symbol measured in OFDMA symbols from beginning of the downlink frame in which the DL-MAP is transmitted
DIUC Change Indication	1	Used to indicate DIUC change is included
reserved	32	...
if (DIUC change indication = 1) {	-	-
reserved	34	...
...

Proposed Resolution Recommendation: **Accepted-Modified**

Recommendation by

Adopt the following editorial changes :

Table 286a - Multicast and Broadcast Service MAP IE

Syntax	Size	Notes
--------	------	-------

Syntax	Size	Notes
MBS_MAP_IE () {		
...
PRBS_ID	2	
OFDMA Symbol Offset	7	OFDMA symbol offset with respect to start of the MBS region The offset of the OFDMA symbol measured in OFDMA symbols from beginning of the downlink frame in which the DL-MAP is transmitted. Counting from the frame preamble and starting from 0
DIUC Change Indication	1	Used to indicate DIUC change is included
reserved	32	...
if (DIUC change indication = 1) {	-	-
reserved	34	...
...

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

Adopt the following editorial changes :

Table 286a - Multicast and Broadcast Service MAP IE

Syntax	Size	Notes
MBS_MAP_IE () {		
...
PRBS_ID	2	
OFDMA Symbol Offset	7	OFDMA symbol offset with respect to start of the MBS region The offset of the OFDMA symbol measured in OFDMA symbols from beginning of the downlink frame

[in which the DL-MAP is transmitted.](#)
[Counting from the frame preamble and starting from 0](#)

DIUC Change Indication	1	Used to indicate DIUC change is included
reserved	32	...
if (DIUC change indication = 1) {	-	-
reserved	34	...
...

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6203**

Comment submitted by: Jaehee

Cho

Other

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **290** Starting Line # **19** Fig/Table# **Tabl** Section **8.4.5.3.19**

1. UL interference and noise level extended IE broadcasts NI level of every possible zones in DL subframe. However, one can't inform MS the NI level of the MIMO zone with the current IE.
2. The descriptions between CQI/ACK/Periodic ranging region and its bitmap does not match.

Suggested Remedy

[Modify the table 286h as follows]

Length	4	Length = 0x02-5 variable
Bitmap	4	LSB indicates the there exists a 'CQI/ACK/Periodic Ranging region NI' field (1). Otherwise, it is 0. The 2nd LSB indicates the there exists a 'PUSC region NI' field (1). Otherwise, it is 0. The 3rd LSB indicates the there exists a 'Optional PUSC region NI' field (1). Otherwise, it is 0. The 4th LSB indicates the there exists an 'AMC region NI' field (1). Otherwise, it is 0. The 5th LSB indicates the there exists 'AAS region NI' field (1). Otherwise, it is 0. The 6th LSB indicates the there exists 'Periodic ranging region NI' field (1). Otherwise, it is '0' The 7th LSB indicates the there exists 'Sounding region NI' field (1). Otherwise, it is '0' The 8th LSB indicates the there exists 'MIMO region NI' field (1). Otherwise, it is '0'
if (LSB of Bitmap = 1) {		
CQI/ACK/Periodic Ranging region NI	8	Estimated average power level (dBm) per a subcarrier in CQI/ACK/Periodic Ranging region.
if (The 6th LSB of Bitmap = 6) {		

Periodic ranging region NI	8	Estimated average power level (dBm) per a subcarrier in Periodic ranging region. The interference and noise level shall be estimated before the beam forming. When this field is present, the value for the periodic ranging region indicated in CQI/ACK/Preodic Ranging region NI shall be ignored. Instead, the value of this field shall be used for NI level of the periodic ranging region.
----------------------------	---	--

}

if(The 7th LSB of Bitmap = 1) {

<u>Sounding region NI</u>	<u>8</u>	<u>Estimated average power level (dBm) per a subcarrier in sounding region.</u>
---------------------------	----------	---

}

if(The 8th LSB of Bitmap = 1) {

<u>MIMO region NI</u>	<u>8</u>	<u>Estimated average power level (dBm) per a subcarrier in MIMO region.</u>
-----------------------	----------	---

}

}

Proposed Resolution **Recommendation: Accepted-Modified** **Recommendation by**

[Modify the table 286h as follows]

.....

Length	4	Length = 0x02-5 variable
--------	---	-------------------------------------

Bitmao	4	LSB indicates the there exists a 'CQI/ACK/Periodic Ranging region NI' field (1). Otherwise, it is 0. The 2nd LSB indicates the there exists a 'PUSC region NI' field (1). Otherwise, it is 0. The 3rd LSB indicates the there exists a 'Optional PUSC region NI' field (1). Otherwise, it is 0. The 4th LSB indicates the there exists an 'AMC region NI' field (1)
--------	---	---

7th region NI field (1).

Otherwise, it is 0.

The 5th LSB indicates the there exists 'AAS region NI' field (1). Otherwise, it is 0.

The 6th LSB indicates the there exists 'Periodic ranging region NI' field (1). Otherwise, it is '0'

The 7th LSB indicates the there exists 'Sounding region NI' field (1). Otherwise, it is '0'

The 8th LSB indicates the there exists 'MIMO region NI' field (1). Otherwise, it is '0'

if (LSB of Bitmap = 1) {

CQI/ACK/Periodic Ranging region NI	8	Estimated average power level (dBm) per a subcarrier in CQI/ACK/Periodic Ranging region.
------------------------------------	---	--

.....

if (The 6th LSB of Bitmap = 6) {

Periodic ranging region NI	8	Estimated average power level (dBm) per a subcarrier in Periodic ranging region. The interference and noise level shall be estimated before the beam forming. When this field is present, the value for the periodic ranging region indicated in CQI/ACK/Preodic Ranging region NI shall be ignored. Instead, the value of this field shall be used for NI level of the periodic ranging region.
----------------------------	---	--

}

if(The 7th LSB of Bitmap = 1) {

Sounding region NI	8	Estimated average power level (dBm) per a subcarrier in sounding region.
--------------------	---	--

}

if(The 8th LSB of Bitmap = 1) {

MIMO region NI	8	Estimated average power level (dBm) per a subcarrier in MIMO region.
----------------	---	--

}

}

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

[Modify the table 286h as follows]

.....		
Length	4	Length = 0x02-5 <u>variable</u>
Bitmap	4	<p>LSB indicates the there exists a 'CQI/ACK/Periodic Ranging region NI' field (1). Otherwise, it is 0.</p> <p>The 2nd LSB indicates the there exists a 'PUSC region NI' field (1). Otherwise, it is 0.</p> <p>The 3rd LSB indicates the there exists a 'Optional PUSC region NI' field (1). Otherwise, it is 0.</p> <p>The 4th LSB indicates the there exists an 'AMC region NI' field (1). Otherwise, it is 0.</p> <p>The 5th LSB indicates the there exists 'AAS region NI' field (1). Otherwise, it is 0.</p> <p>The 6th LSB indicates the there exists 'Periodic ranging region NI' field (1). Otherwise, it is '0'</p> <p><u>The 7th LSB indicates the there exists 'Sounding region NI' field (1). Otherwise, it is '0'</u></p> <p><u>The 8th LSB indicates the there exists 'MIMO region NI' field (1). Otherwise, it is '0'</u></p>
if (LSB of Bitmap = 1) {		
CQI/ACK/ <u>Periodic Ranging</u> region NI	8	Estimated average power level (dBm) per a subcarrier in CQI/ACK/ <u>Periodic Ranging</u> region.
.....		
if (The 6th LSB of Bitmap = 6) {		
Periodic ranging region NI	8	Estimated average power level (dBm) per a subcarrier in Periodic ranging region. The interference and noise level shall be estimated before the beam forming. When this field is present, the value for the periodic

randina reasion indicated in CQI/ACK/Preodic Randina

Reason for Group's Decision/Resolution

Vote: 29-7

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6204**

Comment submitted by: [Lei](#)

[Wang](#)

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **291** Starting Line # **53** Fig/Table# Section **8.4.5.3.20**

What're the tables above? Are they relevant to the Dedicated DL control IE?

Suggested Remedy

replace "the tables above" by the specific Table numbers.

Proposed Resolution

Recommendation: **Accepted-Modified**

Recommendation by

Dedicated DL Control IE contains additional control information for each sub-burst in ~~the tables above~~ [Table 286l](#).

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Dedicated DL Control IE contains additional control information for each sub-burst in ~~the tables above~~ [Table 286l](#).

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6205**

Comment submitted by: Bin-Chul

Ihm

Other

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **295** Starting Line # **54** Fig/Table# Section **8.4.5.3.21**

[Clarification and correction of Fast-feedback channel]

1. There is no need to restrict Fast-feedback type allocated through any of the DL HARQ sub-burst IEs to the 6 bit Enhanced Fast-feedback which is one of options. This prevents MS with the other Fast-feedback type from being allocated through the DL HARQ sub-burst IE.

Furthermore, there is need to clarify the priority of several Fast-feedback type in order to remove the ambiguity in interpretation of CQICH type when using CQICH_control_IE, CQICH_Alloc_IE, MIMO_Compact_DL_MAP_IE, SDMA Compact_DL-MAP IE, Dedicated MIMO DL Control IE, AAS_SDMA_DL_IE, Reduced_AAS_Private_DL-MAP() or any of the DL_H-ARQ Sub Burst IEs which do not include CQICH type or usage.

2. The resolution of #5163 was "Remove DIUC-CQI material from the document", however there is a value still in SBC_REQ/RSP for uplink control support.

3. Editorial correction : FAST-FEEDBACK --> Fast-feedback

Suggested Remedy

[Remedy 1: Remove the text between line 54~56, page 295 of section 8.4.5.3.21]

~~The enhanced feedback 6-bit channel type shall be used for CQI channels allocated through any of the DL HARQ sub-burst IEs.~~

[Remedy 2: modify the table of section 11.8.3.7.9 as following and insert the bottom text at the end of 11.8.3.7.9]

Type	Length	Value	Scope
173	1	bit #0: 3 bit-MIMO Fast-feedback bit #1: Enhanced FAST-FEEDBACK Fast-feedback Under negotiation for SBC fast feedback, if enhanced feature is enabled, the SS should use only the enhanced fast feedback channel in the CQICH allocation IE (see 8.4.5.4.12 and 8.4.5.3.21). bit #2: UL ACK bit #3: Enhanced UL ACK Under negotiation for UL ACK, if enhanced feature is enabled, the SS should use only the enhanced UL ACK channel. bit #4: UEP fast-feedback bit #5: A measurement report shall be performed on the last DL burst, as described in 8.4.5.4.10.1	SBC-REQ (see 6.3.2.3.23) SBC-RSP (see 6.3.2.3.24)

bit #6: Primary/Secondary ~~FAST_FEEDBACK~~ Fast-feedback
 bit #7: ~~DIUC-CQI Fast-feedback~~

When Fast-feedback channels are allocated in uplink PUSC without indication of CQICH type, MS shall interpret CQICH type as the following priority:

Primary Fast-feedback(8.4.5.4.10.12) > Enhanced Fast-feedback(8.4.5.4.10.4) > Fast-feedback(8.4.5.4.10)

When Fast-feedback channels are allocated in uplink optional-PUSC without indication of CQICH type, MS shall interpret CQICH type as the following priority:

Enhanced Fast-feedback(8.4.5.4.10.4) > Fast-feedback(8.4.5.4.10)

In case higher priority feature is enabled through SBC REQ/RSP, lower priority features are not interpreted as CQICH type when Fast-feedback channel is allocated without indication of CQICH type.

3 bit MIMO Fast-feedback and Secondary Fast-feedback shall be used only when CQICH type is explicitly indicated by BS.

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Option 1:

[Remove indicated text (pg 295, lines 54-56):]

~~The enhanced feedback 6-bit channel type shall be used for CQI channels allocated through any of the DL HARQ sub-burst IEs.~~

[Modify the table of section 11.8.3.7.9 as follow:]

Type	Length	Value	Scope
173	1	bit #0: 3 bit-MIMO Fast-feedback bit #1: Enhanced FAST_FEEDBACK <u>Fast-feedback</u> Under negotiation for SBC fast feedback , if enhanced feature is enabled, the SS should use only the enhanced fast feedback channel in the CQICH allocation IE (see 8.4.5.4.12) and 8.4.5.3.21) bit #2: UL ACK bit #3: Enhanced UL ACK Under negotiation for UL ACK , if enhanced feature is enabled, the SS should use only the enhanced UL ACK channel. bit #4: UEP fast-feedback bit #5: A measurement report shall be performed on the last DL burst, as described in 8.4.5.4.10.1 bit #6: Primary/Secondary FAST_FEEDBACK <u>Fast-feedback</u> bit #7: DIUC-CQI Fast-feedback <u>Reserved</u>	SBC-REQ (see 6.3.2.3.23) SBC-RSP (see 6.3.2.3.24)

Option 2:

[Change text as indicated:]

The enhanced feedback 6-bit channel type or mandatory feedback channel type shall be used for CQI channels allocated through any of the DL HARQ sub-burst IEs.

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified***[Change text as indicated:]*

The enhanced feedback 6-bit channel type or mandatory feedback channel type shall be used for CQI channels allocated through any of the DL HARQ sub-burst IEs.

Reason for Group's Decision/Resolution

Vote on Option 1: Fails 15-17.

Vote on Option 2: Fails 19-14.

Vote on original comment: Fails 15-18

Revote (in joint session) on Option 2: Passes (no objections)

Group's Notes**Group's Action Items****Editor's Notes**

Editor's Actions k) done

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6206**

Comment submitted by: **David**

Castelow

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **296** Starting Line # **48**

Fig/Table# **286l** Section **8.4.5.3.21**

The byte or nibble alignment of HARQ DL-MAP IE is dreadful.

Suggested Remedy

Simplify by the following process:

Move row "Boosting" (page 297, lines 23-26) to page 296, line 49.

Proposed Resolution Recommendation: Accepted

Recommendation by

Simplify by the following process:

Move row "Boosting" (page 297, lines 23-26) to page 296, line 49.

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Simplify by the following process:

Move row "Boosting" (page 297, lines 23-26) to page 296, line 49.

Reason for Group's Decision/Resolution

Vote: 20-2

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6207**

Comment submitted by: **Lei**

Wang

Member

2005/07/14

Comment Type **Editorial**

Starting Page # **297** Starting Line # **12**

Fig/Table# **T28** Section **8.4.5.3.21**

HARQ and H-ARQ are still co-existent in the 16e spec. A typical example is Table 286l.

Suggested Remedy

Replace all the "H-ARQ" by "HARQ" throughout the 16e spec.

Proposed Resolution Recommendation: Accepted

Recommendation by

Replace all the "H-ARQ" by "HARQ" throughout the 16e spec.

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

Replace all the "H-ARQ" by "HARQ" throughout the 16e spec.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6208**

Comment submitted by: **David**

Castelow

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **298** Starting Line # **17** Fig/Table# **286** Section **8.4.5.3.21**

Table 286m is missing padding to byte declarations.

Suggested Remedy

Insert the following row above page 299, line 28:

}	Dedicated DL Control IE ()	variable	-
}		-	-
	Padding	variable	Padding to byte; shall be set to zero.
}		-	-
}		-	-

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Withdrawn**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6209**Comment submitted by: **Lei****Wang**

Member

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	298	Starting Line #	46	Fig/Table#	286	Section	8.4.5.3.21
---------	------	------------------------	-----------------	-----	-----------------	----	------------	-----	---------	------------

In Table 286m, 286n, and 286o, the field "ACK disable" is not actually used. Why do we need to keep them?

Suggested Remedy

In Table 286m, 286n, and 286o, change the "ACK disable" row to the following:

reserved	1	shall be set to 0.
----------	---	--------------------

Proposed ResolutionRecommendation: **Accepted-Modified**

Recommendation by

[Change Notes for 'ACK disable' in Table 286m, 286n, 286o, 286p, 286r, 286q, and 286s for DL.]

~~ACK disable | 1 | When this bit is "1" no ACK channel is allocated and the SS shall not reply with an ACK. When 'ACK Disable' == 1, the allocated sub-burst does not require an ACK to be transmitted by the SS in the ACKCH Region (see 8.4.5.4.24). In this case, no ACK channel is allocated for the sub-burst in the ACKCH Region. For the burst, BS shall not perform HARQ retransmission and MS shall ignore ACID, AI SN, and SPID which shall be set to '0' by BS if they exist.~~

[Change Notes for 'ACK disable' in Table 302j, 302k, 302l, 302m, 302n, 302o, and 302p for UL.]

~~ACK disable | 1 | When this bit is "1" no ACK channel is allocated and the SS shall not reply with an ACK. When 'ACK Disable' == 1, the allocated sub-burst does not require an ACK to be transmitted by the BS in the HARQ ACK BITMAP (see 8.4.5.3.22). In this case, no bit position is allocated for the sub-burst in the HARQ ACK BITMAP. For the burst, MS shall not perform HARQ retransmission and ignore ACID, AI SN, and SPID which shall be set to '0' by BS if they exist.~~

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

[Change Notes for 'ACK disable' in Table 286m, 286n, 286o, 286p, 286r, 286q, and 286s for DL.]

~~ACK disable | 1 | When this bit is "1" no ACK channel is allocated and the SS shall not reply with an ACK. When 'ACK Disable' == 1, the allocated sub-burst does not require an ACK to be transmitted by the SS in the ACKCH Region (see 8.4.5.4.24). In this case, no ACK channel is allocated for the sub-burst in the ACKCH Region. For the burst, BS shall not perform HARQ retransmission and MS shall ignore ACID, AI SN, and SPID which shall be set to '0' by BS if they exist.~~

[Change Notes for 'ACK disable' in Table 302j, 302k, 302l, 302m, 302n, 302o, and 302p for UL.]

~~ACK disable | 1 | When this bit is "1" no ACK channel is allocated and the SS shall not reply with an ACK. When 'ACK Disable' == 1, the allocated sub-burst does not require an ACK to be transmitted by the BS in the HARQ ACK BITMAP (see 8.4.5.3.22). In this case, no bit position is allocated for the sub-burst in the HARQ ACK BITMAP. For the burst, MS shall not perform HARQ retransmission and ignore ACID, AI SN, and SPID which shall be set to '0' by BS if they exist.~~

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6210**

Comment submitted by: David

Castelow

Member

2005/07/14

Comment Type Starting Page # **300** Starting Line # **36** Fig/Table# **286n** Section **8.4.5.3.21**

Table 286n is not parseable: too many closing brackets, and is missing padding to byte declarations.

End of loop bracket at page 300, line 36 needs deleting, as the test at line 38 must be inside the loop.

Suggested Remedy

Delete page 300, line 36.

Insert above page 300, line 44:

Dedicated DL Control IE ()	variable	-	
}	-	-	
Padding	variable	Padding to byte; shall be set to zero.	
}	-	-	
}	-	-	

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Withdrawn**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6211**

Comment submitted by: **David**

Castelow

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **301** Starting Line # **5**

Fig/Table# **286o** Section **8.4.5.3.21**

Table 286o is missing padding to byte declarations.

Suggested Remedy

Insert at page 302, line 38:

} Dedicated DL Control IE ()	variable	-	
}	-	-	
} Padding	variable	-	Padding to byte; shall be set to zero.
}	-	-	
}	-	-	

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Withdrawn**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: 802.16e/D9

Ballot Number: 0001056

Comment Date

Comment # 6212

Comment submitted by: David

Castelow

Member

2005/07/14

Comment Type Technical, Non-binding Starting Page # 303 Starting Line # 4 Fig/Table# 286 Section 8.4.5.3.21

Table 286p is difficult to parse for a number of reasons, in part because after the first field the structure is neither byte nor nibble aligned. Also add padding to byte at end of message.

Suggested Remedy

Insert at page 303, line 13:

N sub burst	5	Number of sub-bursts in the 2D region
Reserved	3	Shall be set to zero.
For (j=0; j< N sub burst; j++){		

Insert at page 303, line 23:

ACK Disable	1	When this bit is "1" no ACK channel is allocated and the SS shall not reply with an ACK.
Reserved	3	Shall be set to zero.
If (MU indicator == 0) {		

Insert at page 303, line 50:

Repetition Coding Indication	2	0b00 - No repetition coding 0b01 - Repetition coding of 2 used 0b10 - Repetition coding of 4 used 0b11 - Repetition coding of 6 used
Reserved	2	Shall be set to zero.
If ((ACK Disable == 0) {		

Insert at page 303, line 38:

AI_SN	xxxxx	-
}	-	-
Padding	variable	Padding to byte; shall be set to zero.
}	-	-
}	-	-
}	-	-

Proposed Resolution Recommendation: Accepted-Modified Recommendation by

Insert at page 303, line 13:

N sub burst	5	Number of sub-bursts in the 2D region
Reserved	3	Shall be set to zero.
For (j=0; j< N sub burst; j++){		

Insert at page 303, line 23:

ACK Disable	1	When this bit is "1" no ACK channel is allocated and the SS shall not reply with an ACK.
Reserved	3	Shall be set to zero.
If (MU indicator == 0) {		

ACK Disable	1	When this bit is "1" no ACK channel is allocated and the SS shall not reply with an ACK.
Reserved	3	Shall be set to zero.
If (MU indicator == 0) {		

Insert at page 303, line 50:

Repetition Coding Indication	2	0b00 - No repetition coding 0b01 - Repetition coding of 2 used 0b10 - Repetition coding of 4 used 0b11 - Repetition coding of 6 used
Reserved	2	Shall be set to zero.
If ((ACK Disable == 0) {		

Insert at page 303, line 38:

AI_SN	xxxx	-
}	-	-
Padding	variable	Padding to byte; shall be set to zero.
}	-	-
}	-	-
}	-	-

Reason for Recommendation

Resolution of Group

Decision of Group: **Withdrawn**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6213**

Comment submitted by: **David**

Castelow

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **303** Starting Line # **5** Fig/Table# **286** Section **8.4.5.3.21**

Table 286p is difficult to parse for a number of reasons, not least a lack of specification of the size of ACID and AI_SN.

Suggested Remedy

Provide size specification in the following:

```

If (ACK Disable ==0) {
    ACID
    AI_SN
}
size in bits or variable
size in bits or variable

```

Proposed Resolution

Recommendation: **Accepted-Modified**

Recommendation by

```

If (ACK Disable ==0) {
    ACID
    AI_SN
}

```

4
1

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

```

If (ACK Disable ==0) {
    ACID
    AI_SN
}

```

4
1

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6214**Comment submitted by: **Panyuh****Joo**

Member

2005/07/14

Comment Type **Editorial** Starting Page # **309** Starting Line # **4**Fig/Table# **286t** Section **8.4.5.3.21.1**

There are different tables (Dedicated MIMO DL Control IE format) in D9 and D8.

Suggested Remedy

[Replace the Figure 286t in page 309 ~ 311 in D9(8.4.5.3.21.1) with the Figure 286t in page 305~308 in D8(section 8.4.5.3.21.1)]

Proposed Resolution Recommendation: **Accepted-Modified**

Recommendation by

Adopt C802.16e-05/372

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

Adopt C802.16e-05/372

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6215**

Comment submitted by: **Lei**

Wang

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **309** Starting Line # **47** Fig/Table# **286t** Section **8.4.5.3.21.1**
 which CQICH_ID gets the CQICH allocation?

Suggested Remedy

insert the following row before the row of "period" in Table 286t:

CQICH_ID	variable	Index to uniquely identify the CQICH resource assigned to the MS
----------	----------	--

Proposed Resolution

Recommendation: Accepted-Modified

Recommendation by

Duration 4bits A CQI feedback is transmitted on the CQI channels indexed by the ~~CQICH_ID~~
Allocation index for 10 x 2^d frames.

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

Duration 4bits A CQI feedback is transmitted on the CQI channels indexed by the ~~CQICH_ID~~
Allocation index for 10 x 2^d frames.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6216**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment	Type	Editorial	Starting Page #	310	Starting Line #	22	Fig/Table#	286t	Section	8.4.5.3.21.1
---------	------	-----------	-----------------	-----	-----------------	----	------------	------	---------	--------------

Comment #5441 in last meeting BRG was accepted. But it is not correctly reflected on IEEE802.16e/D9.

[Delete line 8 - line 49 in page 306 within Table 286t] in #5441 in last meeting BRG, but editor deleted line 8 (page 306) ~ line 35 (page 307) in 16e/D9.

(line description in 16e/D8)

```
line 50 (page 306 in D8) if( Closed MIMO Control Info == 1){
```

```
....
line 34 (page 307 in D8)    }
line 35 (page 307 in D8)  }
line 36 (page 307 in D8)  Padding
```

Suggested Remedy

[Add line 50 (page 306 in D8) ~ line 35(page 307 in D8) to line 22 (page 310 in D9)]

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Comment #5441 in last meeting BRG was accepted. But it is not correctly reflected on IEEE802.16e/D9.

[Delete line 8 - line 49 in page 306 within Table 286t] in #5441 in last meeting BRG, but editor deleted line 8 (page 306) ~ line 35 (page 307) in 16e/D9.

(line description in 16e/D8)

```
line 50 (page 306 in D8) if( Closed MIMO Control Info == 1){
```

```
....
line 34 (page 307 in D8)    }
line 35 (page 307 in D8)  }
line 36 (page 307 in D8)  Padding
```

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Comment #5441 in last meeting BRG was accepted. But it is not correctly reflected on IEEE802.16e/D9.

[Delete line 8 - line 49 in page 306 within Table 286t] in #5441 in last meeting BRG, but editor deleted line 8 (page 306) ~ line 35 (page 307) in 16e/D9.

(line description in 16e/D8)

```
line 50 (page 306 in D8) if( Closed MIMO Control Info == 1){
```

line 33 (page 307 in D8) in (closed) table control line -- 1/1

....
line 34 (page 307 in D8) }
line 35 (page 307 in D8) }
line 36 (page 307 in D8) Padding

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions c) instructions unclear

This table, and in particular the lines described in the comment have been modified and re-worked by other comments. It is difficult for me to understand what needs to be done here, so please have a look and comment against the document currently in re-circ (D10).

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6217**

Comment submitted by: **Lei**

Wang

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **311** Starting Line # **12**

Fig/Table# Section **8.4.5.3.22**

The HARW_ACK_delay_for_UL burst is in UCD, not DCD.

Suggested Remedy

Change DCD to UCD.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Withdrawn**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6218**

Comment submitted by: **Jungnam**

Yun

Other

2005/07/14

Comment Type **editorial**
typo

Starting Page # **311**

Starting Line # **12**

Fig/Table#

Section **8.4.5.3.22**

Suggested Remedy

DCD --> UCD

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

See 6217

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **) none needed**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6219**

Comment submitted by: **Lei**

Wang

Member

2005/07/14

Comment Type **Editorial**

Starting Page # **312** Starting Line # **38**

Fig/Table#

Section **8.4.5.3.23**

Region ID and Region_ID are exchangeably used in the spec. Should pick one and use it consistantly.

Suggested Remedy

change all the appearences of Region ID to Region_ID.

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

change all the appearences of Region ID to Region_ID.

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

change all the appearences of Region ID to Region_ID.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6220**Comment submitted by: **Asaf****Matatyaou**

Other

2005/07/14

Comment Type **Editorial**Starting Page # **321** Starting Line # **7**Fig/Table# **287**Section **8.4.5.4**

An editorial change to table 287..

Suggested Remedy

Pg. 322, line 12: insert a closing parenthesis and an opening brace:
if (AAS or AMC UL Zone) {

Proposed Resolution Recommendation: Accepted**Recommendation by**

Pg. 322, line 12: insert a closing parenthesis and an opening brace:
if (AAS or AMC UL Zone) {

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

Pg. 322, line 12: insert a closing parenthesis and an opening brace:
if (AAS or AMC UL Zone) {

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6221**Comment submitted by: **Lei****Wang**

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **321** Starting Line # **8** Fig/Table# **287** Section **8.4.5.4**

In OFMDA UL-MAP IE format, the allocation with UIUC=0 is a block allocation too and it is treated as a special case, as specified in Cor1/D3 page 119, Figure 287.

Suggested Remedy

import the portion of the allocation with UIUC=0 in Cor1/D3 Figure 287 to 16e spec.

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

import the portion of the allocation with UIUC=0 in Cor1/D3 Table 287 to 16e spec.

```

else if (UIUC == 15) {
    Extended UIUC dependent IE      variable      See subclauses following 8.4.5.4.3
} else if (UIUC == 0) {
    FAST-FEEDBACK Allocation IE() 32 bits
} else {

```

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6222**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **321** Starting Line # **41**

Fig/Table# **401** Section **8.4**

Typo

Suggested Remedy

recover striked out value = 1 for the size of Dedicated ranging indicator field

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Change as indicated:

+ --> 1

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change as indicated:

+ --> 1

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6223**

Comment submitted by: Jaehwan

Chang

Other

2005/07/14

Comment Type **Editorial**

Starting Page # **322**

Starting Line # **21**

Fig/Table# **287**

Section **8.4.5.4**

This is an error and was corrected in Corrigenda.

Suggested Remedy

[Delete the padding nibble from the text.]

~~Padding nibble, if needed | 4 | Completing to nearest byte, shall be set to 0.~~

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

[See 6224](#)

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6224**

Comment submitted by: Mark

Cudak

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **322** Starting Line # **21** Fig/Table# **287** Section **8.4.5.4**

- Two issues:
- 1) Corrigendum removed padding nibble from both UL-MAP to be in line with DL-MAP; this should also be reflected in .16e
 - 2) The size field of the 'Dedicated ranging indicator' seems to be void

Suggested Remedy

Change size field of 'Dedicated ranging indicator' from '4' to '1'.
Remove row containing the padding nibble as follows:

"

```

-----+-----
| Padding nibble, if needed|4|Completing to nearest byte, shall be set to 0. |
-----+-----

```

"

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

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

Change size field of 'Dedicated ranging indicator' from '4' to '1'.
Remove row containing the padding nibble as follows:

"

```

-----+-----
| Padding nibble, if needed|4|Completing to nearest byte, shall be set to 0. |
-----+-----

```

"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6225**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Editorial**

Starting Page # **322** Starting Line # **38**

Fig/Table# **288** Section **8.4.5.4.1**

Wrong caption of the table.

Suggested Remedy

[Modify the caption in table 288 line 38 page 322(section 8.4.5.4.1) as follows]

Table288 - OFDMA ~~DUUC~~ **UIUC** values

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

[Modify the caption in table 288 line 38 page 322(section 8.4.5.4.1) as follows]

Table288 - OFDMA ~~DUUC~~ **UIUC** values

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

[Modify the caption in table 288 line 38 page 322(section 8.4.5.4.1) as follows]

Table288 - OFDMA ~~DUUC~~ **UIUC** values

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6226**

Comment submitted by: **Lei**

Wang

Member

2005/07/14

Comment Type **Editorial**

Starting Page # **322**

Starting Line # **38**

Fig/Table# **288**

Section **8.4.5.4.1**

Table 288 shall be OFDMA UIUC values, not DIUC

Suggested Remedy

change "DIUC" to "UIUC"

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

change "DIUC" to "UIUC"

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

change "DIUC" to "UIUC"

Reason for Group's Decision/Resolution

Group's Notes

Corrected remedy (UICU -> UIUC)

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6227**

Comment submitted by: Tal

Kaitz

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **325** Starting Line # **45** Fig/Table# Section **8.4.5.4.12**

- The CQICH type is defined in CQICH_Enhanced_Alloc_IE. However, it is not defined for CQICH_Alloc_IE. As a result, the type of CQI encoding is not clear when CQI is allocated through CQICH_Alloc_IE. Since C/N may be sent using both 4-bit and 6-bit encodings, this should be made explicit for this IE as well.

- MIMO specific fast-feedback allocation should be assigned through CQICH_Enhanced_Alloc_IE rather than through CQICH_Alloc_IE.

- MIMO-related text inserted to end of 8.4.5.4.10 should go into end of 8.4.5.4.10.1

Suggested Remedy

1) section 8.4.5.4.12:

Add the following field to table 300 (CQICH Allocation IE [note to editor: current 'table 300' in 802.16e/D9 is misplaced]), immediately before the 'Padding' field:

<u>CQICH_Type</u>	<u>3</u>	<u>0b000 = 6-bit CQI,</u>
		<u>0b001 = 6 bit CQI (primary)</u>
		<u>0b010 = 4 bit CQI (secondary)</u>
		<u>0b011 = 4-bit CQI</u>
		<u>0b100-0b111 = reserved</u>

2) Move text on page 325 starting line 45 and ending page 326 line 53 to the end of section 8.4.5.4.10.1, and modify first paragraph as follows:

MIMO capable MS shall measure post processing S/N for each individual layers as shown in Figure 230a. When the FAST_FEEDBACK subheader Feedback Type field is "00", the **MIMO capable** MS shall report the post processing Effective SNR (Eff_SNR) for S/N in (106a), as defined below. When BS requests MS feedback through ~~CQICH_Alloc_IE()~~ or CQICH_Enhanced_Alloc_IE() with '00' feedback_type field, MS shall report average S/N Eff_SNR or individual layer S/N as described in ~~8.4.5.4.12 and~~ 8.4.5.4.15.

3) Modify text on page 327, line 7-9 as follows:

When the Feedback_type field in CQICH_Enhanced_Alloc_IE() is 0b000 with CQICH type 0b101 **or the CQICH type field in CQICH_Alloc_IE() is 0b010 or 0b011**, the following formula shall be used:

4) Modify text on page 334, line 33-38 as follows:

When the Fast-feedback allocation subheader Feedback Type field is 0b00 or the CQICH_Type field in ~~feedback is requested through~~ CQICH_Alloc_IE **is 0b000 or 0b001** (see section 8.4.5.4.12), or the Feedback_type field in CQICH_Enhanced_Alloc_IE() is 0b000-0b010 with CQICH type 0b000, 0b001 or (see 8.4.5.4.15), the MS shall report the SNR it measures on the DL. The following formula shall be used:

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

Remedy-1 is redundant and only increases the signaling overhead.

1. Except mandatory CQICH, other CQICH shall be negotiated between each SS and BS.
2. The usage of each different CQICH is mutually exclusive and there is no reason for a SS to switch from one scheme to another.
3. As a consequence, the negotiation through SBC messages determines type of CQICH a SS shall use.

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6228**Comment submitted by: **Bin-Chul****lhm****Other****2005/07/14**

Comment	Type Technical, Non-binding	Starting Page # 325	Starting Line # 47	Fig/Table#	Section 8.4.5.4.10
---------	------------------------------------	----------------------------	---------------------------	------------	---------------------------

8.4.5.4.12 and 8.4.5.4.15 describe only CQICH_Alloc_IE and CQICH_Enhanced_Alloc_IE respectively, and there is no definition on average S/N Eff_SNR or individual layer S/N.

And CQICH_Enhanced_Alloc_IE has no '00' in feedback type field. It has several combinations of feedback type and CQICH type to indicate the Fast DL measurement as described in below Table 302a. Correct this.

Suggested Remedy

[Apply the following modification to line47~ 53, page 325, section 8.4.5.4.10]

MIMO capable MS shall measure post processing S/N for each individual layers as shown in Figure 230a. When the ~~FAST_FEEDBACK~~Fast-feedback subheader Feedback Type field is "00", the MS shall report the post processing Effective SNR (Eff_SNR) for S/N in (106a), as defined below. When BS requests MS feedback through CQICH_Alloc_IE() or CQICH_Enhanced_Alloc_IE() with ~~'00' feedback_type_field~~feedback type indicating Fast DL measurement, MS shall report average S/N Eff_SNR or individual layer S/N ~~described in 8.4.5.4.12 and 8.4.5.4.15~~ as defined below.

Proposed Resolution

Recommendation: **Accepted-Modified**

Recommendation by

MIMO capable MS shall measure post processing S/N for each individual layers as shown in Figure 230a. When the ~~FAST_FEEDBACK~~Fast-feedback allocation subheader Feedback Type field is "00", the MS shall report the post processing Effective SNR (Eff_SNR) for S/N in (106a), as defined below. When BS requests MS feedback through CQICH_Alloc_IE() or CQICH_Enhanced_Alloc_IE() with ~~'00' feedback_type_field~~feedback type indicating Fast DL measurement, MS shall report average S/N Eff_SNR or individual layer S/N ~~described in 8.4.5.4.12 and 8.4.5.4.15~~ as defined below.

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

MIMO capable MS shall measure post processing S/N for each individual layers as shown in Figure 230a. When the ~~FAST_FEEDBACK~~Fast-feedback allocation subheader Feedback Type field is "00", the MS shall report the post processing Effective SNR (Eff_SNR) for S/N in (106a), as defined below. When BS requests MS feedback through CQICH_Alloc_IE() or CQICH_Enhanced_Alloc_IE() with ~~'00' feedback_type_field~~feedback type indicating Fast DL measurement, MS shall report average S/N Eff_SNR or individual layer S/N ~~described in 8.4.5.4.12 and 8.4.5.4.15~~ as defined below.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6229**

Comment submitted by: Lei

Wang

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **329** Starting Line # **36** Fig/Table# Section **8.4.5.4.10.4**

There are two other DL IEs that can also allocate the enhanced fast-feedback slots, i.e., Dedicated MIMO DL Control IE (8.4.5.3.21.1) and AAS_SDMA_DL_IE (8.4.5.3.26).

Suggested Remedy

insert the follow text before "and the transmission"

Dedicated MIMO DL Control IE (8.4.5.3.21.1), AAS_SDMA_DL_IE (8.4.5.3.26),

Proposed Resolution Recommendation: **Accepted-Modified** Recommendation by

insert the follow text before "and the transmission"

Dedicated MIMO DL Control IE (8.4.5.3.21.1), AAS_SDMA_DL_IE (8.4.5.3.26),

Reason for Recommendation

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

insert the follow text before "and the transmission"

Dedicated MIMO DL Control IE (8.4.5.3.21.1), AAS_SDMA_DL_IE (8.4.5.3.26),

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6230**

Comment submitted by: Bin-Chul

lhm

Other

2005/07/14

Comment	Type Editorial	Starting Page # 334	Starting Line # 36	Fig/Table#	Section 8.4.5.4.10.5
---------	-----------------------	----------------------------	---------------------------	------------	-----------------------------

The value of CQICH type 0b100 has been wrongly changed to 0b001 which is "reserved". Correct it.

Suggested Remedy

[Apply the following modifications to the text between line 33~38, page 334, section 8.4.5.4.10.5]

When the Fast-feedback allocation subheader Feedback Type field is 0b00 or the feedback is requested through CQICH_Alloc_IE (see section 8.4.5.4.12), or the Feedback_type field in CQICH_Enhanced_Alloc_IE() is 0b000-0b010 with CQICH type 0b000; or 0b100~~1-01~~ (see 8.4.5.4.15), the MS shall report the SNR it measures on the DL. The following formula shall be used:

Proposed ResolutionRecommendation: **Accepted**

Recommendation by

[Apply the following modifications to the text between line 33~38, page 334, section 8.4.5.4.10.5]

When the Fast-feedback allocation subheader Feedback Type field is 0b00 or the feedback is requested through CQICH_Alloc_IE (see section 8.4.5.4.12), or the Feedback_type field in CQICH_Enhanced_Alloc_IE() is 0b000-0b010 with CQICH type 0b000; or 0b100~~1-01~~ (see 8.4.5.4.15), the MS shall report the SNR it measures on the DL. The following formula shall be used:

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

[Apply the following modifications to the text between line 33~38, page 334, section 8.4.5.4.10.5]

When the Fast-feedback allocation subheader Feedback Type field is 0b00 or the feedback is requested through CQICH_Alloc_IE (see section 8.4.5.4.12), or the Feedback_type field in CQICH_Enhanced_Alloc_IE() is 0b000-0b010 with CQICH type 0b000; or 0b100~~1-01~~ (see 8.4.5.4.15), the MS shall report the SNR it measures on the DL. The following formula shall be used:

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

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review:	802.16e/D9	Ballot Number:	0001056	Comment Date
Comment #	6231	Comment submitted by:	Bin-Chul lhm Other	2005/07/14
Comment	Type Editorial	Starting Page #	339	Starting Line #
			1	Fig/Table#
				Section
				8.4.5.4.10.9

The whole texts and figure between p.339 line1 and p.340 line 44 are the contents of "8.4.5.4.10.9 UEP fast-feedback".

Suggested Remedy

[Move the whole texts and figure between p.339 line1 and p.340 line 44 into the end of 8.4.5.4.10.9]

Proposed Resolution Recommendation: **Accepted** Recommendation by

[Move the whole texts and figure between p.339 line1 and p.340 line 44 into the end of 8.4.5.4.10.9]

Reason for Recommendation

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

[Move the whole texts and figure between p.339 line1 and p.340 line 44 into the end of 8.4.5.4.10.9]

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6232**

Comment submitted by: Bin-Chul

lhm

Other

2005/07/14

Comment	Type	Starting Page #	Starting Line #	Fig/Table#	Section
	Editorial	342	41		8.4.5.4.10.12

Unknown character inserted. Correct it.

Suggested Remedy

Replace the text between line 41~45, page 342, section 8.4.5.4.10.12

The secondary Fast-feedback channel is orthogonally modulated with QPSK symbols. Let $M_{n,4m+k}$ ($0 \leq k \leq 3$) be the modulation symbol index of the k th modulation symbol in the m -th uplink PUSC tile of the n -th secondary Fast-feedback channel. The possible modulation patterns composed of $M_{n,4m+k}$ in the m th tile of the n th secondary Fast-feedback channel are defined in Table 298k.

with

The secondary Fast-feedback channel is orthogonally modulated with QPSK symbols. Let $M_{n,4m+k}$ ($0 \leq k \leq 3$) be the modulation symbol index of the k th modulation symbol in the m -th uplink PUSC tile of the n -th secondary Fast-feedback channel. The possible modulation patterns composed of $M_{n,4m+k}$ in the m th tile of the n th secondary Fast-feedback channel are defined in Table 298k.

Proposed Resolution**Recommendation: Accepted-Modified****Recommendation by**

Replace the text between line 41~45, page 342, section 8.4.5.4.10.12

The secondary Fast-feedback channel is orthogonally modulated with QPSK symbols. Let $M_{n,4m+k}$ ($0 \leq k \leq 3$) be the modulation symbol index of the k th modulation symbol in the m -th uplink PUSC tile of the n -th secondary Fast-feedback channel. The possible modulation patterns composed of $M_{n,4m+k}$ in the m th tile of the n th secondary Fast-feedback channel are defined in Table 298k.

with

The secondary Fast-feedback channel is orthogonally modulated with QPSK symbols. Let $M_{n,4m+k}$ ($0 \leq k \leq 3$) be the modulation symbol index of the k th modulation symbol in the m -th uplink PUSC tile of the n -th secondary Fast-feedback channel. The possible modulation patterns composed of $M_{n,4m+k}$ in the m th tile of the n th secondary Fast-feedback channel are defined in Table 298k.

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

Replace the text between line 41~45, page 342, section 8.4.5.4.10.12

The secondary Fast-feedback channel is orthogonally modulated with QPSK symbols. Let $M_{n,4m+k}$ ($0 \leq k \leq 3$) be the modulation symbol index of the k th modulation symbol in the m -th uplink PUSC tile of the n -th secondary Fast-feedback channel. The possible modulation patterns composed of $M_{n,4m+k}$ in the m th tile of the n th secondary Fast-feedback channel are defined in Table 298k.

with

The secondary Fast-feedback channel is orthogonally modulated with QPSK symbols. Let $M_{n,4m+k}$ ($0 \leq k \leq 3$) be the modulation symbol index of the k th modulation symbol in the m -th uplink PUSC tile of the n -th secondary Fast-feedback channel. The possible modulation patterns composed of $M_{n,4m+k}$ in the m th tile of the n th secondary Fast-feedback channel are defined in Table 298k.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6233**

Comment submitted by: Yongseok

Jin

Other

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	351	Starting Line #	12	Fig/Table#	Section	8.4.5.4.12
---------	------	------------------------	-----------------	-----	-----------------	----	------------	---------	------------

The 802.16e/D9 defines 'preferred-period' used by MS to request or change the period through CQICH allocation request header. However, this scheme is not clarified well in text. Therefore, this scheme shall be clarified.

Suggested Remedy

Add the following modified text after 8.4.5.4.12 title.

8.4.5.4.12 CQICH Allocation IE format

CQICH_Alloc_IE(), is introduced to dynamically allocate or de-allocate a CQICH to an SS. Once allocated, the SS transmit channel quality information on the assigned CQICH on subsequent frames with the period determined by BS or MS requests through CQICH allocation request header, until the SS receives a CQICH_Alloc_IE() to de-allocate the assigned CQICH.

Proposed Resolution **Recommendation: Accepted-Modified**

Recommendation by

Add the following modified text after 8.4.5.4.12 title.

8.4.5.4.12 CQICH Allocation IE format

CQICH_Alloc_IE(), is introduced to dynamically allocate or de-allocate a CQICH to an SS. Once allocated, the SS transmit channel quality information on the assigned CQICH on subsequent frames with the period until the SS receives a CQICH_Alloc_IE() to de-allocate the assigned CQICH. MS may request the period through CQICH allocation request header, but BS determines the period.

Reason for Recommendation

Resolution of Group

Decision of Group: Rejected

Reason for Group's Decision/Resolution

Vote: 7-9

Text exists in the baseline document and is redundant here.

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6234**Comment submitted by: **Bin-Chul****lhm****Other****2005/07/14**

Comment	Type Technical, Non-binding	Starting Page # 352	Starting Line # 1	Fig/Table#	Section 8.4.5.4.11.1
---------	------------------------------------	----------------------------	--------------------------	------------	-----------------------------

There are three descriptions on Fast DL measurement feedback of MIMO capable MS in the 802.16e/D9 draft.

8.4.5.4.10 Fast-feedback channels

MIMO capable MS shall measure post processing S/N for each individual layers as shown in Figure 230a. When the FAST_FEEDBACK subheader Feedback Type field is "00", the MS shall report the post processing Effective SNR (Eff_SNR) for S/N in (106a), as defined below. When BS requests MS feedback through CQICH_Alloc_IE() or CQICH_Enhanced_Alloc_IE() with '00' feedback_type field, MS shall report average S/N Eff_SNR or individual layer S/N as described in 8.4.5.4.12 and 8.4.5.4.15.

8.4.5.4.10.5 Fast DL measurement feedback for enhanced Fast-feedback channel

For MIMO capable MSs, if BS allocates a single CQICH to the MS in UL_MAP for the purposes of Fast DL Measurement, MS shall report the effective post processing SNR Eff_SNR as defined in 8.4.5.4.10.1. Otherwise, if BS allocate multiple CQICHs to the MS in UL_MAP for the purposes of Fast DL Measurement, the MS shall report post processing S/N of individual layers in order of layer indices.

8.4.5.4.11.1 CQICH Enhanced Allocation IE format

For MIMO capable MSs, BS may allocate one or multiple CQICH channels to the MS in UL_MAP. IF CQICH_Num=0 and feedback type is '00', MS shall report the effective post processing SNR Eff_SNR as defined in 8.4.5.4.10.1. For CQICH_Num>0 and feedback type is '00', MS shall report post processing SNR of individual layers, the order of CQICH channel allocation shall match the order of layer index.

As shown in above, 8.4.5.4.11.1 has identical description with 8.4.5.4.10 and 8.4.5.4.10.5 on Fast DL measurement of MIMO capable MS , Therefore, 8.4.5.4.11.1 should be removed.

Suggested Remedy

[Remove 8.4.5.4.11.1, line1~ 8, page 352 as following]

~~8.4.5.4.11.1 CQICH Enhanced Allocation IE format~~

~~For MIMO capable MSs, BS may allocate one or multiple CQICH channels to the MS in UL_MAP. IF CQICH_Num=0 and feedback type is '00', MS shall report the effective post processing SNR Eff_SNR as defined in 8.4.5.4.10.1. For CQICH_Num>0 and feedback type is '00', MS shall report post processing SNR of individual layers, the order of CQICH channel allocation shall match the order of layer index.~~

Proposed Resolution Recommendation: **Accepted-Modified**

Recommendation by

[Change 8.4.5.4.10.5 as indicated:]

8.4.5.4.10.5 Fast DL measurement feedback for enhanced Fast-feedback channel

For MIMO capable MSs, if BS allocates a single CQICH to the MS in UL_MAP (CQICH_Num = 0) for the purposes of Fast DL Measurement, MS shall report the effective post processing SNR Eff_SNR as defined in 8.4.5.4.10.1. Otherwise, if BS allocate multiple CQICHs to the MS in UL_MAP (CQICH_Num > 0) for the purposes of Fast DL Measurement, the MS shall report post processing S/N of individual layers in order of layer indices.

[Remove 8.4.5.4.11.1, line1~ 8, page 352 as following]

~~8.4.5.4.11.1 CQICH Enhanced Allocation IE format~~

~~For MIMO capable MSs, BS may allocate one or multiple CQICH channels to the MS in UL_MAP. IF CQICH_Num=0 and feedback type is '00', MS shall report the effective post processing SNR Eff_SNR as defined in 8.4.5.4.10.1. For CQICH_Num>0 and feedback type is '00', MS shall report post processing SNR of individual layers, the order of CQICH channel allocation shall match the order of layer index.~~

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

[Change 8.4.5.4.10.5 as indicated:]

8.4.5.4.10.5 Fast DL measurement feedback for enhanced Fast-feedback channel

For MIMO capable MSs, if BS allocates a single CQICH to the MS in UL_MAP (CQICH_Num = 0) for the purposes of Fast DL Measurement, MS shall report the effective post processing SNR Eff_SNR as defined in 8.4.5.4.10.1. Otherwise, if BS allocate multiple CQICHs to the MS in UL_MAP (CQICH_Num > 0) for the purposes of Fast DL Measurement, the MS shall report post processing S/N of individual layers in order of layer indices.

[Remove 8.4.5.4.11.1, line1~ 8, page 352 as following]

~~8.4.5.4.11.1 CQICH Enhanced Allocation IE format~~

~~For MIMO capable MSs, BS may allocate one or multiple CQICH channels to the MS in UL_MAP. IF CQICH_Num=0 and feedback type is '00', MS shall report the effective post processing SNR Eff_SNR as defined in 8.4.5.4.10.1. For CQICH_Num>0 and feedback type is '00', MS shall report post processing SNR of individual layers, the order of CQICH channel allocation shall match the order of layer index.~~

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6235**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Editorial** Starting Page # **352** Starting Line # **9**

Fig/Table# Section **8.4.5.4.12**

The section including the table 300 - OFDMA UL-MAP Physical Modifier IE format is wrong.

Suggested Remedy

[Change the section number and the title in line 9 page 352(section 8.4.5.4.12) as follow]

[8.4.5.4.12 CQICH Allocation IE format](#)

[8.4.5.4.14 UL-MAP Physical Modifier IE](#)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

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

Reason for Group's Decision/Resolution

[See 6236](#)

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6236**

Comment submitted by: Tal

Kaitz

Member

2005/07/14

Comment Type **Editorial** Starting Page # **352** Starting Line # **9** Fig/Table# **300** Section **8.4.5.4.12**

Table appearing as 'table 300' on page 352 should be table 302, and section 8.4.5.4.12 should be 8.4.5.4.14.

Suggested Remedy

Correct text on page 352 lines 9-18 as follows:

~~8.4.5.4.12 CQICH Allocation IE format~~

8.4.5.4.14 UL-MAP Physical Modifier IE

[Modify table ~~300~~ **302** as indicated:]

Table ~~300~~ **302** - OFDMA UL-MAP Physical Modifier IE format

Proposed Resolution Recommendation: Accepted

Recommendation by

Correct text on page 352 lines 9-18 as follows:

~~8.4.5.4.12 CQICH Allocation IE format~~

8.4.5.4.14 UL-MAP Physical Modifier IE

[Modify table ~~300~~ **302** as indicated:]

Table ~~300~~ **302** - OFDMA UL-MAP Physical Modifier IE format

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Correct text on page 352 lines 9-18 as follows:

~~8.4.5.4.12 CQICH Allocation IE format~~

8.4.5.4.14 UL-MAP Physical Modifier IE

[Modify table ~~300~~ **302** as indicated:]

Table ~~300~~ **302** - OFDMA UL-MAP Physical Modifier IE format

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

2005/08/12

IEEE 802.16-045r4

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6237**

Comment submitted by: Asaf

Matatyaou

Other

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **352** Starting Line # **18** Fig/Table# **300** Section **8.4.5.4.12**

Comment #4234 (accepted at session #37) incorrectly identified the OFDMA UL-MAP Physical Modifier IE format table as "Table 300," causing it to be misplaced in P802.16e/D8 and P802.16e/D9. The mistaken identity of the table resulted in the original Table 300 being overwritten.

Suggested Remedy

Update and number correctly the "OFDMA UL-MAP Physical Modifier IE format" table and place the table in the appropriate subsection 8.4.5.4.14 (not 8.4.5.4.12).

1. Place the "OFDMA UL-MAP Physical Modifier IE format" table into subclause 8.4.5.4.14 titled "UL-MAP Physical Modifier IE" (it is currently incorrectly placed in subclause 8.4.5.4.12 "CQICH Allocation IE format").
2. Rename the table number from table 300 to table 302.
3. Remove the striked-out text for the "Preamble Time Shift Index" field, as it is the editorial removal of text from e/D8 and should not be confused with the actual removal of a field.
4. Add text to the notes column for the Pilot Pattern Index field.

Table 30~~0~~² - OFDMA UL-MAP Physical Modifier IE format

Syntax	Size	Notes
...
}		
Pilot Pattern Modifier	1 bit	0: Not applied, 1: Applied
Pilot Pattern Index	2 bits	<u>Pilot pattern used for this allocation (see section 8.4.8.1.5(Fig. 249) and 8.4.6.3.3):</u> 00 - Pilot Pattern #A 01 - Pilot Pattern #B 10 - Pilot Pattern #C 11 - Pilot Pattern #D
Reserved	3 bits	
}		

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Update and number correctly the "OFDMA UL-MAP Physical Modifier IE format" table and place the table in the appropriate subsection 8.4.5.4.14 (not 8.4.5.4.12).

1. Remove the striked-out text for the "Preamble Time Shift Index" field, as it is the editorial removal of text from e/D8 and should not be confused with the actual removal of a field. (remove the Preamble Time Shift Index field from the table)
2. Add text to the notes column for the Pilot Pattern Index field.

Table 30~~20~~ - OFDMA UL-MAP Physical Modifier IE format

Syntax	Size	Notes
...
}		
Pilot Pattern Modifier	1 bit	0: Not applied, 1: Applied
Pilot Pattern Index	2 bits	<u>Pilot pattern used for this allocation (see section 8.4.8.1.5(Fig. 249) and 8.4.6.3.3):</u> 00 - Pilot Pattern #A 01 - Pilot Pattern #B 10 - Pilot Pattern #C 11 - Pilot Pattern #D
Reserved	3 bits	
}		

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9** Ballot Number: **0001056** Comment Date

Comment # **6238** Comment submitted by: [Lei Wang](#) Member [2005/07/14](#)

Comment Type [Technical, Non-binding](#) Starting Page # [352](#) Starting Line # [18](#) Fig/Table# Section [8.4.5.4.12](#)
[wrong table title for Table 300](#)

Suggested Remedy
[change the title of Table 300 to "CHOICH alloc IE format".](#)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

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

Reason for Group's Decision/Resolution
[See 6236](#)

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6239**

Comment submitted by: Yongseok

Jin

Other

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	352	Starting Line #	61	Fig/Table#	Section	8.4.5.4.15
---------	------	------------------------	-----------------	-----	-----------------	----	------------	---------	------------

The 802.16e/D9 defines 'preferred-period' used by MS to request or change the period through CQICH allocation request header. However, this scheme is not clarified well in text. Therefore, this scheme shall be clarified.

Suggested Remedy

Add the new sentence for clarification as follows

8.4.5.4.15 CQICH Enhanced Allocation IE format

CQICH_Enhanced_Alloc_IE(), is introduced to dynamically allocate or de-allocate a CQICH to a SS. This IE shall only be used with enhanced Fast-feedback channel in 8.4.5.4.10.4 and primary/secondary Fast-feedback channel in 8.4.5.4.10.12. Once allocated, the SS transmit feedback information of the specified type on the assigned CQICH with the **determined** period determined by BS or MS requests through CQICH allocation request header, until the SS receives a CQICH_Enhanced_Alloc_IE() to de-allocate the assigned CQICH.

Proposed Resolution Recommendation: **Accepted**

Recommendation by

Add the new sentence for clarification as follows

8.4.5.4.15 CQICH Enhanced Allocation IE format

CQICH_Enhanced_Alloc_IE(), is introduced to dynamically allocate or de-allocate a CQICH to a SS. This IE shall only be used with enhanced Fast-feedback channel in 8.4.5.4.10.4 and primary/secondary Fast-feedback channel in 8.4.5.4.10.12. Once allocated, the SS transmit feedback information of the specified type on the assigned CQICH with the **determined** period determined by BS or MS requests through CQICH allocation request header, until the SS receives a CQICH_Enhanced_Alloc_IE() to de-allocate the assigned CQICH.

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

Rejected at the request of the commentor.

Group's Notes**Group's Action Items****Editor's Notes**

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6240**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Editorial** Starting Page # **363** Starting Line # **11**Fig/Table# **302h** Section **8.4.5.4.22**

Anchor_BS_switch IE() needs byte alignment.

Suggested Remedy

Add reserved 4bits at the end before last "}" as following :

```

Anchor_BS_switch IE()
{
    Extended UIUC2                4bits
    Length                        8bits
    N_Anchor_BS_switch            4bits
    for(i=0; i<N_Anchor_BS_switch; i++)
    {
        Reduced CID                12bits
        Action code                2bits
        if(Action code == 0)
        {
            Action time(A)         3bits
            TEMP_BS_ID             3bits
            Reserved                2bits
        }
        if(Action code == 00 || Action code == 01)
        {
            CQICH Allocation Indicator 2bits
            if(CQICH_Allocation_Indicator == 1)
            {
                .....
            }
        }
        else
        {
            Reserved                2bits
        }
    }
    Reserved                       4bits
}

```

Proposed Resolution Recommendation: **Accepted**

Recommendation by

Add reserved 4bits at the end before last "}" as following :

```

Anchor_BS_switch IE()
{
    Extended UIUC2                                4bits
    Length                                        8bits
    N_Anchor_BS_switch                            4bits
    for(i=0; i<N_Anchor_BS_switch; i++)
    {
        Reduced CID                                12bits
        Action code                                2bits
        if(Action code == 0)
        {
            Action time(A)                        3bits
            TEMP_BS_ID                            3bits
            Reserved                               2bits
        }
        if(Action code == 00 || Action code == 01)
        {
            CQICH Allocation Indicator            2bits
            if(CQICH_Allocation_Indicator == 1)
            {
                .....
            }
        }
        else
        {
            Reserved                               2bits
        }
    }
    Reserved                                     4bits
}

```

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

Add reserved 4bits at the end before last "}" as following :

```

Anchor_BS_switch IE()
{
    Extended UIUC2                                4bits
    Length                                        8bits
    N_Anchor_BS_switch                            4bits
    for(i=0; i<N_Anchor_BS_switch; i++)
    {
        Reduced CID                                12bits

```

```

Action code                                     2bits
if(Action code == 0)
{
    Action time(A)                             3bits
    TEMP_BS_ID                                 3bits
    Reserved                                   2bits
}
if(Action code == 00 || Action code == 01)
{
    CQICH Allocation Indicator                 2bits
    if(CQICH_Allocation_Indicator == 1)
    {
        .....
    }
}
else
{
    Reserved                                   2bits
}
}
Reserved                                       4bits
}

```

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6241**Comment submitted by: **Lei****Wang**

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **363** Starting Line # **34** Fig/Table# Section **8.4.5.4.23**
The paragraph in line 34 page 363 needs further clarification.

Suggested Remedy

replace the paragraph in line 34 page 363 by the following text:

The HARQ UL MAP IE defines one or more HARQ regions. Each HARQ region has one or more HARQ bursts. All the HARQ bursts in the same HARQ region are in the same HARQ mode, but each burst is encoded separately.

Proposed ResolutionRecommendation: **Accepted**

Recommendation by

replace the paragraph in line 34 page 363 by the following text:

The HARQ UL MAP IE defines one or more HARQ regions. Each HARQ region has one or more HARQ bursts. All the HARQ bursts in the same HARQ region are in the same HARQ mode, but each burst is encoded separately.

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

HARQ UL MAP IE defines one or more HARQ bursts not region.

Group's Notes**Group's Action Items****Editor's Notes**

Editor's Actions |) none needed

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6242**Comment submitted by: **Lei****Wang**

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **364** Starting Line # **7**Fig/Table# **302i** Section **8.4.5.4.23**

The Allocation Start fields inside HARQ UL MAP IE is really problematic and useless.

Suggested Remedy

revome the allocation fields in the HARQ UL MAP IE, i.e.,

1. delete line 7 to line 21 on page 364;
2. delete line 36 to line 43 on page 363.

Proposed Resolution Recommendation: **Accepted-Modified**

Recommendation by

revome the allocation fields in the HARQ UL MAP IE, i.e.,

1. delete line 7 to line 21 on page 364;
2. delete line 36 to line 43 on page 363.

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

In each zone, HARQ UL bust can be allocated. Therefore, contiguous HARQ UL burst allocations can be separated into different zone.

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6243**

Comment submitted by: Mark

Cudak

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **364** Starting Line # **23** Fig/Table# **302i** Section **8.4.5.4.23**
 The OFDMA Symbol offset and Subchannel offset fields are not nibble aligned due to the placement of Mode and Allocation Start Indication fields.

Suggested Remedy

Move row containing the Mode field immediately above the Allocation Start Indication field. So, the correct order is:

```
-----
| while (data remains) {
-----
|   Mode
-----
|   Allocation Start Indication
-----
etc.
```

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

Move row containing the Mode field immediately above the Allocation Start Indication field. So, the correct order is:

```
-----
| while (data remains) {
-----
|   Mode
-----
|   Allocation Start Indication
-----
etc.
```

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

Move row containing the Mode field immediately above the Allocation Start Indication field. So, the correct order is:

```
-----
| while (data remains) {
-----
|   Mode
-----
|   Allocation Start Indication
-----
etc.
```

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Allocation Start Indication has been removed.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6244**

Comment submitted by: **Lei**

Wang

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **364** Starting Line # **23**

Fig/Table# **302i** Section **8.4.5.4.23**

The mode is not for the entire IE, instead, it is for one while loop, i.e., one HARQ region.

Suggested Remedy

change "this IE" to "this HARQ region"

Proposed Resolution Recommendation: **Accepted-Modified** Recommendation by

Adopt contribution C802.16e-05/371r2.

Reason for Recommendation

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

Adopt contribution C802.16e-05/371r2.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6245**

Comment submitted by: **Mark**

Cudak

Member

2005/07/14

Comment Type **Editorial**

Starting Page # **373**

Starting Line # **57**

Fig/Table#

Section **8.4.5.4.24**

Wrong reference

Suggested Remedy

Change "Table 302u" to "Table 302s"

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Change "Table 302u" to "Table 302s"

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change "Table 302u" to "Table 302s"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Text appears to have been removed.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6246**

Comment submitted by: **Lei**

Wang

Member

2005/07/14

Comment Type **Editorial**

Starting Page # **373**

Starting Line # **57**

Fig/Table#

Section **8.4.5.4.24**

wrong reference

Suggested Remedy

change 302u to 302s.

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

change 302u to 302s.

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

change 302u to 302s.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6247**

Comment submitted by: **Jungnam**

Yun

Other

2005/07/14

Comment Type **editorial**
typo

Starting Page # **374** Starting Line # **3**

Fig/Table# Section **8.4.5.4.24**

Suggested Remedy
UCD --> DCD

Proposed Resolution Recommendation: **Accepted**
UCD --> DCD

Recommendation by

Reason for Recommendation

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

Reason for Group's Decision/Resolution
Vote: 0-2
Current text is right

Group's Notes
Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6248**Comment submitted by: **Lei****Wang**

Member

2005/07/14

Comment Type **Editorial**Starting Page # **374** Starting Line # **4**

Fig/Table#

Section **8.4.5.4.24**

wrong field name.

Suggested Remedy

Change "HARQ ACK Delay for DL burst" to "HARQ ACK Delay for UL burst"

Proposed ResolutionRecommendation: **Accepted**

Recommendation by

Change "HARQ ACK Delay for DL burst" to "HARQ ACK Delay for UL burst"

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

Vote: 0-1

That section is for Downlink .

Group's Notes**Group's Action Items****Editor's Notes**

Editor's Actions |) none needed

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6249**Comment submitted by: **Rajesh****Bhalla**

Member

2005/07/14

Comment Type **Technical, Satisfied (was** Starting Page # **375** Starting Line # Fig/Table# Section **8.4.5.4.25**
 A contribution is submitted into 16d/Cor1 to add UL Allocation Start IE into 16d. If the contribution is accepted in 16d, changes need to be made to align with 16d.

Suggested Remedy

Proposed change as the following:

1. Move the entire section 8.4.5.4.25 to section 8.4.5.4.15
2. Change all occurrences of "MS" to "SS in this section

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

Proposed change as the following:

1. Move the entire section 8.4.5.4.25 to section 8.4.5.4.15
2. Change all occurrences of "MS" to "SS in this section

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6250**

Comment submitted by: **Rajesh Bhalla**

Member

2005/07/14

Comment Type **Editorial** Starting Page # **375** Starting Line # **20** Fig/Table# Section **8.4.5.4.25**

UL Allocation Start IE has beend changed to Extended UIUC type in D9. Table 302t needs to be updated.

Suggested Remedy

change "Extended-2 UIUC" to "Extended UIUC"

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

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

change "Extended-2 UIUC" to "Extended UIUC"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6251**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Editorial**

Starting Page # **376**

Starting Line # **56**

Fig/Table# **302u**

Section **8.4.5.4.27**

Correction for some editorial errors.

Suggested Remedy

[Modify the text in line 56 page 376 table 302u (section 8.4.5.4.27) as follows]

Pilot Pattern	-2
----------------------	-----------

[Modify the text in line 61 page 377 table 302u (section 8.4.5.4.27) as follows]

reserved	+3
-----------------	-----------

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

[Modify the text in line 56 page 376 table 302u (section 8.4.5.4.27) as follows]

Pilot Pattern	-2
----------------------	-----------

[Modify the text in line 61 page 377 table 302u (section 8.4.5.4.27) as follows]

reserved	+3
-----------------	-----------

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

[Modify the text in line 56 page 376 table 302u (section 8.4.5.4.27) as follows]

Pilot Pattern	-2
----------------------	-----------

[Modify the text in line 61 page 377 table 302u (section 8.4.5.4.27) as follows]

reserved	+3
-----------------	-----------

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

2005/08/12

IEEE 802.16-045r4

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6252**

Comment submitted by: Yongseok

Jin

Other

2005/07/14

Comment Type **Editorial** Starting Page # **379** Starting Line # **18**Fig/Table# **302v** Section **8.4**

The field name, Allocation offset, differs from the mentioned name in the 302x table.

Suggested Remedy

Replace Allocation offset with Frame offset

Proposed ResolutionRecommendation: **Accepted-Modified**

Recommendation by

Delete the text below the table as indicated:~~Allocation offset~~~~The UL feedback shall be transmitted in the frame which is 0-8 frame delay relative to the current frame.~~*On page 380, line 13, change the text as indicated:*

Allocation Duration (d)

The allocation is valid for 4(d-1) frame starting from the frame defined by ~~Allocation_offset~~ Frame_offset

If d == 0b000, the dedicated allocation is de-allocated

If d == 0b111, the dedicated resource shall be valid until the BS commands to de-allocate the dedicated allocation

Reason for Recommendation**Resolution of Group**Decision of Group: **Accepted-Modified***Delete the text below the table as indicated:*~~Allocation offset~~~~The UL feedback shall be transmitted in the frame which is 0-8 frame delay relative to the current frame.~~*On page 380, line 13, change the text as indicated:*

Allocation Duration (d)

The allocation is valid for 4(d-1) frame starting from the frame defined by ~~Allocation_offset~~ Frame_offset

If d == 0b000, the dedicated allocation is de-allocated

If d == 0b111, the dedicated resource shall be valid until the BS commands to de-allocate the dedicated allocation

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

Editor's Actions k) done

2005/08/12

IEEE 802.16-045r4

Editor's Notes

Editor's Actions [is done](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6253**Comment submitted by: **Bin-Chul****lhm****Other****2005/07/14**

Comment	Type Editorial	Starting Page # 380	Starting Line # 57	Fig/Table#	Section 8.4.5.5
---------	-----------------------	----------------------------	---------------------------	------------	------------------------

Wrong reference.

Suggested Remedy

[Modify the text line 57~62, page 380, section 8.4.5.5 as following]

Table 304^{ab} defines the format of the Uplink_Burst_Profile with type=13, which is used in the UCD message (6.3.2.3.3) for MS only. The UIUC field is associated with the Uplink Burst Profile and Thresholds. The UIUC value is used in the UL-MAP message to specify the Burst Profile to be used for a specific uplink burst.

Proposed ResolutionRecommendation: **Accepted**

Recommendation by

[Modify the text line 57~62, page 380, section 8.4.5.5 as following]

Table 304^{ab} defines the format of the Uplink_Burst_Profile with type=13, which is used in the UCD message (6.3.2.3.3) for MS only. The UIUC field is associated with the Uplink Burst Profile and Thresholds. The UIUC value is used in the UL-MAP message to specify the Burst Profile to be used for a specific uplink burst.

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

[Modify the text line 57~62, page 380, section 8.4.5.5 as following]

Table 304^{ab} defines the format of the Uplink_Burst_Profile with type=13, which is used in the UCD message (6.3.2.3.3) for MS only. The UIUC field is associated with the Uplink Burst Profile and Thresholds. The UIUC value is used in the UL-MAP message to specify the Burst Profile to be used for a specific uplink burst.

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

2005/08/12

IEEE 802.16-045r4

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6254**Comment submitted by: **Asaf****Matatyaou**

Other

2005/07/14

Comment Type **Editorial**Starting Page # **382** Starting Line # **25**Fig/Table# **308a** Section **8.4.5.8.1**

A few editorial changes to table 308a.

Suggested Remedy

1. Pg. 384, line 42, remove extra opening parenthesis:
If (~~f~~current zone permutation is AMC, TUSC1 or TUSC2) {
2. Pg. 385, line 27, replace 'o' with '0':
~~e~~0b01 - Repetition coding of 2 used
3. Pg. 385, line 38, add "(end NUM IE loop)" comment to closing brace, '}'
} (~~e~~nd NUM IE loop)

Proposed Resolution Recommendation: Accepted**Recommendation by**

1. Pg. 384, line 42, remove extra opening parenthesis:
If (~~f~~current zone permutation is AMC, TUSC1 or TUSC2) {
2. Pg. 385, line 27, replace 'o' with '0':
~~e~~0b01 - Repetition coding of 2 used
3. Pg. 385, line 38, add "(end NUM IE loop)" comment to closing brace, '}'
} (~~e~~nd NUM IE loop)

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

1. Pg. 384, line 42, remove extra opening parenthesis:
If (~~f~~current zone permutation is AMC, TUSC1 or TUSC2) {
2. Pg. 385, line 27, replace 'o' with '0':
~~e~~0b01 - Repetition coding of 2 used
3. Pg. 385, line 38, add "(end NUM IE loop)" comment to closing brace, '}'
} (~~e~~nd NUM IE loop)

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

Editor's Notes

Editor's Actions k) done

This one's not done:

3. Pg. 385, line 38, add "(end NUM IE loop)" comment to closing brace, '}'.

} **(end NUM IE loop)**

We haven't done this with the other tables/loops; it would be inappropriate to start now.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6255**

Comment submitted by: InSeok

Hwang

Other

2005/07/14

Comment Type Editorial Starting Page # 382 Starting Line # 48 Fig/Table# Section 8.4.5.8.1

The relation between "Periodicity" and "DL/UL Frame Offset" in Reduced Private Map needs more description for better understanding.

Suggested Remedy

[Add the text following at line 52 p.385]

The "DL/UL Frame Offset" fields define the latency between the Reduced Private Map and the DL/UL allocation made by the Reduced Private Map. This is valid for all values of the "Periodicity" field. A Reduced Private Map with "Periodicity = 00" indicates single allocation or termination of a periodic chain of private map allocations if such chain is established.

Proposed Resolution Recommendation: Accepted-Modified

Recommendation by

[Add the text following at line 52 p.385]

The "DL Frame Offset" and "UL Frame Offset" fields define the latency between the Reduced Private Map and the DL or UL allocation made by the Reduced Private Map. This is valid for all values of the "Periodicity" field. A Reduced Private Map with "Periodicity = 00" indicates single allocation or termination of a periodic chain of private map allocations if such chain is established.

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

[Add the text following at line 52 p.385]

The "DL Frame Offset" and "UL Frame Offset" fields define the latency between the Reduced Private Map and the DL or UL allocation made by the Reduced Private Map. This is valid for all values of the "Periodicity" field. A Reduced Private Map with "Periodicity = 00" indicates single allocation or termination of a periodic chain of private map allocations if such chain is established.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6256**

Comment submitted by: **Joanne**

Wilson

Member

2005/07/14

Comment Type **Technical, Satisfied (was** Starting Page # **387** Starting Line # **39** Fig/Table# Section **8.4.5.8.2**

This text was incorrectly incorporated from a previously accepted comment. In table 308b, the "Pilot Pattern Modifier" field is duplicated and should be removed from the "Pilot Pattern Index" row. There should only be one instance of this field. The "Pilot Pattern Modifier" is already properly described the row above (line 36).

Suggested Remedy

Remove the following (single) row from this table entry, which should only describe the Pilot Pattern Index:%%| Pilot Pattern Modifier | 1 | 0: Not Applied, 1: Applied |

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Remove the following (single) row from this table entry, which should only describe the Pilot Pattern Index:
~~%%| Pilot Pattern Modifier | 1 | 0: Not Applied, 1: Applied |~~

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Remove the following (single) row from this table entry, which should only describe the Pilot Pattern Index:
~~%%| Pilot Pattern Modifier | 1 | 0: Not Applied, 1: Applied |~~

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6257**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **405** Starting Line # **36** Fig/Table# Section **8.4.6.1.2.2**

There is an ambiguity in the position of constant pilots in FUSC since we don't know whether the subcarrier index in the equation defining constant pilot position in Table 311a,b,c includes DC subcarrier or not. It should be clarified.

In Figure 235 in 802.16-2004, subcarrier index runs from 0 to 1702 and hence DC subcarrier is included in this enumeration. So, it's natural to include DC subcarrier when calculating the index of pilot subcarrier position.

Similar problem exists in optional FUSC and AMC permutation. There is no description whether DC subcarrier is included or not when calculating pilot subcarrier index. In this case, for the symmetry of pilot position, it is better to not include DC subcarrier when calculating pilot subcarrier index.

Suggested Remedy

Add the following sentence at the end of the description of ConstantSet #0, #1 in Table 311a,b,c.

DC subcarrier shall be included when the pilot subcarrier index is calculated by the equation.

Add the following sentence at the end of the description of Pilot Subcarrier index in Table 312a,b,c and Table 317a,b,c.

DC subcarrier is excluded when the pilot subcarrier index is calculated by the equation.

Proposed Resolution Recommendation: Accepted**Recommendation by**

Add the following sentence at the end of the description of ConstantSet #0, #1 in Table 311a,b,c.

DC subcarrier shall be included when the pilot subcarrier index is calculated by the equation.

Add the following sentence at the end of the description of Pilot Subcarrier index in Table 312a,b,c and Table 317a,b,c.

DC subcarrier is excluded when the pilot subcarrier index is calculated by the equation.

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

Add the following sentence at the end of the description of ConstantSet #0, #1 in Table 311a,b,c.

DC subcarrier shall be included when the pilot subcarrier index is calculated by the equation.

Add the following sentence at the end of the description of Pilot Subcarrier index in Table 312a,b,c and Table 317a,b,c.

DC subcarrier is excluded when the pilot subcarrier index is calculated by the equation.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6258**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **409** Starting Line # **44**Fig/Table# Section **8.4.6.1.2.3.1**

There is no definition of c1 and c2. The same definition as 16d shall be inserted.

Suggested Remedy

Add the following text after the definition of P2,c2

 $c1 = DL_PermBase \bmod Ns, \quad c2 = \text{floor}(DL_PermBase / Ns)$ **Proposed Resolution** Recommendation: **Accepted**

Recommendation by

Add the following text after the definition of P2,c2

 $c1 = DL_PermBase \bmod Ns, \quad c2 = \text{floor}(DL_PermBase / Ns)$ **Reason for Recommendation****Resolution of Group****Decision of Group: Accepted**

Add the following text after the definition of P2,c2

 $c1 = DL_PermBase \bmod Ns, \quad c2 = \text{floor}(DL_PermBase / Ns)$ **Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes**Editor's Actions [k\) done](#)**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6259**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	415	Starting Line #	63	Fig/Table#	Section	8.4.6.2.5.2
---------	------	------------------------	-----------------	-----	-----------------	----	------------	---------	-------------

In order to be consistency with IEEE Std 802.16-2004, exclude DC subcarrier from the total subcarriers to be partitioned into tiles. In addition, 'Ns' is used for the permutation in the UL O-PUSC, but there is no specification the value of 'Ns' for each FFT size. Also, in the definition of c1 and c2 IDcell was changed to UL_PermBase in corrigenda. So, the same change shall be made in 16e

Suggested Remedy

Change the text of line 63, page 415, as follows:

To allocate the subchannels, Nused subcarriers [excluding DC subcarrier](#) are partitioned into tiles, ...

Add the following text at the end of line 2, page 416:

[The value of Ns for each FFT size is specified in Table 313a.](#)

Change the definition of c1 and c2 as follows:

$c1 = \text{IDcell} \text{ UL_PermBase} \bmod Ns, c2 = \text{floor}(\text{IDcell} \text{ UL_PermBase} / Ns)$

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

Change the text of line 63, page 415, as follows:

To allocate the subchannels, Nused subcarriers [excluding DC subcarrier](#) are partitioned into tiles, ...

Add the following text at the end of line 2, page 416:

[The value of Ns for each FFT size is specified in Table 313a.](#)

Change the definition of c1 and c2 as follows:

$c1 = \text{IDcell} \text{ UL_PermBase} \bmod Ns, c2 = \text{floor}(\text{IDcell} \text{ UL_PermBase} / Ns)$

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

Change the text of line 63, page 415, as follows:

To allocate the subchannels, Nused subcarriers [excluding DC subcarrier](#) are partitioned into tiles, ...

Add the following text at the end of line 2, page 416:

[The value of Ns for each FFT size is specified in Table 313a.](#)

Change the definition of c1 and c2 as follows:

$$c1 = \text{floor}(\text{UL_PermBase} \bmod Ns), c2 = \text{floor}(\text{UL_PermBase} / Ns)$$

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6260**

Comment submitted by: InSeok

Hwang

Other

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **417** Starting Line #

Fig/Table#

Section **8.4.6.2.7.1**

Several typos and editorial ambiguity are noticed in the text for sounding operation.

1) Wrong referencing at line 46,47, 51 p. 423

- Table 1 should be Table 316b.
- Table 3 should be Table 316d.
- Table 309 should be Table 311, where $p(x)$ of length 32 is defined for 2K FFT FUSC.

2) Ambiguity of AMC slot in CSIT type B

- 2x3, 3x2, 1x6 can be used at line 58 p. 420.

3) Ambiguity of seq. mapping in CSIT type B at line 27 p. 424

- Sub-carrier mapping can be done in physical order after aggregating all subcarriers within subchannels allocated.

Suggested Remedy

Modify the texts as follows:

1. [Correct typos for CSIT type A in p.423]

- At line 46, Table ~~4~~ **316b**
- At line 47, Table ~~3~~ **316d**
- At line 51, Table ~~309~~ **311** ("OFDMA downlink carrier allocations **for FUSC in 2048 FFT mode**")

2. [Clarify the AMC slot for CSIT type B]

- At line 58 p. 420, change the text as below

Permutation | 3 | 0b 000 = PUSC perm.

| 0b 001 = FUSC perm.

| 0b 010 = Opt. FUSC perm.

| 0b 011 = ~~Adj. Sub. perm.~~**AMC (2 x 3)**

| 0b 100 = TUSC1

| 0b 101 = TUSC2

~~| 0b 110 - 0b 111 = Reserved~~**| 0b 110 = AMC (1 x 6)****| 0b 111 = AMC (3 x 2)**

3. [Sub-carrier mapping order for CSIT type B]

- At line 28 p. 424, add the text as below

Sequence to sub-carrier mapping is done in physical order after collecting all sub-carrier index belonging to the allocated sub-channels.

Proposed Resolution Recommendation: Accepted-Modified Recommendation by

Modify the texts as follows:

1. [Correct typos for CSIT type A in p.423]
 - At line 46, Table ~~4~~ **316b**
 - At line 47, Table ~~3~~ **316d**
 - At line 51, Table ~~309~~ **311** ("OFDMA downlink carrier allocations **for FUSC in 2048 FFT mode**")
2. [Clarify the AMC slot for CSIT type B]
 - At line 58 p. 420, change the text as below

Permutation | 3 | 0b 000 = PUSC perm.
 | 0b 001 = FUSC perm.
 | 0b 010 = Opt. FUSC perm.
 | 0b 011 = ~~Adj. Sub. perm.~~
 PUSC-ASCA
 | 0b 100 = TUSC1
 | 0b 101 = TUSC2
 | **0b 110 = AMC (2 x 3)**
 | 0b111 = Reserved

3. [Sub-carrier mapping order for CSIT type B]
 - At line 28 p. 424, add the text as below

Sequence to sub-carrier mapping is done in physical order after collecting all sub-carrier index belonging to the allocated sub-channels.

Reason for Recommendation

Resolution of Group Decision of Group: Accepted-Modified

Modify the texts as follows:

1. [Correct typos for CSIT type A in p.423]
 - At line 46, Table ~~4~~ **316b**
 - At line 47, Table ~~3~~ **316d**
 - At line 51, Table ~~309~~ **311** ("OFDMA downlink carrier allocations **for FUSC in 2048 FFT mode**")
2. [Clarify the AMC slot for CSIT type B]
 - At line 58 p. 420, change the text as below

Permutation | 3 | 0b 000 = PUSC perm.
 | 0b 001 = FUSC perm.
 | 0b 010 = Opt. FUSC perm.
 | 0b 011 = ~~Adj. Sub. perm.~~

PUSC-ASCA

| 0b 100 = TUSC1

| 0b 101 = TUSC2

| **0b 110 = AMC (2 x 3)**

| 0b111 = Reserved

3. [Sub-carrier mapping order for CSIT type B]

- At line 28 p. 424, add the text as below

Sequence to sub-carrier mapping is done in physical order after collecting all sub-carrier index belonging to the allocated sub-channels.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6261**

Comment submitted by: Jungnam

Yun

Other

2005/07/14

Comment Type **editorial** Starting Page # **417** Starting Line # **61** Fig/Table# Section **8.4.6.2.1.7**
there is no optional FUSC mode in uplink.

Suggested Remedy*modify p. 417, line 61, as below*

For CSIT capability B, distributing the sounding frequency bands according to the optional **F**PUSC is supported only for MSs that support the optional **F**PUSC permutation.

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6262**

Comment submitted by: **Panyuh**

Joo

Member

2005/07/14

Comment Type **Editorial**
Correction for the editorial error

Starting Page # **419** Starting Line # **31**

Fig/Table# **316a** Section **8.4.6.2.7.1**

Suggested Remedy

[Modify the text in line 31 ~33 page 419 table 316a (section 8.4.6.2.7.1) as follows]

| **Sounding symbol index** | **3** | Symbol index within Sounding Zone, from 1(value 0b000) to ~~2³=8~~^{2³=8} (value 0b111) |

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

[Modify the text in line 31 ~33 page 419 table 316a (section 8.4.6.2.7.1) as follows]

| **Sounding symbol index** | **3** | Symbol index within Sounding Zone, from 1(value 0b000) to ~~2³=8~~^{2³=8} (value 0b111) |

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

[Modify the text in line 31 ~33 page 419 table 316a (section 8.4.6.2.7.1) as follows]

| **Sounding symbol index** | **3** | Symbol index within Sounding Zone, from 1(value 0b000) to ~~2³=8~~^{2³=8} (value 0b111) |

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6263**

Comment submitted by: Mark

Cudak

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **427** Starting Line # **38** Fig/Table# **317a** Section **8.4.6.3.1**

The definition of the pilot subcarrier in AMC is ambiguous. It doesn't consider guard subcarriers or the DC subcarrier. Assuming the equation is valid for 'used' subcarriers (which normally exclude guard subcarriers, but include the DC subcarrier), would mean that after subcarrier 432 (DC), the location of the pilots within the bin changes. This is clearly unwanted.

Suggested Remedy

Add the following text to the 'Notes' field of the Pilot Subcarrier Index in Table 317a, as indicated:

"Symbol of index 0 in pilot subcarrier index should be the first symbol of the current zone. m is incremented only for data symbols, excluding preambles, Safety zones, Sounding symbols, midambles, etc.

Pilot Subcarrier Index is a logical index that does not include guard subcarriers or the DC subcarrier."

Add the same text to Table 317b and 317c.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: **Superseded******Reason for Group's Decision/Resolution**[See comment #6257](#)**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6264**

Comment submitted by: Dave

Pechner

Other

2005/07/14

Comment Type **Technical, non-binding** Starting Page # **430** Starting Line # **46** Fig/Table# Section **8.4.6.3.3**
 SDMA Pilots can be allocated by SDMA Maps, Reduced Private Maps, or PHY Modifiers

Suggested Remedy

Modify the 6th sentence in section 8.4.6.3.3 as follows:

Subcarriers shall only be punctured if there is an allocation associated with the corresponding pattern, as described in the AAS_SDMA_DL_IE() and , AAS_SDMA_UL_IE(), PHYMOD_DL_IE(), PHYMOD_UL_IE(), Reduced AAS Private DL-MAP() or Reduced AAS Private UL-MAP()

Proposed ResolutionRecommendation: **Accepted**

Recommendation by

Modify the 6th sentence in section 8.4.6.3.3 as follows:

Subcarriers shall only be punctured if there is an allocation associated with the corresponding pattern, as described in the AAS_SDMA_DL_IE() and , AAS_SDMA_UL_IE(), PHYMOD_DL_IE(), PHYMOD_UL_IE(), Reduced AAS Private DL-MAP() or Reduced AAS Private UL-MAP()

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

Modify the 6th sentence in section 8.4.6.3.3 as follows:

Subcarriers shall only be punctured if there is an allocation associated with the corresponding pattern, as described in the AAS_SDMA_DL_IE() and , AAS_SDMA_UL_IE(), PHYMOD_DL_IE(), PHYMOD_UL_IE(), Reduced AAS Private DL-MAP() or Reduced AAS Private UL-MAP()

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

Editor's Actions k) done

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6265**

Comment submitted by: Phillip

Barber

Member

2005/07/14

Comment Type **Technical, Satisfied (was** Starting Page # **436** Starting Line # **31** Fig/Table# Section **8.4.8.2**

In current IEEE P802.16e/D9, multiple antenna transmission is supported for 2Tx, 3Tx and 4Tx antennas. However, for the DL-PUSC and DL-FUSC STC mode, only the 2Tx and 4Tx pilot allocations are defined, while the 3Tx antennas pilot scheme is missing.

Suggested Remedy

Adopt the remedy in the contribution "C80216e-05_327"(John Lee).

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6266**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Editorial**

Starting Page # **437** Starting Line # **5**

Fig/Table#

Section **8.4.8.3**

There is wrong reference.

Suggested Remedy

[modify the text in line 5 page 437 (section 8.4.8.3) as following]

zones, are described in 8.4.6.1.2.3, 8.4.6.3 and ~~8.4.6.3-18.4.6.4.1~~, respectively.

Proposed Resolution

Recommendation: Accepted

Recommendation by

[modify the text in line 5 page 437 (section 8.4.8.3) as following]

zones, are described in 8.4.6.1.2.3, 8.4.6.3 and ~~8.4.6.3-18.4.6.4.1~~, respectively.

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

[modify the text in line 5 page 437 (section 8.4.8.3) as following]

zones, are described in 8.4.6.1.2.3, 8.4.6.3 and ~~8.4.6.3-18.4.6.4.1~~, respectively.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6267**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Editorial**

Starting Page # **437**

Starting Line # **38**

Fig/Table# **251a**

Section **8.4.8.3**

Captions of 251a, 251b, 251c, and 251d do not match.

Suggested Remedy

[modify the text in line 38 page 437 (section 8.4.8.3) as following]

Figure 251a-Example of STC for optional zones in DL (Matrix A for ~~2,3,4~~2, 3 or 4 Tx and matrix B for ~~3,4~~3 or 4 Tx)

[modify the text in line 41 page 438 (section 8.4.8.3) as following]

Figure 251c-Example of Matrix C with Vertical Encoding for ~~2,3,4~~2, 3 or 4 Tx BS for optional zones in DL

Proposed Resolution

Recommendation: Accepted

Recommendation by

[modify the text in line 38 page 437 (section 8.4.8.3) as following]

Figure 251a-Example of STC for optional zones in DL (Matrix A for ~~2,3,4~~2, 3 or 4 Tx and matrix B for ~~3,4~~3 or 4 Tx)

[modify the text in line 41 page 438 (section 8.4.8.3) as following]

Figure 251c-Example of Matrix C with Vertical Encoding for ~~2,3,4~~2, 3 or 4 Tx BS for optional zones in DL

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

[modify the text in line 38 page 437 (section 8.4.8.3) as following]

Figure 251a-Example of STC for optional zones in DL (Matrix A for ~~2,3,4~~2, 3 or 4 Tx and matrix B for ~~3,4~~3 or 4 Tx)

[modify the text in line 41 page 438 (section 8.4.8.3) as following]

Figure 251c-Example of Matrix C with Vertical Encoding for ~~2,3,4~~2, 3 or 4 Tx BS for optional zones in DL

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6268**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	437	Starting Line #	46	Fig/Table#	Section	8.4.8.3
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Correction

- Data truncation or puncturing is not required for UL Optional AMC subchannel

Suggested Remedy*[modify the text in line 46~48 page 437 (section 8.4.8.3) as following]*

The data truncation for CTC or the puncturing of CC encoder shall be required for 3 Tx and 4 Tx BS for the optional AMC and the optional FUSC zones in the downlink, and required for 2 Tx for ~~the optional AMC and~~ the optional PUSC in the uplink.

Proposed ResolutionRecommendation: **Accepted**

Recommendation by

[modify the text in line 46~48 page 437 (section 8.4.8.3) as following]

The data truncation for CTC or the puncturing of CC encoder shall be required for 3 Tx and 4 Tx BS for the optional AMC and the optional FUSC zones in the downlink, and required for 2 Tx for ~~the optional AMC and~~ the optional PUSC in the uplink.

Reason for Recommendation**Resolution of Group**Decision of Group: **Accepted***[modify the text in line 46~48 page 437 (section 8.4.8.3) as following]*

The data truncation for CTC or the puncturing of CC encoder shall be required for 3 Tx and 4 Tx BS for the optional AMC and the optional FUSC zones in the downlink, and required for 2 Tx for ~~the optional AMC and~~ the optional PUSC in the uplink.

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

Editor's Actions k) done

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6269**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment	Type	Editorial	Starting Page #	440	Starting Line #	42	Fig/Table#	251g	Section	8.4.8.3.1.1
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- The editor did not incorporate three previous comment resolutions on Figure 251g.
 (Comment #1510 in Nov. 2004 meeting, Comment #3438 in Mar. 2005 meeting, Comment #4298L)

the figure 251g in 16e/D9 shall be changed by the following manner :

 Pilot for Ant 0 | ~~Punctured pilot for Ant 3~~ **Pilot for Ant1**

Punctured pilot for Ant 2 | ~~Pilot for Ant 1~~ **Punctured pilot for Ant 3**

Suggested Remedy

[Replace the Figure 251g in page 436 with the Figure ccc in the accepted contribution C802.16e-04/558r2 (Comment #1510) in Nov. 2004 meeting]

Proposed Resolution Recommendation: Accepted**Recommendation by**

[Replace the Figure 251g in page 436 with the Figure ccc in the accepted contribution C802.16e-04/558r2 (Comment #1510) in Nov. 2004 meeting]

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

[Replace the Figure 251g in page 436 with the Figure ccc in the accepted contribution C802.16e-04/558r2 (Comment #1510) in Nov. 2004 meeting]

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

Editor's Notes Editor's Actions k) done

I've made a change to the legend, but if you take a look at Figure ccc in C802.16e-04/558r2, you'll see that the difference between "Pilot for Ant 0" and "Punctured pilot for Ant 3" are nearly impossible to distinguish, so I've just made (yet another) guess. If this figure is still incorrect, do not refer me back to Figure ccc again; re-draw that figure with proper shading or hashing so I can tell what is required.

Editor's Questions and Concerns

Editor's Action Items

Document under Review:	802.16e/D9	Ballot Number:	0001056	Comment Date	
Comment #	6270	Comment submitted by:	Panyuh Joo Member	2005/07/14	
Comment	Type Editorial	Starting Page #	444	Starting Line #	56
		Fig/Table#		Section	8.4.8.3.1.2.3
There is wrong figure index					

Suggested Remedy

[modify the text in line 56 page 444 (section 8.4.8.3.1.2.3) as following]

Figure ~~251k~~[251i](#) shows an example of vertically encoded rate 2 with CTC H-ARQ transmission.

Proposed Resolution Recommendation: **Accepted** Recommendation by

[modify the text in line 56 page 444 (section 8.4.8.3.1.2.3) as following]

Figure ~~251k~~[251i](#) shows an example of vertically encoded rate 2 with CTC H-ARQ transmission.

Reason for Recommendation

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

[modify the text in line 56 page 444 (section 8.4.8.3.1.2.3) as following]

Figure ~~251k~~[251i](#) shows an example of vertically encoded rate 2 with CTC H-ARQ transmission.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6271**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Editorial** Starting Page # **445** Starting Line # **40**Fig/Table# Section **8.4.8.3.4**

We need to match names of two subsections which are 8.4.8.3.3 and 8.4.8.4.3.

Suggested Remedy*[modify the text in line 40 page 445 (section 8.4.8.3.4) as following]*8.4.8.3.4 Transmission schemes for 3-antenna BS [in DL](#)**Proposed Resolution Recommendation: Accepted****Recommendation by***[modify the text in line 40 page 445 (section 8.4.8.3.4) as following]*8.4.8.3.4 Transmission schemes for 3-antenna BS [in DL](#)**Reason for Recommendation****Resolution of Group****Decision of Group: Accepted***[modify the text in line 40 page 445 (section 8.4.8.3.4) as following]*8.4.8.3.4 Transmission schemes for 3-antenna BS [in DL](#)**Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** k) done**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6272**

Comment submitted by: **Panyuh**

Joo

Member

2005/07/14

Comment Type **Editorial**

Starting Page # **445**

Starting Line # **44**

Fig/Table#

Section

8.4.8.3.4

Redundant setence

Suggested Remedy

Delete line 44 (page 445)

~~STC for 3Tx Rate1,2,and 3:~~

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Delete line 44 (page 445)

~~STC for 3Tx Rate1,2,and 3:~~

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Delete line 44 (page 445)

~~STC for 3Tx Rate1,2,and 3:~~

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6273**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Editorial** Starting Page # **446** Starting Line # **28**

Fig/Table# Section **8.4.8.3.4**

Eq. (124b) in line 28 on page 446 and Equation in line 5 on page 448 do not match.

Suggested Remedy

Matrix B1 (124b, page 446) should be changed as follow

$$B1 = \begin{bmatrix} \sqrt{4/3} & 0 & 0 & \tilde{s}_1 & -\tilde{s}_2^* & \tilde{s}_5 & -\tilde{s}_6^* \\ 0 & \sqrt{4/3} & 0 & \tilde{s}_2 & \tilde{s}_1^* & \tilde{s}_6 & \tilde{s}_5^* \\ 0 & 0 & \sqrt{3/2} & \tilde{s}_7 & -\tilde{s}_8^* & -\tilde{s}_8^* & \tilde{s}_3 & -\tilde{s}_4^* \end{bmatrix}$$

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Matrix B1 (124b, page 446) should be changed as follow

$$B1 = \begin{bmatrix} \sqrt{4/3} & 0 & 0 & \tilde{s}_1 & -\tilde{s}_2^* & \tilde{s}_5 & -\tilde{s}_6^* \\ 0 & \sqrt{4/3} & 0 & \tilde{s}_2 & \tilde{s}_1^* & \tilde{s}_6 & \tilde{s}_5^* \\ 0 & 0 & \sqrt{3/2} & \tilde{s}_7 & -\tilde{s}_8^* & -\tilde{s}_8^* & \tilde{s}_3 & -\tilde{s}_4^* \end{bmatrix}$$

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Matrix B1 (124b, page 446) should be changed as follow

$$B1 = \begin{bmatrix} \sqrt{4/3} & 0 & 0 & \tilde{s}_1 & -\tilde{s}_2^* & \tilde{s}_5 & -\tilde{s}_6^* \\ 0 & \sqrt{4/3} & 0 & \tilde{s}_2 & \tilde{s}_1^* & \tilde{s}_6 & \tilde{s}_5^* \\ 0 & 0 & \sqrt{3/2} & \tilde{s}_7 & -\tilde{s}_8^* & -\tilde{s}_8^* & \tilde{s}_3 & -\tilde{s}_4^* \end{bmatrix}$$

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Note that this is just a sign change for the S8* in the lower middle position of the second matrix.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6274**

Comment submitted by: **Panyuh**

Joo

Member

2005/07/14

Comment Type **Editorial**

Starting Page # **446**

Starting Line # **54**

Fig/Table#

Section **8.4.8.3.4**

It is difficult to read eq. (124c)

Suggested Remedy

Please add enough space instead of using semi-colons.

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Please add enough space instead of using semi-colons.

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Please add enough space instead of using semi-colons.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6275**

Comment submitted by: Bin-Chul

lhm

Other

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	447	Starting Line #	14	Fig/Table#	Section	8.4.8.3.4.1
---------	------	------------------------	-----------------	-----	-----------------	----	------------	---------	-------------

Clarify the codewords of 3 and 4 bit CQICH for antenna grouping and selection.

Suggested Remedy

[Modify the text in line 14~16, page 447 section 8.4.8.3.4.1 as following]

When MS reports [0b000, 0b0111](#) or 0b101110 on its CQICH (See [8.4.5.4.10.3](#) and 8.4.5.4.10.7), then BS shall group antenna 0 and 1 for the first subcarrier and antenna 1 and 2 for the second subcarrier. In matrix form, it shall be read as

[Modify the text in line 27~29, page 447 section 8.4.8.3.4.1 as following]

When MS reports [0b001, 0b1000](#) or 0b101111 on its CQICH, then BS shall group antenna 0 and 1 for the first subcarrier and antenna 0 and 2 for the second subcarrier. In matrix form, it shall be read as

[Modify the text in line 40~42, page 447 section 8.4.8.3.4.1 as following]

When MS reports [0b010, 0b1001](#) or 0b110000 on its CQICH, then BS shall group antenna 0 and 2 for the first subcarrier and antenna 1 and 2 for the second subcarrier. In matrix form, it shall be read as

[Modify the text in line 62~64, page 447 section 8.4.8.3.4.2 as following]

When MS reports [0b000, 0b1010](#) or 0b110001 on its allocated CQICH, then BS shall transmit in the following transmission matrix

[Modify the text in line 10~12, page 448 section 8.4.8.3.4.2 as following]

When MS reports [0b001, 0b1011](#) or 0b110010 on its allocated CQICH, then BS shall transmit in the following transmission matrix

[Modify the text in line 23~25, page 448 section 8.4.8.3.4.2 as following]

When MS reports [0b010, 0b1100](#) or 0b110011 on its allocated CQICH, then BS shall transmit in the following transmission matrix

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

[Modify the text in line 14~16, page 447 section 8.4.8.3.4.1 as following]

When MS reports [0b000, 0b0111](#) or 0b101110 on its CQICH (See [8.4.5.4.10.3](#) and 8.4.5.4.10.7), then BS shall group antenna 0 and 1 for the first subcarrier and antenna 1 and 2 for the second subcarrier. In matrix form, it shall be read as

[Modify the text in line 27~29, page 447 section 8.4.8.3.4.1 as following]

When MS reports [0b001, 0b1000](#) or 0b101111 on its CQICH, then BS shall group antenna 0 and 1 for the first subcarrier and antenna 0 and 2 for the second subcarrier. In matrix form, it shall be read as

[Modify the text in line 40~42, page 447 section 8.4.8.3.4.1 as following]

When MS reports [0b010, 0b1001](#) or 0b110000 on its CQICH, then BS shall group antenna 0 and 2 for the first subcarrier and

When MS reports [0b010, 0b1001 or](#) 0b1000 on its CQICH, then BS shall group antenna 0 and 2 for the first subcarrier and antenna 1 and 2 for the second subcarrier. In matrix form, it shall be read as

[Modify the text in line 62~64, page 447 section 8.4.8.3.4.2 as following]

When MS reports [0b000, 0b1010 or](#) 0b110001 on its allocated CQICH, then BS shall transmit in the following transmission matrix

[Modify the text in line 10~12, page 448 section 8.4.8.3.4.2 as following]

When MS reports [0b001, 0b1011 or](#) 0b110010 on its allocated CQICH, then BS shall transmit in the following transmission matrix

[Modify the text in line 23~25, page 448 section 8.4.8.3.4.2 as following]

When MS reports [0b010, 0b1100 or](#) 0b110011 on its allocated CQICH, then BS shall transmit in the following transmission matrix

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

[Modify the text in line 14~16, page 447 section 8.4.8.3.4.1 as following]

When MS reports [0b000, 0b0111 or](#) 0b101110 on its CQICH (See [8.4.5.4.10.3 and](#) 8.4.5.4.10.7), then BS shall group antenna 0 and 1 for the first subcarrier and antenna 1 and 2 for the second subcarrier. In matrix form, it shall be read as

[Modify the text in line 27~29, page 447 section 8.4.8.3.4.1 as following]

When MS reports [0b001, 0b1000 or](#) 0b101111 on its CQICH, then BS shall group antenna 0 and 1 for the first subcarrier and antenna 0 and 2 for the second subcarrier. In matrix form, it shall be read as

[Modify the text in line 40~42, page 447 section 8.4.8.3.4.1 as following]

When MS reports [0b010, 0b1001 or](#) 0b110000 on its CQICH, then BS shall group antenna 0 and 2 for the first subcarrier and antenna 1 and 2 for the second subcarrier. In matrix form, it shall be read as

[Modify the text in line 62~64, page 447 section 8.4.8.3.4.2 as following]

When MS reports [0b000, 0b1010 or](#) 0b110001 on its allocated CQICH, then BS shall transmit in the following transmission matrix

[Modify the text in line 10~12, page 448 section 8.4.8.3.4.2 as following]

When MS reports [0b001, 0b1011 or](#) 0b110010 on its allocated CQICH, then BS shall transmit in the following transmission matrix

[Modify the text in line 23~25, page 448 section 8.4.8.3.4.2 as following]

When MS reports [0b010, 0b1100 or](#) 0b110011 on its allocated CQICH, then BS shall transmit in the following transmission matrix

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6276** Comment submitted by: Panyuh Joo Member 2005/07/14Comment Type **Editorial** Starting Page # **448** Starting Line # **40** Fig/Table# Section **8.4.8.3.4.3**

The tile of the section 8.4.8.3.4.3 may cause confusion. Except the title, "antenna selection" is used.

Suggested Remedy

8.4.8.3.4.3 Enhanced 3 Tx Matrix C with ~~Antenna Grouping~~ Antenna SelectionProposed Resolution Recommendation: **Accepted** Recommendation by8.4.8.3.4.3 Enhanced 3 Tx Matrix C with ~~Antenna Grouping~~ Antenna Selection

Reason for Recommendation

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

Reason for Group's Decision/Resolution

See 6279

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6277**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Editorial** Starting Page # **448** Starting Line # **42** Fig/Table# Section **8.4.8.3.4.3**

There is confusion so that the clarification is necessary. Note that Subsection 8.4.8.3.4.3 is related with '3Tx Matrix C with antenna selection'. Therefore, the maximum number of streams is 2. In addition, there is some typos.

Suggested Remedy

[modify the text in line 42 page 448 (section 8.4.8.3.4.3) as following]

For the transmission matrix C, when k sub-streams are configured, ~~$x_i = [s_1, s_2, \dots, s_k]$, $k=1,2,\dots,M$, $M=3,4$, Transmission~~ $x_i = [s_1, s_2, \dots, s_k]$, $k=1, \dots, M$, and $M=1,2$, transmission

[modify the text in line 44 page 448 (section 8.4.8.3.4.3) as following]

matrix is listed in Table 317f, where the mapping of the matrix ~~C_n~~ C_n to the CQICH is shown. The active

Proposed ResolutionRecommendation: **Accepted**

Recommendation by

[modify the text in line 42 page 448 (section 8.4.8.3.4.3) as following]

For the transmission matrix C, when k sub-streams are configured, ~~$x_i = [s_1, s_2, \dots, s_k]$, $k=1,2,\dots,M$, $M=3,4$, Transmission~~ $x_i = [s_1, s_2, \dots, s_k]$, $k=1, \dots, M$, and $M=1,2$, transmission

[modify the text in line 44 page 448 (section 8.4.8.3.4.3) as following]

matrix is listed in Table 317f, where the mapping of the matrix ~~C_n~~ C_n to the CQICH is shown. The active

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

[modify the text in line 42 page 448 (section 8.4.8.3.4.3) as following]

For the transmission matrix C, when k sub-streams are configured, ~~$x_i = [s_1, s_2, \dots, s_k]$, $k=1,2,\dots,M$, $M=3,4$, Transmission~~ $x_i = [s_1, s_2, \dots, s_k]$, $k=1, \dots, M$, and $M=1,2$, transmission

[modify the text in line 44 page 448 (section 8.4.8.3.4.3) as following]

matrix is listed in Table 317f, where the mapping of the matrix ~~C_n~~ C_n to the CQICH is shown. The active

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

Editor's Actions k) done

2005/08/12

IEEE 802.16-045r4

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6278**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Editorial** Starting Page # **451** Starting Line # **44** Fig/Table# Section **8.4.8.3.5.1**

The editor did not incorporate previous comment resolution.

In last meeting,

[modify the text in line 39~40 page 446 (section 8.4.8.3.5.1) as following]

When MS reports 0b101110 on its CQICH, then BS shall group antenna 0 and 1 for the first subcarrier and antenna ~~1 and 22~~ and 3 for the second subcarrier.

But editor changed ~~1 and 22~~ and 3 as ~~1 and 20~~ and 2.

Suggested Remedy

[modify the text in line 44~45 page 451 (section 8.4.8.3.5.1) as following]

When MS reports 0b101110 on its CQICH, then BS shall group antenna 0 and 1 for the first subcarrier and antenna ~~0 and 22~~ and 3 for the second subcarrier.

Proposed Resolution

Recommendation: Accepted

Recommendation by

[modify the text in line 44~45 page 451 (section 8.4.8.3.5.1) as following]

When MS reports 0b101110 on its CQICH, then BS shall group antenna 0 and 1 for the first subcarrier and antenna ~~0 and 22~~ and 3 for the second subcarrier.

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

[modify the text in line 44~45 page 451 (section 8.4.8.3.5.1) as following]

When MS reports 0b101110 on its CQICH, then BS shall group antenna 0 and 1 for the first subcarrier and antenna ~~0 and 22~~ and 3 for the second subcarrier.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6279**

Comment submitted by: Peiyong

Zhu

Member

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	454	Starting Line #	Fig/Table#	Section	8.4.8.3.5.3
---------	------	------------------------	-----------------	-----	-----------------	------------	---------	-------------

The title for this section is not correct.

Similarly, the title for section 8.4.8.3.4.3 is not correct. Enhanced 3 Tx Matrix C with Antenna Grouping

Suggested Remedy

Change the section title to

8.4.8.3.5.3 ~~Enhanced~~ 4 Tx Matrix C with Antenna Grouping Selection8.4.8.3.4.3 ~~Enhanced~~ 3 Tx Matrix C with Antenna Grouping SelectionProposed Resolution Recommendation: **Accepted**

Recommendation by

Change the section title to

8.4.8.3.5.3 ~~Enhanced~~ 4 Tx Matrix C with Antenna Grouping Selection8.4.8.3.4.3 ~~Enhanced~~ 3 Tx Matrix C with Antenna Grouping Selection

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change the section title to

8.4.8.3.5.3 ~~Enhanced~~ 4 Tx Matrix C with Antenna Grouping Selection8.4.8.3.4.3 ~~Enhanced~~ 3 Tx Matrix C with Antenna Grouping Selection

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6280**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Editorial Clarificatoin**

Starting Page # **454** Starting Line # **20**

Fig/Table# Section **8.4.8.3.5.4**

Suggested Remedy

Cn to the CQICH is shown' to C_n to the CQICH is shown.

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Cn to the CQICH is shown' to C_n to the CQICH is shown.

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Cn to the CQICH is shown' to C_n to the CQICH is shown.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6281**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Editorial** Starting Page # **457** Starting Line # **41**

Fig/Table# Section **8.4.8.4.2**

Correction for wrong reference section in text.

Suggested Remedy

[Modify the text in ine 41 page 457(section 8.4.8.4.2) as follows]

For the optional PUSC permutation with matrix A in ~~8.4.8.3.3~~ 8.4.8.4.3

Proposed Resolution Recommendation: Accepted

Recommendation by

[Modify the text in ine 41 page 457(section 8.4.8.4.2) as follows]

For the optional PUSC permutation with matrix A in ~~8.4.8.3.3~~ 8.4.8.4.3

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

[Modify the text in ine 41 page 457(section 8.4.8.4.2) as follows]

For the optional PUSC permutation with matrix A in ~~8.4.8.3.3~~ 8.4.8.4.3

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6282**

Comment submitted by: **Panyuh**

Joo

Member

2005/07/14

Comment Type **Editorial**

Starting Page # **458** Starting Line # **11**

Fig/Table# Section **8.4.8.4.2**

Wrong index in Figure 251I

Suggested Remedy

In line 11 in Figure 251I, H* should be changed to -H*.

Proposed Resolution Recommendation: **Accepted**

Recommendation by

In line 11 in Figure 251I, H* should be changed to -H*.

Reason for Recommendation

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

In line 11 in Figure 251I, H* should be changed to -H*.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

This figure is still unclear. I cannot tell pilot subcarriers from null subcarriers, and checking back to the original figure that was pasted into the document (not by me!), it's not clear either. Someone needs to fix this.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6283**

Comment submitted by: Jungnam

Yun

Other

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **476** Starting Line # **46** Fig/Table# Section **8.4.9.2.1.1**

it was originally 1st Transmission and 2nd Transmission and then modified to current form in draft 16e/D6 without any comment or contribution on that change.

Suggested Remedy

in Table 318a,

merge SPID = 0 and SPID = 1 and replace it with '1st Transmission'

merge SPID = 2 and SPID = 3 and replace it with '2nd Transmission'

Proposed Resolution**Recommendation: Accepted-Modified****Recommendation by**

Change section 8.4.9.2.1.1 Incremental Redundancy HARQ support as the following:

HARQ implementation is optional. An Incremental Redundancy (IR) based HARQ is taking the puncture pattern into account, and for each retransmission the coded block is not the same. Different puncture patterns are used to create ~~HARQ packets~~~~the retransmission FEC block identified by SPID~~. The puncture patterns are predefined or can be easily deduced from the original pattern, and can be selected based on ~~retransmission SPID number~~. At the receiver, the received signals are depunctured according to its specific puncture pattern, which is decided by the current ~~retransmission number, SPID~~, then the combination is performed at bit metrics level.

The puncture pattern for the ~~first transmission HARQ packet with SPID=0~~ is the same as the mandatory one in Table 318a. The puncture pattern for the ~~second transmission HARQ packet with SPID=1~~ is the ~~right-left~~ cyclic shift of the one ~~for from SPID=0 the first transmission~~, as shown in

Table 318a. Following the same rule, the puncture patterns ~~for the third and fourth transmission packets with SPID=2 and SPID=3 is available are shown in Table 318a. This rule shall apply to the more than four transmissions.~~

Also, change table 318a as the following:

1. Merge cells "SPID=0" and "SPID=1" into one cell and label it with "SPID=0"
2. Merge cells "SPID=2" and "SPID=3" into one cell and label it with "SPID=1"
3. Replace "3rd Transmission" with "SPID=2"
4. Replace "4th Transmission" with "SPID=3"

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

Change section 8.4.9.2.1.1 Incremental Redundancy HARQ support as the following:

HARQ implementation is optional. An Incremental Redundancy (IR) based HARQ is taking the puncture

pattern into account, and for each retransmission the coded block is not the same. Different puncture patterns are used to create ~~HARQ packets~~~~the retransmission FEC block identified by SPID~~. The puncture patterns are predefined or can be easily deduced from the original pattern, and can be selected based on ~~retransmission SPID number~~. At the receiver, the received signals are depunctured according to its specific puncture pattern, which is decided by the current ~~retransmission number, SPID~~, then the combination is performed at bit metrics level.

The puncture pattern for the ~~first transmission HARQ packet with SPID=0~~ is the same as the mandatory one in Table 318a. The puncture pattern for the ~~second transmission HARQ packet with SPID=1~~ is the ~~right-left~~ cyclic shift of the one ~~for from SPID=0 the first transmission~~, as shown in

Table 318a. Following the same rule, the puncture patterns ~~for the third and fourth transmission packets with SPID=2 and SPID=3 is available are shown in Table 318a. This rule shall apply to the more than four transmissions.~~

Also, change table 318a as the following:

1. Merge cells "SPID=0" and "SPID=1" into one cell and label it with "SPID=0"
2. Merge cells "SPID=2" and "SPID=3" into one cell and label it with "SPID=1"
3. Replace "3rd Transmission" with "SPID=2"
4. Replace "4th Transmission" with "SPID=3"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6284**

Comment submitted by: Dave

Pechner

Other

2005/07/14

Comment Type **Technical non-binding** Starting Page # **482** Starting Line # **11** Fig/Table# Section **8.4.9.4.3**

The defintion in 16e contradicts the changes made in the corrigenda. The defintions should be consistent to avoid confusion and/or mis-interpretation

Suggested Remedy

Modify the 2nd paragraph in section 8.4.9.4.3 as follows:

~~In the downlink, all permutations, except uplink PUSC and downlink TUSC1, except for the TUSC1 structure, and for the optional uplink tile structure~~ each pilot shall be transmitted with a boosting of 2.5 dB over the average non-boosted power of each data tone. The Pilot subcarriers shall be modulated according to the following formula:

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

Modify the 2nd paragraph in section 8.4.9.4.3 as follows:

~~In the downlink, all permutations, except uplink PUSC and downlink TUSC1, except for the TUSC1 structure, and for the optional uplink tile structure~~ each pilot shall be transmitted with a boosting of 2.5 dB over the average non-boosted power of each data tone. The Pilot subcarriers shall be modulated according to the following formula:

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6285**

Comment submitted by: Lei

Wang

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **482** Starting Line # **60** Fig/Table# Section **8.4.9.5**

In the current 16e spec, there are actually two ways for doing HARQ allocations, i.e., HARQ MAP and extended-2 normal MAP IEs for HARQ allocation. The descriptions given in section 8.4.9.5 only refer to the HARQ MAP, not the extended-2 normal MAP IEs at all.

Suggested Remedy

1. page 482 line 62, change (see 6.3.2.3.43.6.7) to (see 6.3.2.3.43.6.7, 8.4.5.3.21)
2. change the paragraph on page 483 line 24 as follows:

When Chase Combining HARQ is enabled for a particular MS, the HARQ_MAP or Extended normal MAP IE for HARQ will be used to signal the allocation and the HARQ Control IE or extended normal MAP HARQ sub-burst IE will use the "Generic Chase" allocation format. The encoding of the companded sub channel field is defined in Table 333d below. Concatenation rules for each respective coding mode are applied as defined for non-HARQ transmissions.

Proposed Resolution Recommendation: Accepted-Modified Recommendation by

1. page 482 line 62, change (see 6.3.2.3.43.6.7) to (see 6.3.2.3.43.6.7, 8.4.5.3.21)
2. change the paragraph on page 483 line 24 as follows:

When Chase Combining HARQ is enabled for a particular MS, the HARQ_MAP or Extended-2 normal MAP IE for HARQ will be used to signal the allocation and the HARQ Control IE or extended normal MAP HARQ sub-burst IE will use the "Generic Chase" allocation format. The encoding of the companded sub channel field is defined in Table 333d below. Concatenation rules for each respective coding mode are applied as defined for non-HARQ transmissions.

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

Vote: 1-4

The HARQ method defined in HARQ_MAP is different than that defined in the normal MAP IE.

Group's Notes**Group's Action Items****Editor's Notes**

Editor's Actions |) none needed

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6286**

Comment submitted by: **Jaehee**

Cho

Other

2005/07/14

Comment	Type Editorial	Starting Page # 484	Starting Line # 46	Fig/Table#	Section 8.4.9.6
---------	-----------------------	----------------------------	---------------------------	------------	------------------------

Please see the comment #3469 that was rejected in March meeting.
 The following is the group's resolution.
 Vote: 22-28
 Zone boosting is a implementation issue, there is no need to specify in the standard.
 So the corresponding section shall be removed from the 16e spec.

Suggested Remedy

[Delete the whole section "8.4.9.6" from line 46 to line 61 on page 484]

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

Reason for Recommendation

Resolution of Group	Decision of Group: Accepted
---------------------	------------------------------------

[Delete the whole section "8.4.9.6" from line 46 to line 61 on page 484]

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes	Editor's Actions k) done
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Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6287**

Comment submitted by: Phillip

Barber

Member

2005/07/14

Comment Type **Technical, Satisfied (was** Starting Page # **485** Starting Line # **30** Fig/Table# Section **8.4.10.3.2**

In current IEEE P802.16e/D9, a great deal of consideration has gone into designing the power control for the OFDMA PHY in the 802.16e standard. However, there are a number of issues that need clarification or amendment to compliment the work done already.

Suggested Remedy

Adopt the remedy in the contribution "C80216e-05_328"(John Lee).

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6288**

Comment submitted by: Jaehee

Cho

Other

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **487** Starting Line # **21**

Fig/Table# Section **8.4.10.3.2.1**

The value M shall count for all common variation term related with transmit power.
So it is right to exclude C/N and repetition factor but not NI level.

Suggested Remedy

8.4.10.3.2.1 UL Tx power and Headroom transmission condition

[Change the following eq as indicated]

$$M(n) = L + NI + \text{Offset_SSperSS} + \text{Offset_BSperSS} \text{ (dB)}$$

Proposed Resolution Recommendation: Accepted

Recommendation by

8.4.10.3.2.1 UL Tx power and Headroom transmission condition

[Change the following eq as indicated]

$$M(n) = L + NI + \text{Offset_SSperSS} + \text{Offset_BSperSS} \text{ (dB)}$$

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

8.4.10.3.2.1 UL Tx power and Headroom transmission condition

[Change the following eq as indicated]

$$M(n) = L + NI + \text{Offset_SSperSS} + \text{Offset_BSperSS} \text{ (dB)}$$

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6289**Comment submitted by: **Lei****Wang**

Member

2005/07/14

Comment Type **Editorial** Starting Page # **489** Starting Line # **1**
 incorrect or incomplete references

Fig/Table# Section **8.4.15**

Suggested Remedy

1. in line 1 page 489, change "8.4.9.2.1.2" to "8.4.9.2.1.1"
2. add "and 8.4.9.5.1." at the end of line 2 page 489.

Proposed Resolution Recommendation: Accepted**Recommendation by**

1. in line 1 page 489, change "8.4.9.2.1.2" to "8.4.9.2.1.1"
2. add "and 8.4.9.5.1." at the end of line 2 page 489.

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

1. in line 1 page 489, change "8.4.9.2.1.2" to "8.4.9.2.1.1"
2. add "and 8.4.9.5.1." at the end of line 2 page 489.

Reason for Group's Decision/Resolution**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** c) instructions unclear

I do not understand the instructions.

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6290**

Comment submitted by: **Lei**

Wang

Member

2005/07/14

Comment Type **Editorial**

Starting Page # **489** Starting Line # **12**

Fig/Table# Section **8.4.15**

Should be HARQ, not ARQ.

Suggested Remedy

in both ine 12 and line 30 on page 489, change ARQ to HARQ.

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

in both ine 12 and line 30 on page 489, change ARQ to HARQ.

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

in both ine 12 and line 30 on page 489, change ARQ to HARQ.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6291**

Comment submitted by: **Lei**

Wang

Member

2005/07/14

Comment Type **Editorial**

Starting Page # **489**

Starting Line # **16**

Fig/Table#

Section **8.4.15.1**

wrong reference

Suggested Remedy

change "8.4.5.4.17" to "8.4.5.4.24"

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

change "8.4.5.4.17" to "8.4.5.4.24"

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

change "8.4.5.4.17" to "8.4.5.4.24"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6292**

Comment submitted by: Jaehee

Cho

Other

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	489	Starting Line #	50	Fig/Table#	Section	8.4.15.1.2
---------	------	------------------------	-----------------	-----	-----------------	----	------------	---------	------------

It is not clear where the CRC is covering.
It is reasonable for CRC to cover data bits and padding bits.

Suggested Remedy

8.4.15.1.2 CRC

[Modify the section as follows]

Bursts transmitted using Chase HARQ shall include CRC of 16 bits. The CRC is appended to MAC data after padding (before partitioning to FEC blocks and encoding as defined in 8.4.9). Padding is done so that the total length after CRC concatenation matches the size of the burst indicated by the map.

The CRC shall be CRC16-CCITT, as defined in ITU-T Recommendation X.25, and it is calculated over all the [data bits](#) and [padding bits](#) in the burst.

This CRC shall be used for error detection and for ACK/NACK transmission.

Proposed Resolution**Recommendation: Accepted-Modified****Recommendation by**

8.4.15.1.2 CRC

[Modify the section as follows]

Bursts transmitted using Chase HARQ shall include CRC of 16 bits. The CRC is appended to MAC data after padding (before partitioning to FEC blocks and encoding as defined in 8.4.9). Padding is done so that the total length after CRC concatenation matches the size of the burst indicated by the map.

The CRC shall be CRC16-CCITT, as defined in ITU-T Recommendation X.25, and it is calculated over all the bits in the burst, [including data and padding](#).

This CRC shall be used for error detection and for ACK/NACK transmission.

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

8.4.15.1.2 CRC

[Modify the section as follows]

Bursts transmitted using Chase HARQ shall include CRC of 16 bits. The CRC is appended to MAC data after padding (before partitioning to FEC blocks and encoding as defined in 8.4.9). Padding is done so that the total length after CRC concatenation matches the size of the burst indicated by the map.

The CRC shall be CRC16-CCITT, as defined in ITU-T Recommendation X.25, and it is calculated over all the bits in the burst, [including data and padding](#).

This CRC shall be used for error detection and for ACK/NACK transmission.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6293**

Comment submitted by: [Lei](#)

[Wang](#)

[Member](#)

[2005/07/14](#)

Comment Type [Editorial](#)

Starting Page # [490](#) Starting Line # [4](#)

Fig/Table# Section [8.4.15.1.3](#)

[wrong reference](#)

Suggested Remedy

[change "11.8.3.7.12" to "11.8.3.7.11"](#)

Proposed Resolution

Recommendation: [Accepted](#)

Recommendation by

[change "11.8.3.7.12" to "11.8.3.7.11"](#)

Reason for Recommendation

Resolution of Group

Decision of Group: [Accepted](#)

[change "11.8.3.7.12" to "11.8.3.7.11"](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6294**

Comment submitted by: **Yerang**

Hur

Other

2005/07/14

Comment Type **Technical non-binding** Starting Page # **501** Starting Line # **48**

Fig/Table# **Tabl** Section **10.1**

The current maximum value of MOB_NBR-ADV interval is small. We need to relax it.

Suggested Remedy

[Change line 48, Table 342, p. 302 of Section 10.1 as follows:]

Name:
MOB_NBR-ADV interval
Value (Maximum): ~~4 s~~ 30 s

Proposed Resolution Recommendation: **Accepted**

Recommendation by

[Change line 48, Table 342, p. 302 of Section 10.1 as follows:]

Name:
MOB_NBR-ADV interval
Value (Maximum): ~~4 s~~ 30 s

Reason for Recommendation

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

[Change line 48, Table 342, p. 302 of Section 10.1 as follows:]

Name:
MOB_NBR-ADV interval
Value (Maximum): ~~4 s~~ 30 s

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6295**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **503** Starting Line # **56** Fig/Table# **343** Section **10.2**

When EAP-based authentication is achieved, MSK lifetime may be transferred by the EAP method, or it should be set by a vendor. So a PMK lifetime needs to be defined in the text.

Suggested Remedy

[Insert the following rows into the table 343 of section 10.2 in page 503]

BS	PMK lifetime	If MSK lifetime is infinite, PMK lifetime shall be set to this value. (in seconds)	60	3600	86400
----	--------------	--	----	------	-------

Proposed ResolutionRecommendation: **Accepted-Modified**

Recommendation by

[Insert the following rows into the table 343 of section 10.2 in page 503]

BS	PMK lifetime	If MSK lifetime is unspecified (ie by AAA server), PMK lifetime shall be set to this value. (in seconds)	60	3600	86400
----	--------------	--	----	------	-------

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

[Insert the following rows into the table 343 of section 10.2 in page 503]

BS	PMK lifetime	If MSK lifetime is unspecified (ie by AAA server), PMK lifetime shall be set to this value. (in seconds)	60	3600	86400
----	--------------	--	----	------	-------

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

Editor's Actions k) done

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6296**

Comment submitted by: [Yerang](#)

[Hur](#)

[Other](#)

2005/07/14

Comment Type [Editorial](#) Starting Page # [504](#) Starting Line # [25](#) Fig/Table# [Tabl](#) Section [10.4](#)

[Multicast polling CIDs overlap with normal mode multicast CID. See comments 4328 and 4461 of 80216-05_023r6.](#)

Suggested Remedy

[Change the value of multicast polling CIDs as indicated:]

CID:
Multicast polling CIDs

Value:
0xFF00 -
0xFFFFA9

Proposed Resolution Recommendation: [Accepted](#)

Recommendation by

[Change the value of multicast polling CIDs as indicated:]

CID:
Multicast polling CIDs

Value:
0xFF00 -
0xFFFFA9

Reason for Recommendation

Resolution of Group Decision of Group: [Accepted](#)

[Change the value of multicast polling CIDs as indicated:]

CID:
Multicast polling CIDs

Value:
0xFF00 -
0xFFFFA9

Reason for Group's Decision/Resolution

2005/08/12

IEEE 802.16-045r4

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6297**

Comment submitted by: Mark

Cudak

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **504** Starting Line # **31** Fig/Table# **345** Section **10.4**

Table 345 defines several CIDs for use, solely in the DLMAP, whereas the rest of the text allows them to be used in MAC management messages as well. For example, "Idle mode multicast CID" is defined in Table 345 as "Used in DL-MAP to denote bursts for transmission of DL broadcast information to Idle mode MS.", whereas Section 6.3.2.3.56 states that "The MOB_PAG-ADV message shall be sent on the Broadcast CID or Idle mode multicast CID during the BS Paging Interval.". The latter statement is supported also by Section 6.3.22.7.

Suggested Remedy

Change 'Description' field of 'Idle mode multicast CID' row in Table 345 as follows:

"Used in DL-MAP to denote bursts for transmission of DL broadcast information to Idle mode MS. May also be used in MOB_PAG-ADV messages."

Change 'Description' field of 'Sleep mode multicast CID' row in Table 345 as follows:

"Used in DL-MAP to denote bursts for transmission of DL broadcast information to Sleep mode MS. May also be used in MOB_TRF-IND messages."

Proposed Resolution Recommendation: Accepted

Recommendation by

Change 'Description' field of 'Idle mode multicast CID' row in Table 345 as follows:

"Used in DL-MAP to denote bursts for transmission of DL broadcast information to Idle mode MS. May also be used in MOB_PAG-ADV messages."

Change 'Description' field of 'Sleep mode multicast CID' row in Table 345 as follows:

"Used in DL-MAP to denote bursts for transmission of DL broadcast information to Sleep mode MS. May also be used in MOB_TRF-IND messages."

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

Change 'Description' field of 'Idle mode multicast CID' row in Table 345 as follows:

"Used in DL-MAP to denote bursts for transmission of DL broadcast information to Idle mode MS. May also be used in MOB_PAG-ADV messages."

Change 'Description' field of 'Sleep mode multicast CID' row in Table 345 as follows:

"Used in DL-MAP to denote bursts for transmission of DL broadcast information to Sleep mode MS. May also be used in MOB_TRF-IND messages."

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

2005/08/12

IEEE 802.16-045r4

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6298**

Comment submitted by: Mark

Cudak

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **504** Starting Line # **37** Fig/Table# **345** Section **10.4**

Corrigendum has made 3-bit FSN optional. Current .16e draft is not aligned with this.

Suggested Remedy

Change Description field of Fragmentable Broadcast CID as follows:

"Used by the BS for transmission of management broadcast information with fragmentation. The fragment sub header shall use ~~311~~-bit long FSN on this connection."

Also, change the value column of the TLV in Section 11.8.2 on page 535, line 32 as follows:

"Bit #0: Ability to receive requests piggybacked with data

Bit #1: ~~Ability to use 3-bit FSN values Specifies the size of FSN values used~~ when forming MAC PDUs on non-ARQ connections

~~0: Only 3-bit FSN values are supported~~

~~1: Only 11-bit FSN values are supported~~

Bits #2-7: *Reserved*; shall be set to zero

"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Change Description field of Fragmentable Broadcast CID as follows:

"Used by the BS for transmission of management broadcast information with fragmentation. The fragment sub header shall use ~~311~~-bit long FSN on this connection."

Also, change the value column of the TLV in Section 11.8.2 on page 535, line 32 as follows:

"Bit #0: Ability to receive requests piggybacked with data

Bit #1: ~~Ability to use 3-bit FSN values Specifies the size of FSN values used~~ when forming MAC PDUs on non-ARQ connections

~~0: Only 3-bit FSN values are supported~~

~~1: Only 11-bit FSN values are supported~~

Bits #2-7: *Reserved*; shall be set to zero

"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review:	802.16e/D9	Ballot Number:	0001056	Comment Date	
Comment #	6299	Comment submitted by:	Phillip Barber	Member	2005/07/14
Comment	Type <u>Technical</u> , Satisfied (was	Starting Page #	505	Starting Line #	31
	I object to the resolution of comment 5615.	Fig/Table#	347	Section	11.1.2.1

The remedy accepted did not solve the problem. Oops. Sorry about that. Finger fumble. Should have been DREG-REQ added. DREG-CMD was already in the table.

Suggested Remedy

[In 11.1.2.1 HMAC Tuple, page 497, Table 347 and page 506, Table 348a, modify by adding DREG-REQ to the list of messages in 'Scope' in the Tables:]

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

[In 11.1.2.1 HMAC Tuple, page 497, Table 347 and page 506, Table 348a, modify by adding DREG-REQ to the list of messages in 'Scope' in the Tables:]

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

[In 11.1.2.1 HMAC Tuple, page 497, Table 347 and page 506, Table 348a, modify by adding DREG-REQ to the list of messages in 'Scope' in the Tables:]

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6300**

Comment submitted by: Phillip

Barber

Member

2005/07/14

Comment Type Technical, Satisfied (was Starting Page # 505 Starting Line # 31 Fig/Table# 347 Section 6.3.17)

I object to the resolution of comment 5226, 4424 & 4001.

While much of the changes incorporated in the remedy were editorially useful, the adopted Accepted-Modified remedy did nothing to repair the specific PAR violation problem identified: that legacy 802.16-2004 SS support on PER TERMINAL IR HARQ. The revised section still removes PER TERMINAL IR specification and allows per connection IR and Chase Combining HARQ only. SS will not be able to deal with per connection HARQ and will fail, breaking backwards compatibility. The section MUST BE MODIFIED to support the SS's expected iteration of PER TERMINAL IR HARQ to maintain backwards compatibility.

Suggested Remedy

In 6.3.17 MAC support for H-ARQ, page 158, lines 36-43, modify as:]

'Hybrid automatic repeat request (~~H-ARQ~~HARQ) scheme is an optional part of the MAC ~~and can be enabled on a per terminal basis.~~
~~H-ARQ~~HARQ may be supported only for the OFDMA PHY. ~~The per terminal H-ARQ~~HARQ and associated parameters shall be specified and negotiated using SBC-REQ/RSP messages during initializationnetwork entry or re-entry procedure. The utilization of HARQ is on a per-connection basis, that is, it can be enabled on a per CID basis by using the DSA/DSC messages. Two implementations of HARQ are supported: 1) per-terminal, that is, HARQ is enabled for all active CIDs for a terminal, and 2) per-connection, that is, it can be enabled on a per CID basis by using the DSA/DSC messages. The two implementation methods shall not be employed simultaneously on any terminal. SS may support per-terminal implementation. MS may support per-connection implementation. A burst cannot have a mixture of ~~H-ARQ~~HARQ and non-~~H-ARQ~~HARQ traffic.'

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

In 6.3.17 MAC support for H-ARQ, page 158, lines 36-43, modify as:]

'Hybrid automatic repeat request (~~H-ARQ~~HARQ) scheme is an optional part of the MAC ~~and can be enabled on a per terminal basis.~~
~~H-ARQ~~HARQ may be supported only for the OFDMA PHY. ~~The per terminal H-ARQ~~HARQ and associated parameters shall be specified and negotiated using SBC-REQ/RSP messages during initializationnetwork entry or re-entry procedure. The utilization of HARQ is on a per-connection basis, that is, it can be enabled on a per CID basis by using the DSA/DSC messages. Two implementations of HARQ are supported: 1) per-terminal, that is, HARQ is enabled for all active CIDs for a terminal, and 2) per-connection, that is, it can be enabled on a per CID basis by using the DSA/DSC messages. The two implementation methods shall not be employed simultaneously on any terminal. If HARQ is supported, SS shall support per-terminal implementation. If HARQ is supported, MS shall support per-connection implementation. A burst cannot have a mixture of ~~H-ARQ~~HARQ and non-~~H-ARQ~~HARQ traffic.'

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

2005/08/12

IEEE 802.16-045r4

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6301**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **507** Starting Line # **42** Fig/Table# Section **11.1.3**

What does the following sentence mean:
"Indicates conformance with IEEE Std 802.16e-2005" ?

There is no "conformance to 802.16e" and cannot be. There may be only "conformance to 802.16-2004 amended by 802.16e" [+ Corrigenda]

Suggested Remedy

Change

"Indicates conformance with **IEEE Std. 802.16-2004 amended by IEEE P802.16-2004/Cor1 and IEEE Std 802.16e-2005**"

Proposed Resolution

Recommendation: **Accepted-Modified**

Recommendation by

Change

"Indicates conformance with **IEEE Std. 802.16-2004 and IEEE P802.16-2004/Cor1 and IEEE Std 802.16e-2005**"

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Change

"Indicates conformance with **IEEE Std. 802.16-2004 and IEEE P802.16-2004/Cor1 and IEEE Std 802.16e-2005**"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review:	802.16e/D9	Ballot Number:	0001056	Comment Date	
Comment #	6302	Comment submitted by:	Kiseon Ryu Other	2005/07/14	
Comment	Type Technical, Non-binding	Starting Page #	513	Starting Line #	52
		Fig/Table#	353a	Section	11.3.1

Clarification :

The reduction of broadcast message size is important for the efficient bandwidth usage. In general, UL-MAP IEs with UIUC 12 for initial ranging and BW-REQ/periodic ranging should be frequently included in UL-MAP message regardless of rarely changed that information. If a BS provides SSs with the information of allocated ranging region through UCD message, BS can omit UL-MAP IE with UIUC 12 from UL-MAP message and reduce the broadcast UL-MAP message size at least 21 bytes in every frame.

Suggested Remedy

Discuss and adopt the contribution C80216e-05_240r6 (Ranging region allocation using UCD message).

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Rejected at the request of the commenter.

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6303**Comment submitted by: [Kyungjoo](#)[Suh](#)

Other

2005/07/14

Comment Type [Technical, Non-binding](#) Starting Page # [519](#) Starting Line # [3](#) Fig/Table# [Tabl](#) Section [11.5, 11.6](#)

This Contribution deals with repetition coding indication.

Even though the current specification supports a number of MCS modulation level, the RNG-RREQ and RNG-RSP message contain only DIUC. Therefore, when SS perform handover or initial ranging at the cell edge, there is no way for SS to communicate BS using a certain MCS level. In this Draft, we offer a solution to overcome this problem including the Repetition Coding Indication.

Suggested Remedy

Adopt the contribution [C802.16e-05/332](#)

Proposed Resolution

Recommendation:

Recommendation by

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

Adopt the contribution [C802.16e-05/332r1](#)

Reason for Group's Decision/Resolution

Vote to accept the comment:

In favor: 20

Against: 2

Passes

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6304**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **522** Starting Line # **44** Fig/Table# **367** Section **11.6**

The HO Process Optimization TLV defined for RNG-RSP messages in section 11.6 contains three indications defined only for managed MSs: bit #3, #4, and #5. So the bit #3 - omit network address acquisition management messages during current reentry processing - does not give any valid meaning to unmanaged MSs.

When there is a need for a managed MS to refresh its IP address, the BS can send the MS a RNG-RSP message with the HO Process Optimization bit #3 clear. Similarly, an unmanaged MS may have to change its IP address due to subnet change between its serving BS and the target BS. The target BS can detect the fact that IP address refresh is required, but there is no way for the BS to let the MS know that. A simple way to solve that problem is to define an indication mechanism to trigger layer 3 protocol exchanges to retain IP connectivity as we do for managed MSs. We propose to use one bit for that purpose among the reserved bits in the HO Process Optimization TLV.

Suggested Remedy

[Change the line 44 in Page 522 as following:]

Bit #12 : Omit triggering layer 3 protocol exchanges for refreshing its IP address. This bit is valid only for an MS not supporting the secondary management connection.

Bit #123~15 : reserved

Proposed ResolutionRecommendation: **Accepted-Modified**

Recommendation by

~~Bit #123 : Omit triggering layer 3 protocol exchanges for refreshing its traffic IP address. This bit is valid only for an MS not supporting the secondary management connection.~~ If this bit is set to 1, MS shall trigger a higher layer protocol required to refresh its traffic IP address (e.g. DHCP Discover [IETF RFC 2131] or Mobile IPv4 re-registration [IETF RFC 3344]).

Bit #1234~15 : reserved

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

~~Bit #123 : Omit triggering layer 3 protocol exchanges for refreshing its traffic IP address. This bit is valid only for an MS not supporting the secondary management connection.~~ If this bit is set to 1, MS shall trigger a higher layer protocol required to refresh its traffic IP address (e.g. DHCP Discover [IETF RFC 2131] or Mobile IPv4 re-registration [IETF RFC 3344]).

Bit #1234~15 : reserved

Reason for Group's Decision/Resolution

Vote: 16-2

Group's Notes**Group's Action Items****Editor's Notes**

Editor's Actions k) done

Editor's Questions and Concerns

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6305**

Comment submitted by: David

Castelow

Member

2005/07/14

Comment Type **Technical, Satisfied (was** Starting Page # **522** Starting Line # **53** Fig/Table# Section **11.6**

This started as a style thing: should you have If tests (e.g. page 522, line 49: If (HO Optimization [bit#X]==1)) surrounding a TLV. The TLV is a TLV regardless of the setting of a bit in some other message.

SBC-RSP encodings may be embedded as a compound TLV within a RNG-RSP. Why? Why not just send an SBC-RSP. The overheads are not great and the increase in complexity and in number of test cases is massive.

If I accept that .16e shall mix in XYZ-RSP messages into the RNG-RSP, then I still have problems:

The value states "SBC-RSP TLV items for HO optimization". Does this mean only SBC-RSP items that are associated with HO optimization (in which case a list is needed), or does it mean that for HO optimization, any SBC-RSP TLV can be embedded in the RNG-RSP?

Suggested Remedy

(A) Remove if (X) { and } rows from table, replacing these with comments in the notes sections that these fields are only transmitted if the corresponding bit in the HO optimization field is set.

Proposed Resolution Recommendation: Accepted

Recommendation by

(A) Remove if (X) { and } rows from table, replacing these with comments in the notes sections that these fields are only transmitted if the corresponding bit in the HO optimization field is set.

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

(A) Remove if (X) { and } rows from table, replacing these with comments in the notes sections that these fields are only transmitted if the corresponding bit in the HO optimization field is set.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Note that for each "If (HO Process Optimization[bit#8]==1){SBC-RSP encodings}" type entry, we're removing the if clause and adding a note

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IEEE 802.16-045r4

column. In the 'SBC-RSP encodings' row, the note entry would contain "Only transmitted if HO Process Optimization[bit#8]==1".

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6306**

Comment submitted by: Mark

Cudak

Member

2005/07/14

Comment Type Technical, Non-binding Starting Page # 523 Starting Line # 9 Fig/Table# 367 Section 11.6

Section 6.3.22.6 refers to a parameters N (Paging Interval Length).

For correct operation, this value must be known by the MS. However, it is not included in the Paging Information TLV.

Suggested Remedy

Change the length of the Paging Information TLV in Table 367 from 4 to 5 bytes.

Change the value field as follows:

"Paging Information shall only be included if Location Update Response=0x01 and if Paging Information has changed

Bits 15:0 - PAGING_CYCLE - Cycle in which the paging message is transmitted within the paging group

Bits 23:16 – PAGING_OFFSET – Determines the frame within the cycle in which the paging message is transmitted. Must be smaller than PAGING_CYCLE value

Bits 31:24 – Paging Group ID - ID of the paging group the MS is assigned to

Bits 34:32 – Paging Interval Length

Bits 39:35 – reserved, shall be set to zero"

Similarly, change the length of the Paging Information TLV in Section 11.4 from 4 to 5 bytes.

Change the value field as follows:

"Bits 15:0 - PAGING_CYCLE - Cycle in which the paging message is transmitted within the paging group

Bits 23:16 – PAGING_OFFSET – Determines the frame within the cycle in which the paging message is transmitted. Must be smaller than PAGING_CYCLE value

Bits 31:24 – Paging Group ID - ID of the paging group the MS is assigned to

Bits 34:32 – Paging Interval Length

Bits 39:35 – reserved, shall be set to zero"

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Change the length of the Paging Information TLV in Table 367 from 4 to 5 bytes.

Change the value field as follows:

"Paging Information shall only be included if Location Update Response=0x01 and if Paging Information has changed

Bits 15:0 - PAGING_CYCLE - Cycle in which the paging message is transmitted within the paging group

Bits 23:16 – PAGING_OFFSET – Determines the frame within the cycle in which the paging message is transmitted. Must be smaller than PAGING_CYCLE value

Bits 31:24 – Paging Group ID - ID of the paging group the MS is assigned to

Bits 34:32 – Paging Interval Length

Bits 39:35 – reserved, shall be set to zero"

Similarly, change the length of the Paging Information TLV in Section 11.4 from 4 to 5 bytes.

Change the value field as follows:

"Bits 15:0 - PAGING_CYCLE - Cycle in which the paging message is transmitted within the paging group

Bits 19:0 – PAGING_CYCLE – Cycle in which the paging message is transmitted within the paging group

Bits 23:16 – PAGING OFFSET – Determines the frame within the cycle in which the paging message is transmitted. Must be smaller than PAGING CYCLE value

Bits 31:24 – Paging Group ID - ID of the paging group the MS is assigned to

Bits 34:32 – Paging Interval Length

Bits 39:35 – reserved, shall be set to zero"

Reason for Recommendation

Resolution of Group

Decision of Group: Rejected

Reason for Group's Decision/Resolution

Vote: 0-1

Paging Interval Length is a well known value in Table 342

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6307**

Comment submitted by: **Yerang**

Hur

Other

2005/07/14

Comment Type **Editorial** Starting Page # **524** Starting Line # **1** Fig/Table# Section **11.6**

TLV appearing on top of page 524 with the type number 21 for Next Periodic Ranging is unnecessary. It is included in 11.16.2 for MOB_SLP-RSP with the type number 2.

Suggested Remedy

[Delete the table of Next Periodic Ranging with the type number 21 after Table 367]

Proposed Resolution

Recommendation: Accepted

Recommendation by

[Delete the table of Next Periodic Ranging with the type number 21 after Table 367]

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

[Delete the table of Next Periodic Ranging with the type number 21 after Table 367]

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6308**

Comment submitted by: David

Castelow

Member

2005/07/14

Comment	Type	Technical, Satisfied (was	Starting Page #	524	Starting Line #	17	Fig/Table#	Section	11.6.1
---------	------	---------------------------	-----------------	-----	-----------------	----	------------	---------	--------

The section "SA Challenge Tuple" appears to be a subsection of RNG-RSP, when it ought to be a part of 11.7
 Type numbers need assigning for SA Challenge, BS_Random and AKId.

Suggested Remedy

Move section 11.6.1 (page 524, line 15 to page 525, line 32 to page 535, line 20, renumbering 11.6.1 as 11.7.26
 and correcting

Page 524, Line 29: replace "?" with 44.

Page 524, line 42: replace "???" with "44.1" (Comment: Is "1" sufficient?)

Page 524, line 44: replace "???" with "44.2" (Comment: Is "2" sufficient?)

Proposed Resolution	Recommendation: Accepted-Modified	Recommendation by
----------------------------	--	--------------------------

Fill in type values on line 29, 42 and 44

E.g. (numbers to be checked!):

SA Challenge -> Type= "31"

BS_Random -> Type = "31.1"

AKId -> Type = "31.2"

Reason for Recommendation

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

Fill in type values on line 29, 42 and 44

SA Challenge -> Type= "31"

BS_Random -> Type = "31.1"

AKId -> Type = "31.2"

Note to editor: numbers to be checked after other edits.

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

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6309**

Comment submitted by: **Mark**

Cudak

Member

2005/07/14

Comment Type **Technical, Non-binding**

Starting Page # **524**

Starting Line # **29**

Fig/Table#

Section

11.6.1

Missing type values

Suggested Remedy

Fill in type values on line 29, 42 and 44

E.g. (numbers to be checked!):

SA Challenge -> Type= "31"

BS_Random -> Type = "31.1"

AKId -> Type = "31.2"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

see **6308**

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6310**

Comment submitted by: **Jose**

Puthenkulam

Member

2005/07/14

Comment Type **Editorial** Starting Page # **524** Starting Line # **30**

Fig/Table#

Section

11.6.1

The type values for SA Challenge Compound TLV are undefined and left as "?" or "??"

Suggested Remedy

In page 524 make the following corrections.

In line 30, Change "?" in Type column to "14"

In line 42, Change "??" in Type column to "15"

In line 44, Change "??" in Type column to "16"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

see 6308

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6311**

Comment submitted by: Phillip

Barber

Member

2005/07/14

Comment Type Technical, Satisfied (was Starting Page # **524** Starting Line # **55** Fig/Table# **37d** Section **11.7.7.1**)

PHS orthogonal to packet protocol selection is properly demonstrated in the 802.16-2004 standard because PHS support is specified in 11.7.7.3, separate from packet CS protocol capabilities specification in 11.7.7.1 or service flow encodings in 11.13.19.1. Specification of packet PHS type is more properly done in revision to 11.7.7.3 rather than building the convoluted table in 11.13.19.1. The changes to 11.13.19.1 should have never been accepted to begin with.

Suggested Remedy

[Delete page 565, line 3 through page 566, line 50 including headings, tables, and editorial instructions]

Add an update to section 11.7.7.3 "PHS support" to include the indicated text changes - "This parameter indicates the level of PHS packet header suppression and compression support:

Bit #0: ATM PHS

Bit #1: Packet PHS

Bit #2: ROHC

Bit #3: ECRTTP

Bit #4-#7: reserved

Proposed Resolution Recommendation: Accepted-Modified

Recommendation by

Add new paragraph to the end of section 5.2.4.2:

For IP-header compressed IP over IEEE 802.3/ethernet, IP header compression and VLAN headers may be included in the classification. In this case the IEEE 802.1Q (11.13.19.3.4.11 - 11.13.19.3.4.12) and Compressed IP header (11.13.19.3.4.16, 11.13.19.3.4.18) classification parameters are allowed.

Add a new section 5.2.7:

5.2.7 IP-Header-compression-specific part

The Convergence sublayer supports SDUs in two formats that facilitate robust compression of IP and higher layer headers. These formats are ROHC (RFC 3095) and ECRTTP (RFC 3545) and are referred to as the IP-header-compression CS PDU format.

5.2.7.1 IP-Header-compressed CS PDU format

IP-Header-compressed PDUs are mapped to MAC SDUs according to Figure 18 (when header suppression is enabled at the connection, but not applied to the CS PDU) or Figure 19 (with header suppression).

+-----+
 | PHS=0 | IP Compressed header | payload |

| PHSI = 0 | IP-Compressed header + payload
|

+-----+
Figure 18 Header-compressed CS PDU format without header suppression

+-----+
| PHSI != 0 | IP-Compressed header + payload
|

+-----+
Figure 19 Header-compressed CS PDU format with header suppression

5.2.7.2 IP-Header-compressed classifiers

IP-Header-compressed classifiers operate on the context fields of the ROHC- and EC RTP-compressed packets. The Compressed IP header parameters

(11.13.19.3.4.16, 11.13.19.3.4.18) may be used in IP-Header-Compressed classifiers.

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Add new paragraph to the end of section 5.2.4.2:

For IP-header compressed IP over IEEE 802.3/ethernet, IP header compression and VLAN headers may be included in the classification. In this case the IEEE 802.1Q (11.13.19.3.4.11 - 11.13.19.3.4.12) and Compressed IP header (11.13.19.3.4.16, 11.13.19.3.4.18) classification parameters are allowed.

Add a new section 5.2.7:

5.2.7 IP-Header-compression-specific part

The Convergence sublayer supports SDUs in two formats that facilitate robust compression of IP and higher layer headers. These formats are ROHC (RFC 3095) and EC RTP (RFC 3545) and are referred to as the IP-header-compression CS PDU format.

5.2.7.1 IP-Header-compressed CS PDU format

IP-Header-compressed PDUs are mapped to MAC SDUs according to Figure 18 (when header suppression is enabled at the connection, but not applied to the CS PDU) or Figure 19 (with header suppression).

+-----+



Figure 18 Header-compressed CS PDU format without header suppression



Figure 19 Header-compressed CS PDU format with header suppression

5.2.7.2 IP-Header-compressed classifiers
 IP-Header-compressed classifiers operate on the context fields of the ROHC- and EC RTP-compressed packets. The Compressed IP header parameters (11.13.19.3.4.16, 11.13.19.3.4.18) may be used in IP-Header-Compressed classifiers.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6312**Comment submitted by: **Jeff****Mandin****Member****2005/07/14**Comment Type **Technical, Non-binding** Starting Page # **524** Starting Line # **55**Fig/Table# Section **11.7.7.1**

There needs to be some descriptive text to give references for ROHC and EC RTP

Suggested Remedy

Add new section:

5.2.7 CS Support for IP Header Compression

The 802.16e Convergence sublayer supports SDUs in two formats that facilitate robust compression of IP and higher layer headers. These formats are ROHC (RFC 3095) and EC RTP (RFC 3545).

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: **Superseded******Reason for Group's Decision/Resolution****See 6311****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** **1) none needed****Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6313**

Comment submitted by: David

Castelow

Member

2005/07/14

Comment Type Technical, Satisfied (was Starting Page # **524** Starting Line # **60**

Fig/Table# Section **11.7.7.1**

The statement, page 524, line 60:

When the length of the TLV is 2 bytes, it indicates that bits 16-31 are zero.

is inconsistent with the table on page 525, where the length is clearly stated to be 2 bytes.

Suggested Remedy

Page 525, line 7:

| 7 | 2 or 4 | Bit #0: ATM | REG-REQ |

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Page 525, line 7:

| 7 | 2 or 4 | Bit #0: ATM | REG-REQ |

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Page 525, line 7:

| 7 | 2 or 4 | Bit #0: ATM | REG-REQ |

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6314**

Comment submitted by: Yerang

Hur

Other

2005/07/14

Comment Type **Technical non-binding** Starting Page # **525** Starting Line #

Fig/Table#

Section **11.7**

The same type number is used in REG-REQ/RSP management message encodings.

Suggested Remedy

Adopt changes in C80216e-05_329.

Proposed Resolution Recommendation: **Accepted-Modified**

Recommendation by

Adopt changes in C80216e-05_329r2.

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Adopt changes in C80216e-05_329r2.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6315**

Comment submitted by: Mark

Cudak

Member

2005/07/14

Comment Type **Technical, Non-binding**

Starting Page # **525**

Starting Line # **7**

Fig/Table#

Section

11.7.7.1

The length field of the TLV was not changed during implementation of accepted comment from BRC.

Suggested Remedy

Change length field of TLV as follows:

"~~24~~"

Proposed Resolution

Recommendation: **Accepted-Modified**

Recommendation by

Change the sentence above the table as indicated:

"When the length field of the TLV is ~~2~~ bytes, it indicates that bits 16-31 are zero."

Change the length field of the TLV as indicated:

"2 or 4"

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Change the sentence above the table as indicated:

"When the length field of the TLV is ~~2~~ bytes, it indicates that bits 16-31 are zero."

Change the length field of the TLV as indicated:

"2 or 4"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6316**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	526	Starting Line #	44	Fig/Table#	Section	11.7.8.13
---------	------	------------------------	-----------------	-----	-----------------	----	------------	---------	-----------

I object to the resolution of the comment 5401. In the previous BRC meeting, the maximum number of bursts transmitted concurrently to an MS is set to be negotiable between BS and MS (pp. 264~265, D9). However, when the max number of concurrent bursts is set to be a low value (e.g. '1'), it causes serious problems:

- Significantly limits the flexibility of BS scheduler: BS has no way but to allow MS with single burst capability on negotiation. Then, no bursts for other MS can reside on the same OFDMA symbol(s)
- Results in reduction of cell throughput and poor QoS support. Resource wastes bound to happen. Virtually depriving BS scheduler of capability to manipulate efficient frequency and power allocation which would increase spectral efficiency
- Weakens overall competitiveness of the standard
- By allowing single burst MS, OFDMA systems can be converted into OFDM ones

Yet, the intention of this comment's commenter was really 'that the definition of the concurrent bursts to an MS is the bursts directed only to it or broadcast ones.' This negotiation process that this comment proposes may be fine. However, in case of the DL/UL MAP not specifying the CIDs of the burst, if the definition of the number of maximum concurrent bursts means MS's capability of how many burst an MS can decode from a single time instance. Its range of the maximum concurrent bursts is too wide. And the problems expressed above will really happen.

Hence, I propose to change the min number of the negotiable range to a reasonable value (i.e. change '1' to '10'). Or, the definition of the maximum concurrent bursts should be clarified and defined as the ones directed only to it or broadcast ones even in case of the MAP not specifying the CIDs.

Suggested Remedy

Change the minimum of the negotiable range:

Valid Value: ~~1~~0-16

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

Rejected at the request of the commenter.

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

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6317**Comment submitted by: **Mark****Cudak**

Member

2005/07/14

Comment	Type	Starting Page #	Starting Line #	Fig/Table#	Section
Add scope to SAID update encoding	Technical, Non-binding	530	61		11.7.17

Suggested Remedy

Add column named "Scope" with value "REG-RSP"

Proposed Resolution

Recommendation: **Accepted-Modified**

Recommendation by

Add column named "Scope" with value "REG-RSP, RNG-RSP"

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Add column named "Scope" with value "REG-RSP, RNG-RSP"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6318**

Comment submitted by: **Panyuh**

Joo

Member

2005/07/14

Comment Type **Editorial**

Starting Page # **534**

Starting Line # **26**

Fig/Table#

Section **11.7.24**

Suggested Remedy

Replace "RNG-REQ/RSP" with "REG-REQ/RSP"

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Replace "RNG-REQ/RSP" with "REG-REQ/RSP"

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Replace "RNG-REQ/RSP" with "REG-REQ/RSP"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6319**

Comment submitted by: **Mark**

Cudak

Member

2005/07/14

Comment Type **Editorial**

Starting Page # **534**

Starting Line # **59**

Fig/Table#

Section **11.7.25**

Wrong editorial instruction

Suggested Remedy

Change as follows:

"[Add new subclause 11.7.2~~4~~5:]"

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Change as follows:

"[Add new subclause 11.7.2~~4~~5:]"

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change as follows:

"[Add new subclause 11.7.2~~4~~5:]"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

2005/08/12

IEEE 802.16-045r4

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6320**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **535** Starting Line #

Fig/Table# Section **11.8.4.2**

I object to the resolution of the EAP-in-EAP mode of authentication in the BRC meeting.

Suggested Remedy

Adopt the contribution C802.16e-05/344

Proposed Resolution Recommendation: **Accepted-Modified** Recommendation by

Adopt the contribution C802.16e-05/344r2

Reason for Recommendation

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

Adopt the contribution C802.16e-05/344r2

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6321**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	535	Starting Line #	Fig/Table#	Section	11.8.4.2
---------	------	------------------------	-----------------	-----	-----------------	------------	---------	----------

The authorization policy support can not support all possible types of authentication capabilities that MS can support.

Suggested Remedy

adopt the contribution C802.16e-05/345

Proposed Resolution Recommendation: **Accepted-Modified**

Recommendation by

adopt the contribution C802.16e-05/345r1

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

adopt the contribution C802.16e-05/345r1

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

Editor's Actions k) done

Original version of C802.16e-05/345r1 did not render properly. A clean copy (C802.16e-05/345r2) was obtained from the contributor and adopted. There were no technical differences between the two revisions, only editorial/cosmetic.

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6322**

Comment submitted by: Jaehwan

Chang

Other

2005/07/14

Comment Type **Editorial** Starting Page # **537** Starting Line # **44**

Fig/Table#

Section **11.8.3.7.3**

This TLV 153 exists in the base document, so there is no need for this to exist in 16e draft.

Suggested Remedy

[Delete lines 44-46 or the row in the table with TLV type 153 from text.]

Proposed ResolutionRecommendation: **Accepted**

Recommendation by

[Delete lines 44-46 or the row in the table with TLV type 153 from text.]

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

[Delete lines 44-46 or the row in the table with TLV type 153 from text.]

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6323**

Comment submitted by: Jaehwan

Chang

Other

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **541** Starting Line # **19** Fig/Table# Section **11.8.3.7.11**

The maximum number of DL HARQ bursts per frame capability does not exist while the same exists for UL HARQ. We propose to add it to the existing TLV for the maximum number of UL HARQ bursts capability.

Suggested Remedy

[Modify the value field as indicated from]

Maximum number of burst per HARQ enabled SS in one UL sub frame. 0 = unlimited (default)

[to]

[Bits #3-#0](#): Maximum number of [HARQ](#) bursts per HARQ enabled [MS](#) in one UL subframe. 0 = unlimited (Default is [1](#).)

[Bits #7-#4](#): Maximum number of HARQ bursts per HARQ enabled [MS](#) in one DL subframe. 0 = unlimited (Default is [1](#).)

Proposed ResolutionRecommendation: **Accepted-Modified**

Recommendation by

[Modify the value field as indicated from]

Maximum number of burst per HARQ enabled SS in one UL sub frame. 0 = unlimited (default)

[to]

Bit #3: Indicates whether the maximum number of UL HARQ bursts per frame (i.e. Bits #2-0) includes the one Non-HARQ burst. (0 = not included, default)

Bits #2-0: Maximum number of UL HARQ bursts per HARQ enabled MS per frame. (0b000 = one, default)

Bits #7-4: Maximum number of DL HARQ bursts per HARQ enabled MS per frame. (0b0000 = one, default)

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

[Modify the value field as indicated from]

Maximum number of burst per HARQ enabled SS in one UL sub frame. 0 = unlimited (default)

[to]

Bit #3: Indicates whether the maximum number of UL HARQ bursts per frame (i.e. Bits #2-0) includes the one Non-HARQ burst. (0 = not included, default)

Bits #2-0: Maximum number of UL HARQ bursts per HARQ enabled MS per frame. (0b000 = one, default)

Bits #7-4: Maximum number of DL HARQ bursts per HARQ enabled MS per frame. (0b0000 = one, default)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6324**Comment submitted by: **Bin-Chul****lhm****Other****2005/07/14**

Comment Type **Technical, Non-binding** Starting Page # **542** Starting Line # Fig/Table# Section **11.8.3.7.13**

Clarify the "capability of SS modulator for uplink MIMO support" in OFDMA.

Suggested Remedy

[Modify the table in line 9~19 of page 542, section 11.8.3.7.13]

11.8.3.7.13 OFDMA SS Modulator for MIMO Support

The 'OFDMA SS Modulator for MIMO Support' field indicates the MIMO capability of OFDMA SS modulator. A bit value of 0 indicates "not supported" while 1 indicates "supported".

Type	Length	Value	Scope
177	1	Bit #0: Two transmit antenna Bit #1: Capable of transmit diversity Bit #2: Capable of spatial multiplexing Bit #3: Capable of beamforming Bit #4: Capable of adaptive rate control Bit #5: Capable of single-antenna collaborative SM Bit #6: Capable of two-antenna collaborative SM Bit #5 -#7: reserved (shall be set to 0)	SBC-REQ (see 6.3.2.3.23) SBC-RSP (see 6.3.2.3.24)

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

[Modify the table in line 9~19 of page 542, section 11.8.3.7.13]

11.8.3.7.13 OFDMA SS Modulator for MIMO Support

The 'OFDMA SS Modulator for MIMO Support' field indicates the MIMO capability of OFDMA SS modulator. A bit value of 0 indicates "not supported" while 1 indicates "supported".

Type	Length	Value	Scope
177	1	Bit #0: Two transmit antenna Bit #1: Capable of transmit diversity Bit #2: Capable of spatial multiplexing Bit #3: Capable of beamforming Bit #4: Capable of adaptive rate control Bit #5: Capable of single-antenna collaborative SM	SBC-REQ (see 6.3.2.3.23) SBC-RSP (see 6.3.2.3.24)

Bit #5: Capable of single-antenna collaborative SM |

Bit #6: Capable of two-antenna collaborative SM |

Bit ~~#5~~-#7: reserved (shall be set to 0) |

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

[Modify the table in line 9~19 of page 542, section 11.8.3.7.13]

11.8.3.7.13 OFDMA SS Modulator for MIMO Support

The 'OFDMA SS Modulator for MIMO Support' field indicates the MIMO capability of OFDMA SS modulator. A bit value of 0 indicates "not supported" while 1 indicates "supported".

Type	Length	Value	Scope
177	1	Bit #0: Two transmit antenna Bit #1: Capable of transmit diversity Bit #2: Capable of spatial multiplexing Bit #3: Capable of beamforming Bit #4: Capable of adaptive rate control <u>Bit #5: Capable of single-antenna collaborative SM</u> <u>Bit #6: Capable of two-antenna collaborative SM</u> Bit #5 -#7: reserved (shall be set to 0)	SBC-REQ (see 6.3.2.3.23) SBC-RSP (see 6.3.2.3.24)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6325**Comment submitted by: **Mark****Cudak****Member****2005/07/14**

Comment Type **Editorial** Starting Page # **542** Starting Line # **37** Fig/Table# Section **11.8.3.7.15**
Sections 11.8.3.7.15 and 11.8.3.7.16 have the same topic and almost the same content. Probably an editorial error. Since 11.8.3.7.16 seems to be more complete, suggest to remove 11.8.3.7.15

Suggested Remedy

Remove section 11.8.3.7.15 and all of its contents

Proposed Resolution Recommendation: Accepted**Recommendation by**

Remove section 11.8.3.7.15 and all of its contents

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

Remove section 11.8.3.7.15 and all of its contents

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

This subclause was moved to 11.8.8.

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6326**

Comment submitted by: **Mark**

Cudak

Member

2005/07/14

Comment Type **Editorial**

Starting Page # **542**

Starting Line # **37**

Fig/Table#

Section **11.8.3.7.15**

Section 11.8.3.7.16 was correctly added, but section 11.8.3.7.15 referring to the same topic was also retained

Suggested Remedy

Remove section 11.8.3.7.15

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Duplicate**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6327**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type Editorial Starting Page # 542 Starting Line # 37 Fig/Table# Section 11.8.3.7.15

Some part from contribution C802.16e-05/219r2 associated with accepted comment #5611 was not reflected to current draft D9.

Suggested Remedy

Change section 11.8.3.7.15 as following :

11.8.3.7.15 Association type support

The Association type support field indicates the association level supported by the MS or the BS.

Type	Length	Value	Scope
167	1	Bit#0 : level0 : Scanning or association without coordination Bit#1 : level1 : association with coordination Bit#2 : level2 : NW assisted association reporting Bit#3 : <u>Directed association support</u> Bit#4 - Bit#7 : 4-255 reserved	SBC-REQ(see6.3.2.3.23) SBC-REQ(see6.3.2.3.23)

~~The highest level supported shall be indicated~~

If a bit is set to "1", then MS or BS indicates support at the respective association type and level. The MS may associate according to arrangements by the BS at levels up to and including the one for which the MS has indicated support.

Proposed ResolutionRecommendation: **Accepted-Modified**

Recommendation by

Change section 11.8.3.7.16 as following :

11.8.3.7.16 Association type support

The Association type support field indicates the association level supported by the MS or the BS.

Type	Length	Value	Scope
167	1	Bit#0 : <u>Scanning without Association: Association not supported</u> Bit#1 : Association level0 : Scanning or association without coordination Bit#2 : Association level1 : association with coordination Bit#3 : Association level2 : NW assisted association reporting Bit#4 : <u>Directed association support</u> Bit#5 - Bit#7 : 4-255 reserved	SBC-REQ(see6.3.2.3.23) SBC-REQ(see6.3.2.3.24)

~~The highest level supported shall be indicated~~

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

Change section 11.8.3.7.16 as following :

11.8.3.7.16 Association type support

The Association type support field indicates the association level supported by the MS or the BS.

Type	Length	Value	Scope
167	1	<u>Bit#0 : Scanning without Association: Association not supported</u> Bit#1 : Association level0 : Scanning or association without coordination Bit#2 : Association level1 : association with coordination Bit#3 : Association level2 : NW assisted association reporting <u>Bit#4 : Directed association support</u> <u>Bit#5 - Bit#7 : 4-255-reserved</u>	SBC-REQ(see6.3.2.3.23) SBC-REQ(see6.3.2.3.24)

~~The highest level supported shall be indicated~~**Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes** **Editor's Actions**) none needed

This subclause was moved to 11.8.8 with edits. Please re-examine.

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6328**

Comment submitted by: Mark

Cudak

Member

2005/07/14

Comment Type **Editorial**

Starting Page # **543** Starting Line # **7**

Fig/Table# Section **11.8.3.7.16**

Table format inconsistent with contribution number 219r2 "Additional Scan Measurement Metric, Triggers and Reporting Modes" (comment #5611) accepted in 15 June BRC meeting

- 1. Bit 3 omitted
- 2. Byte should be interpreted as bitmap

Suggested Remedy

Replace the text in the "Value" column of the table in section 11.8.3.7.16 with the following text:

- Bit# 0: Level 0 - Scanning or association without coordination
- Bit# 1: Level 1 - Association with coordination
- Bit# 2: Level 2 - NW assisted association reporting
- Bit# 3: Directed association support
- Bit#4 - Bit#7: reserved

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

See [6327](#)

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6329**

Comment submitted by: **Bin-Chul**

lhm

Other

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **543** Starting Line # **32** Fig/Table# Section **11.8.3.7.17**

Default downlink/uplink burst profiles does not need the capability negotiation since these are mandatory.

Suggested Remedy

[Modify the table in line 32~43, page 543, section 11.8.3.7.17]

Type	Length	Value	Scope
179	1	Bit#0: Default Downlink Burst Profile (Table 301) Bit#10: Downlink burst profile for multiple FEC types (Table 3014a) Bit#2: Default Uplink Burst Profile (Table 302) Bit#31: Uplink burst profile for multiple FEC types (Table 302a4b) Bit#42~7: reserved (shall be set to 0)	SBC-REQ (see 6.3.2.3.23) SBC-RSP (see 6.3.2.3.24)

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

[Modify the table in line 32~43, page 543, section 11.8.3.7.17]

Type	Length	Value	Scope
179	1	Bit#0: Default Downlink Burst Profile (Table 301) Bit#10: Downlink burst profile for multiple FEC types (Table 3014a) Bit#2: Default Uplink Burst Profile (Table 302) Bit#31: Uplink burst profile for multiple FEC types (Table 302a4b) Bit#42~7: reserved (shall be set to 0)	SBC-REQ (see 6.3.2.3.23) SBC-RSP (see 6.3.2.3.24)

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

[Modify the table in line 32~43, page 543, section 11.8.3.7.17]

Type	Length	Value	Scope
179	1	Bit#0: Default Downlink Burst Profile (Table 301) Bit#10: Downlink burst profile for multiple FEC types (Table 301a) Bit#2: Default Uplink Burst Profile (Table 302) Bit#31: Uplink burst profile for multiple FEC types (Table 302a4b) Bit#42~7: reserved (shall be set to 0)	SBC-REQ (see 6.3.2.3.23) SBC-RSP (see 6.3.2.3.24)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6330**

Comment submitted by: Bin-Chul

Ihm

Other

2005/07/14

Comment	Type Editorial	Starting Page # 543	Starting Line # 44	Fig/Table#	Section 11.8.3.7.17
---------	-----------------------	----------------------------	---------------------------	------------	----------------------------

The paragraph below the table in 11.8.3.7.17 was copied from 11.8.3.7.16 by editorial mistake.

Suggested Remedy

[Remove the texts between line 44 and 51 in page 543, section 11.8.3.7.17]

~~If a bit is set to "1", then MS or BS indicates support at the respective association type and level. The MS may associate according to arrangements by the BS at levels up to and including the one for which the MS has indicated support. The highest level supported shall be indicated.~~

Proposed ResolutionRecommendation: **Accepted**

Recommendation by

[Remove the texts between line 44 and 51 in page 543, section 11.8.3.7.17]

~~If a bit is set to "1", then MS or BS indicates support at the respective association type and level. The MS may associate according to arrangements by the BS at levels up to and including the one for which the MS has indicated support. The highest level supported shall be indicated.~~

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

[Remove the texts between line 44 and 51 in page 543, section 11.8.3.7.17]

~~If a bit is set to "1", then MS or BS indicates support at the respective association type and level. The MS may associate according to arrangements by the BS at levels up to and including the one for which the MS has indicated support. The highest level supported shall be indicated.~~

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

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6331**

Comment submitted by: [Jose](#)

[Puthenkulam](#)

Member

[2005/07/14](#)

Comment Type [Editorial](#)

Starting Page # [545](#)

Starting Line # [26](#)

Fig/Table#

Section [11.8.4](#)

[Missing Table "number" in cross reference](#)

Suggested Remedy

[In page 524, line 26, change "in Table xxx" to "below"](#)

Proposed Resolution

Recommendation: **Accepted-Modified**

Recommendation by

[In page 545, line 26, change "in Table xxx" to "below"](#)

[Change "Attribute" to "Sub-attribute" in the table](#)

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

[In page 545, line 26, change "in Table xxx" to "below"](#)

[Change "Attribute" to "Sub-attribute" in the table](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6332**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	546	Starting Line #	Fig/Table#	Section	11.8.4.2
---------	------	------------------------	-----------------	-----	-----------------	------------	---------	----------

During SBC negotiation in PKMv2, the authorization policy support TLV may represent "no authorization" when the bit #0, #1, and #2 are all set to zero. However, there is no text that explains the operation of MS and BS for this case.

If "no authorization" is selected, MS and BS shall perform neither SA-TEK handshake nor TEK exchange procedure. Without SA-TEK handshake, SAID could not be defined and therefore the target SAID service encoding in DSA-REQ/RSP messages could not be defined. If we need a value used for the target SAID in "no authorization" case, we propose to use a "Null SAID" defined as 0xffff.

Suggested Remedy

[insert the following text at the end of section 11.8.4.2:]

If MS and BS decide "No authorization" as their authorization policy, MS and BS shall perform neither SA-TEK handshake nor TEK exchange procedure.

[insert the following text at the end of section 11.9.7, page 552 line 2:]

Null SAID shall used when "No authorization" is applied. The value of Null SAID is 0xffff.

[insert the following paragraph to the section 7.2.2.1, page 211, line 1:]

If MS and BS decide "No authorization" as their authorization policy, MS and BS shall perform neither SA-TEK handshake nor Key Request/Key Reply handshake. In this case, target SAID value which may be included in DSA-REQ/RSP messages shall be Null SAID.

[insert the following paragraph to the section 7.2.2.3. page 218, line 25:]

If MS and BS decide "No authorization" as their authorization policy, they don't have any security association. In this case, Null SAID shall be used as the target SAID field in DSA-REQ/RSP messages.

Proposed Resolution**Recommendation: Accepted-Modified****Recommendation by**

[insert the following text at the end of section 11.8.4.2:]

If MS and BS decide "No authorization" as their authorization policy, MS and BS shall perform neither SA-TEK handshake nor TEK exchange procedure.

[insert the following text at the end of section 11.9.7, page 552 line 2:]

Null SAID shall used when "No authorization" is applied. The value of Null SAID is 0xffff.

[insert the following paragraph to the section 7.2.2.1, page 211, line 1:]

If MS and BS decide "No authorization" as their authorization policy, MS and BS shall perform neither SA-TEK handshake nor Key Request/Key Reply handshake. In this case, target SAID value which may be included in DSA-REQ/RSP messages shall be Null SAID.

[insert the following paragraph to the section 7.2.2.3. page 218, line 25:]

If MS and BS decide "No authorization" as their authorization policy, they don't have any security association. In this case, Null SAID shall be used as the target SAID field in DSA-REQ/RSP messages.

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

[insert the following text at the end of section 11.8.4.2:]

If MS and BS decide "No authorization" as their authorization policy, MS and BS shall perform neither SA-TEK handshake nor TEK exchange procedure.

[insert the following text at the end of section 11.9.7, page 552 line 2:]

Null SAID shall used when "No authorization" is applied. The value of Null SAID is 0xffff.

[insert the following paragraph to the section 7.2.2.1, page 211, line 1:]

If MS and BS decide "No authorization" as their authorization policy, MS and BS shall perform neither SA-TEK handshake nor Key Request/Key Reply handshake. In this case, target SAID value which may be included in DSA-REQ/RSP messages shall be Null SAID.

[insert the following paragraph to the section 7.2.2.3. page 218, line 25:]

If MS and BS decide "No authorization" as their authorization policy, they don't have any security association. In this case, Null SAID shall be used as the target SAID field in DSA-REQ/RSP messages.

Reason for Group's Decision/Resolution

Vote: 25-1

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6333**Comment submitted by: **Seokheon****Cho**

Other

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **549** Starting Line # **23** Fig/Table# Section **11.9**

The corresponding commentary (#5144) was already accepted.
But, some parts of contribution #278 and resolution results are not fully applied in the P802.16e/D9.

Suggested Remedy

1. *[Apply whole contents from page 5 to page 8 in contribution #278.]*

2. *[Section 11.9.30 Key Push Modes, in contribution #278]*

2.1. *[Modify the second table first row with:]*

Key Sequence Number | ~~Yes~~ **AK Sequence Number** | ~~No~~ **GKEK Sequence Number**.

2.2 *[In text below the second table, modify:]*

~~AK's~~ Key-Sequence-Number, GSAID, Key Push Modes, ...

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

1. *[Apply whole contents from page 5 to page 8 in contribution #278.]*

2. *[Section 11.9.30 Key Push Modes, in contribution #278]*

2.1. *[Modify the second table first row with:]*

Key Sequence Number | ~~Yes~~ **AK Sequence Number** | ~~No~~ **GKEK Sequence Number**.

2.2 *[In text below the second table, modify:]*

~~AK's~~ Key-Sequence-Number, GSAID, Key Push Modes, ...

Reason for Group's Decision/Resolution

2005/08/12

IEEE 802.16-045r4

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6334**

Comment submitted by: Jose

Puthenkulam

Member

2005/07/14

Comment Type **Editorial** Starting Page # **551** Starting Line # **47**

Fig/Table# Section **11.9.6.1**

Missing cross reference number and TLV type value assignment

Suggested Remedy

In page 551 make the following changes.

In line 47, Change "section xx" with "section 11.1.2.3"

In line 54, in the Type column replace "x" with "11"

In line 55, in the Length column, replace "described in x" with "described in section 11.1.2.3"

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

In page 551 make the following changes.

In line 47, Change "section xx" with "section 11.1.2.3"

In line 54, in the Type column replace "x" with "11"

In line 55, in the Length column, replace "described in x" with "described in section 11.1.2.3"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6335**

Comment submitted by: **Seokheon**

Cho

Other

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **555** Starting Line # **8** Fig/Table# Section **11.9.18**

It needs to redefine the SA type field, because Group SA and MBS SA is sub-SA of Static SA or Dynamic SA.

Suggested Remedy

Adopt the contribution C802.16e-05/342.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

Adopt the contribution C802.16e-05/342r2

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6336**

Comment submitted by: **Panyuh**

Joo

Member

2005/07/14

Comment Type **Editorial**

Starting Page # **556**

Starting Line # **55**

Fig/Table#

Section **11.9.24**

PAK sequence number uses "Key Sequence Number" attribute. So we don't have to have "PAK sequence number" attribute.

Suggested Remedy

Delete section 11.9.24

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Delete section 11.9.24

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

2005/08/12

IEEE 802.16-045r4

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6337**

Comment submitted by: [Jeff](#)

[Mandin](#)

Member

2005/07/14

Comment Type [Technical, Non-binding](#) Starting Page # [558](#) Starting Line # [16](#) Fig/Table# [381a](#) Section [11.9.28](#)

Unfortunately, there is still inconsistency and redundancy in the use of CMAC/HMAC tuple vs. CMAC/HMAC digest.

Among other things:

- the counter field appears in CMAC digest, and then there is another counter field in the CMAC tuple which itself includes the CMAC digest

Suggested Remedy

Adopt contribution [C80216e-05_322](#) ("Clarifications on MAC Tuple and MAC digest")

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

[No such contribution.](#)

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6338**

Comment submitted by: Panyuh

Joo

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **561** Starting Line # **35** Fig/Table# Section **11**
PKM configuration settings for PKMv2 are not defined.

Suggested Remedy

[Add the following subsection to the end of section 11.9]

11.9.36 PKMv2 configuration settings

This field defines the parameters associated with PKMv2 operation. It is composed of a number of encapsulated TLV fields

Type	Length	Value	Scope
46	Variable	compound	SA-TEK-Response

The compound attributes of PKMv1 can be reused

[Add the following row right before the row of CMAC/HMAC Tuple in table 37i, section 6.3.2.3.9.20 in page 52:]

<u>PKMv2 configuration settings</u>	<u>PKMv2 configuration defined in 11.9.36</u>
-------------------------------------	---

Proposed Resolution

Recommendation:

Recommendation by

[Add the following subsection to the end of section 11.9]

11.9.19 PKM configuration settings

This field defines the parameters associated with PKM and PKMv2 operation. It is composed of a number of encapsulated TLV fields

Type	Length	Value (compound)	Scope
27	Variable		Auth Reply, <u>PKMv2 SA-TEK-response</u>

[Add the following row right before the row of CMAC/HMAC Tuple in table 37i, section 6.3.2.3.9.20 in page 52:]

PKM configuration settings	PKMv2 configuration defined in 11.9.19
--	--

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

[Add the following subsection to the end of section 11.9]

11.9.19 PKM configuration settings

This field defines the parameters associated with PKM and PKMv2 operation. It is composed of a number of encapsulated TLV fields

Type	Length	Value (compound)	Scope
27	Variable		Auth Reply, <u>PKMv2 SA-TEK-response</u>

[Add the following row right before the row of CMAC/HMAC Tuple in table 37i, section 6.3.2.3.9.20 in page 52:]

PKM configuration settings	PKMv2 configuration defined in 11.9.19
--	--

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

2005/08/12

IEEE 802.16-045r4

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6339**

Comment submitted by: Jungnam

Yun

Other

2005/07/14

Comment Type **editorial** Starting Page # **561** Starting Line # **50**

Fig/Table# Section **11.11**

There is no activity related with 'sounding' using REQ-REQ message.

Suggested Remedy

Sounding --> reserved

Proposed Resolution

Recommendation: **Accepted-Modified**

Recommendation by

In the table in 11.12, change as indicated:

"10 | Band AMC Report", ~~2.54~~ 2.4

Restore the deleted REP-RSP TLV for sounding **with type 2.5**.

Correct reference as indicated: ~~8.4.10.3~~ 8.4.11.3

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

In the table in 11.12, change as indicated:

"10 | Band AMC Report", ~~2.54~~ 2.4

Restore the deleted REP-RSP TLV for sounding **with type 2.5**.

Correct reference as indicated: ~~8.4.10.3~~ 8.4.11.3

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6340**

Comment submitted by: Jeff

Mandin

Member

2005/07/14

Comment Type Technical, Non-binding Starting Page # 565 Starting Line # 24 Fig/Table# Section 11.13.19.1

Service providers have been remarking that there are too many choices for Convergence Sublayer type and that a smaller number can provide precisely equivalent functionality.

This large number of choices is daunting and interferes with attempts at profiling.

Suggested Remedy

Modify table in page 565 line 24

10: Packet, 802.3/ethernet¹ with ROHC header compression

11: Packet, 802.3/ethernet¹ with ECRTTP header compression

12: Packet, IP² with ROHC header compression

13: Packet, IP² with ECRTTP header compression

¹ Classifiers for 802.1Q VLAN tags may applied to service flows of this CS type

² SDUs for service flows of this CS type may carry either IPv4 or IPv6 in the header-compressed payload

10: Packet, IPv4 with header compression (ROHC)

11: Packet, IPv4 with header compression (ECRTTP)

12: Packet, IPv6 with header compression (ROHC)

13: Packet, IPv6 with header compression (ECRTTP)

14: Packet, IPv4 over 802.3/Ethernet with header compression (ROHC)

15: Packet, IPv4 over 802.3/Ethernet with header compression (ECRTTP)

16: Packet, IPv6 over 802.3/Ethernet with header compression (ROHC)

17: Packet, IPv6 over 802.3/Ethernet with header compression (ECRTTP)

18: Packet, IPv4 over 802.1Q VLAN with header compression (ROHC)

19: Packet, IPv4 over 802.1Q VLAN with header compression (ECRTTP)

20: Packet, IPv6 over 802.1Q VLAN with header compression (ROHC)

21: Packet, IPv6 over 802.1Q VLAN with header compression (ECRTTP)

2. Modify page 525 line 17

Bit 9: Packet, 802.3/ethernet (with optional 802.1Q VLAN tags) and ROHC header compression

Bit 10: Packet, 802.3/ethernet (with optional 802.1Q VLAN tags) and ECRTTP header compression

Bit 11: Packet, IP (v4 or v6) with ROHC header compression

Bit 12: Packet, IP (v4 or v6) with ECRTTP header compression

Bit #9: Packet, IPv4 with header compression (ROHC)

Bit #10: Packet, IPv4 with header compression (ECRTTP)

Bit #11: Packet, IPv6 with header compression (ROHC)

Bit #12: Packet, IPv6 with header compression (ECRTTP)

Bit #13: Packet, IPv4 over 802.3/Ethernet with header compression (ROHC)

~~Bit #14: Packet, IPv4 over 802.3/Ethernet with header compression (ECRTP)~~
~~Bit #15: Packet, IPv6 over 802.3/Ethernet with header compression (ROHC)~~
~~Bit #16: Packet, IPv6 over 802.3/Ethernet with header compression (ECRTP)~~
~~Bit #17: Packet, IPv4 over 802.1Q VLAN with header compression (ROHC)~~
~~Bit #18: Packet, IPv4 over 802.1Q VLAN with header compression (ECRTP)~~
~~Bit #19: Packet, IPv6 over 802.1Q VLAN with header compression (ROHC)~~
~~Bit #20: Packet, IPv6 over 802.1Q VLAN with header compression (ECRTP)~~

Proposed Resolution **Recommendation: Accepted-Modified** **Recommendation by**
 Modify table in page 565 line 24:

10: Packet, 802.3/ethernet¹ with ROHC header compression
 11: Packet, 802.3/ethernet¹ with ECRTP header compression
 12: Packet, IP² with ROHC header compression
 13: Packet, IP² with ECRTP header compression

¹ Classifiers for 802.1Q VLAN tags may applied to service flows of this CS type

² SDUs for service flows of this CS type may carry either IPv4 or IPv6 in the header-compressed payload

~~10: Packet, IPv4 with header compression (ROHC)~~
~~11: Packet, IPv4 with header compression (ECRTP)~~
~~12: Packet, IPv6 with header compression (ROHC)~~
~~13: Packet, IPv6 with header compression (ECRTP)~~
~~14: Packet, IPv4 over 802.3/Ethernet with header compression (ROHC)~~
~~15: Packet, IPv4 over 802.3/Ethernet with header compression (ECRTP)~~
~~16: Packet, IPv6 over 802.3/Ethernet with header compression (ROHC)~~
~~17: Packet, IPv6 over 802.3/Ethernet with header compression (ECRTP)~~
~~18: Packet, IPv4 over 802.1Q VLAN with header compression (ROHC)~~
~~19: Packet, IPv4 over 802.1Q VLAN with header compression (ECRTP)~~
~~20: Packet, IPv6 over 802.1Q VLAN with header compression (ROHC)~~
~~21: Packet, IPv6 over 802.1Q VLAN with header compression (ECRTP)~~

Modify page 525 line 17:

Bit 9: Packet, 802.3/ethernet (with optional 802.1Q VLAN tags) and ROHC header compression
 Bit 10: Packet, 802.3/ethernet (with optional 802.1Q VLAN tags) and ECRTP header compression
 Bit 11: Packet, IP (v4 or v6) with ROHC header compression
 Bit 12: Packet, IP (v4 or v6) with ECRTP header compression

~~Bit #9: Packet, IPv4 with header compression (ROHC)~~
~~Bit #10: Packet, IPv4 with header compression (ECRTP)~~
~~Bit #11: Packet, IPv6 with header compression (ROHC)~~
~~Bit #12: Packet, IPv6 with header compression (ECRTP)~~
~~Bit #13: Packet, IPv4 over 802.3/Ethernet with header compression (ROHC)~~
~~Bit #14: Packet, IPv4 over 802.3/Ethernet with header compression (ECRTP)~~

~~Bit #15: Packet, IPv6 over 802.3/Ethernet with header compression (ROHC)~~
~~Bit #16: Packet, IPv6 over 802.3/Ethernet with header compression (ECRTP)~~
~~Bit #17: Packet, IPv4 over 802.1Q VLAN with header compression (ROHC)~~
~~Bit #18: Packet, IPv4 over 802.1Q VLAN with header compression (ECRTP)~~
~~Bit #19: Packet, IPv6 over 802.1Q VLAN with header compression (ROHC)~~
~~Bit #20: Packet, IPv6 over 802.1Q VLAN with header compression (ECRTP)~~

On page 566:

- Change line 26 (table entry 108) from "Packet, IPv4 with header compression (ROHC)"

to
"Packet, IP with ROHC header compression"

- Change line 30 (table entry 109) from "Packet, IPv4 with header compression (ECRTP)"

to
"Packet, IP with ECRTP header compression"

- delete table entries 110 and 111

- Change line 26 (table entry 112) from "Packet, IPv4 over 802.3/Ethernet with header compression (ROHC)"

to
"Packet, IP over 802.3/Ethernet with ROHC header compression"

- Change line 30 (table entry 113) from "Packet, IPv4 over 802.3/Ethernet with header compression (ECRTP)"

to
"Packet, IP over 802.3/Ethernet with ECRTP header compression"

- delete table entries 114-119

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Modify table in page 565 line 24:

- 10: Packet, 802.3/ethernet¹ with ROHC header compression
- 11: Packet, 802.3/ethernet¹ with ECRTP header compression
- 12: Packet, IP² with ROHC header compression
- 13: Packet, IP² with ECRTP header compression

¹ Classifiers for 802.1Q VLAN tags may applied to service flows of this CS type

² CPUs for service flows of this CS type may carry with an IPv4 or IPv6 in the header compressed packet

SDUS for service flows of this CS type may carry either IPv4 or IPv6 in the header-compressed payload

10: Packet, IPv4 with header compression (ROHC)
 11: Packet, IPv4 with header compression (ECRTP)
 12: Packet, IPv6 with header compression (ROHC)
 13: Packet, IPv6 with header compression (ECRTP)
 14: Packet, IPv4 over 802.3/Ethernet with header compression (ROHC)
 15: Packet, IPv4 over 802.3/Ethernet with header compression (ECRTP)
 16: Packet, IPv6 over 802.3/Ethernet with header compression (ROHC)
 17: Packet, IPv6 over 802.3/Ethernet with header compression (ECRTP)
 18: Packet, IPv4 over 802.1Q VLAN with header compression (ROHC)
 19: Packet, IPv4 over 802.1Q VLAN with header compression (ECRTP)
 20: Packet, IPv6 over 802.1Q VLAN with header compression (ROHC)
 21: Packet, IPv6 over 802.1Q VLAN with header compression (ECRTP)

Modify page 525 line 17:

Bit 9: Packet, 802.3/ethernet (with optional 802.1Q VLAN tags) and ROHC header compression
 Bit 10: Packet, 802.3/ethernet (with optional 802.1Q VLAN tags) and ECRTP header compression
 Bit 11: Packet, IP (v4 or v6) with ROHC header compression
 Bit 12: Packet, IP (v4 or v6) with ECRTP header compression

~~Bit #9: Packet, IPv4 with header compression (ROHC)
 Bit #10: Packet, IPv4 with header compression (ECRTP)
 Bit #11: Packet, IPv6 with header compression (ROHC)
 Bit #12: Packet, IPv6 with header compression (ECRTP)
 Bit #13: Packet, IPv4 over 802.3/Ethernet with header compression (ROHC)
 Bit #14: Packet, IPv4 over 802.3/Ethernet with header compression (ECRTP)
 Bit #15: Packet, IPv6 over 802.3/Ethernet with header compression (ROHC)
 Bit #16: Packet, IPv6 over 802.3/Ethernet with header compression (ECRTP)
 Bit #17: Packet, IPv4 over 802.1Q VLAN with header compression (ROHC)
 Bit #18: Packet, IPv4 over 802.1Q VLAN with header compression (ECRTP)
 Bit #19: Packet, IPv6 over 802.1Q VLAN with header compression (ROHC)~~

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6341**Comment submitted by: **Mark****Cudak****Member****2005/07/14**

Comment	Type	Starting Page #	Starting Line #	Fig/Table#	Section
Typo and wrong reference	Technical, Non-binding	567	16		11.13.19.3.4.17

Suggested Remedy

Change text on line 16 as follows:

"shell" --> "shall"

Change type on line 24 as follows:

"[145/146].cst.3.xx" --> "[145/146].cst.3.19"

Proposed Resolution Recommendation: Accepted**Recommendation by**

Change text on line 16 as follows:

"shell" --> "shall"

Change type on line 24 as follows:

"[145/146].cst.3.xx" --> "[145/146].cst.3.19"

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

Change text on line 16 as follows:

"shell" --> "shall"

Change type on line 24 as follows:

"[145/146].cst.3.xx" --> "[145/146].cst.3.19"

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6342**

Comment submitted by: **Mark**

Cudak

Member

2005/07/14

Comment Type **Editorial**

Starting Page # **567**

Starting Line # **35**

Fig/Table#

Section

11.13.19.3.4.18

Title of section is incorrect

Suggested Remedy

Change section title as follows:

"11.13.19.3.4.18 ~~Short-format Large~~ Context ID for ROHC- or ECRTP-compressed packet or ROHC feedback packet"

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Change section title as follows:

"11.13.19.3.4.18 ~~Short-format Large~~ Context ID for ROHC- or ECRTP-compressed packet or ROHC feedback packet"

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Change section title as follows:

"11.13.19.3.4.18 ~~Short-format Large~~ Context ID for ROHC- or ECRTP-compressed packet or ROHC feedback packet"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6343**

Comment submitted by: Vladimir

Yanover

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **572** Starting Line # **30** Fig/Table# Section **11.13.33**

Re: #5680

Section 11.13.33 "PDU SN extended subheader for HARQ reordering" is using term "PDU SN extended subheader" which seems to be a misspelling of "SDU SN extended subheader"

Suggested Remedy

Change all appearances of "PDU SN extended subheader" to "SDU SN extended subheader"

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: **Superceded******Reason for Group's Decision/Resolution**[See comment 6022](#)**Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6344**

Comment submitted by: **David**

James

Member

2005/07/14

Comment	Type Editorial	Starting Page # 589	Starting Line # 25	Fig/Table#	Section E.1.1.1.1
---------	-----------------------	----------------------------	---------------------------	------------	--------------------------

These rows of numbers would look much better if tab'd to line-up, which was done in a previous version.

Suggested Remedy

Restore the uniform tab'ing style to these number values.

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Restore the uniform tab'ing style to these number values.

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Restore the uniform tab'ing style to these number values.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6345**

Comment submitted by: David

James

Member

2005/07/14

Comment Type **Editorial**

Starting Page # **598**

Starting Line # **10**

Fig/Table#

Section **E.1.1.1.4**

This code would look much better if a fixed-width font were used and the text (to avoid wrapping) was presented in landscape, as was done previously.

Suggested Remedy

Use a fixed-width font and landscape presentation for all code.

Proposed Resolution

Recommendation: **Accepted-Modified**

Recommendation by

Use a fixed-width font for all code.
Correct indentation as required.

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Use a fixed-width font for all code.
Correct indentation as required.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6346**

Comment submitted by: **Rajesh**

Bhalla

Member

2005/07/14

Comment Type **Technical, Satisfied (was** Starting Page # **999** Starting Line # Fig/Table# Section **8.4**

The available code rates of LDPC and those of the other FEC types are inconsistent. The LDPC Code Rate of 5/6 is missing in the eisting document.

Suggested Remedy

Adopt Remedy from Contribution C802.16e-05/311.

Proposed Resolution Recommendation: **Accepted**

Recommendation by

Adopt Remedy from Contribution C802.16e-05/311.

Reason for Recommendation

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

Adopt Remedy from Contribution C802.16e-05/311.

Reason for Group's Decision/Resolution

Vote: 44-2

Group's Notes

Group's Action Items

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

Note that Table 357 and Table 363 were not correctly formatted to represent changes to the baseline document, and the numbers were not correctly assigned. I fixed that as well.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6347**

Comment submitted by: James R.

Frysinger

Coordination

2005/07/14

Comment	Type	Coordination	Starting Page #	999	Starting Line #	Fig/Table#	Section
---------	------	--------------	-----------------	-----	-----------------	------------	---------

Throughout the document, the unit symbol dBm is found. This is not defined in IEEE/ASTM SI 10 nor in IEEE Std 260.1; these define instead the unit decibel (dB). In fact, IEEE/ASTM SI 10 states in clause 3.5.5, "Attachments of letters to a unit symbol as a means of giving information about the nature of the quantity is incorrect." IEEE Std 260.1 states that reference levels are to be indicated in the text or as part of the quantity symbol, not as part of the unit symbol. The proper emendment would be to either provide annotated quantity symbols or to make a blanket statement that all levels are referenced to some particular value (perhaps 1 mV or perhaps 1 mW, but not both globally) and then to change all instances of dBm to dB.%%It is recognized that other SDOs may recognize the unit with symbol dBm but support for its use here ought to be made readily available to the reader. If the WG considers it absolutely essential, for the sake of harmony with standards from other SDOs to use dBm, then this document needs to define that symbol up front and not leave it to the reader to find the correct answer. It would be circular logic to aver that those who already "know the meaning" do not need this support since they already know the meaning. Those who do not know the answer probably also do not know where to find it on their own and they would find no help on that in IEEE/ASTM SI 10 or IEEE Std 260.1. Emend to change all instances of dBm to dB (preferred) or provide a local definition at the front of the document for dBm (acceptable).

Suggested Remedy

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

A dBm definition was inserted into the MAINT draft and therefore is not required in TGe

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

Editor's Actions |) none needed

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6348**

Comment submitted by: David

James

Member

2005/07/14

Comment	Type Editorial	Starting Page # 999	Starting Line # --	Fig/Table#	Section --
---------	-----------------------	----------------------------	---------------------------	------------	-------------------

A large number of editorial comments were accepted but not incorporated.

Suggested Remedy

Accept a revised copy, which has this fixed and has been checked by the editor to verify only-editorial changes.

Proposed Resolution

Recommendation: Accepted

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Reason for Group's Decision/Resolution

Group's Notes

No action necessary; the document source for D10 will be based on D9_Delta2.

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6349**Comment submitted by: **Byoung-Jo****Kim**

Member

2005/07/14

Comment	Type	Starting Page #	Starting Line #	Fig/Table#	Section
Although I feel my previous comment on the use of MS and SS in 802.16eD7/8 is largely satisfied, I would strongly recommend implementing Johnathan Labs' detailed remedy on the matter.	Editorial	999			

Suggested Remedy

Recommend Implementing Johnathan Labs' detailed remedy on the usage of the terms MS and SS.

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

The intent of the comment will be addressed and Jon Labs comment will be implemented as applicable.
Phil Barber has an action item to review and provide correct references

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6350**

Comment submitted by: Jeff

Mandin

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **51** Starting Line # **9**Fig/Table# **37g** Section **6.3.2.3.9.18**

In section 6.3.2.3.9.18, HMAC/CMAC tuple should be the last attribute in the included table.

Also it must be said that the MAC keys come from the indicated AK.

Also other cleanup is needed.

Suggested Remedy

Perform the following changes in the indicated order:

1. modify field description in line 16:

AKID of the AK (this is the AKID of the new AK in the case of reauthentication) ~~BS transmits newly assigned AKID.~~

2. Modify description field of page 50 line 18

Message integrity tuple for this message (*using the MAC key derived from the AK identified by AKID*)

3. Also, modify line 25:

The CMAC key sequence number/HMAC key sequence number included in the CMAC Tuple/HMAC Tuple should be equal to the newly assigned ~~RK~~*AK* sequence number.

4. Modify page 50, line 14:

- Move the "HMAC/CMAC tuple" table entry so that it is the bottom (ie. final, last) entry of table 37g.

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

Perform the following changes in the indicated order:

1. modify field description in line 16:

AKID of the AK (this is the AKID of the new AK in the case of reauthentication) ~~BS transmits newly assigned AKID.~~

2. Modify description field of page 50 line 18

Message integrity tuple for this message (using the MAC key derived from the AK identified by AKID)

3. Also, modify line 25:

The CMAC key sequence number/HMAC key sequence number included in the CMAC Tuple/HMAC Tuple should be equal to the newly assigned ~~RK~~AK sequence number.

4. Modify page 50, line 14:

- Move the "HMAC/CMAC tuple" table entry so that it is the bottom (ie. final, last) entry of table 37g.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Due to other edits, some of these changes could not be done (text no longer exists).

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6351**

Comment submitted by: Jeff

Mandin

Member

2005/07/14

Comment	Type	Editorial	Starting Page #	999	Starting Line #	Fig/Table#	Section
---------	------	-----------	-----------------	-----	-----------------	------------	---------

Some duplicated text in CMAC tuple section, and an inconsistency about its length.

Suggested Remedy

This parameter contains the CMAC key sequence number, the CMAC Packet Number Counter (CMAC_PN_*), and the CMAC value used for message authentication. The CMAC-Tuple attribute format is shown in Table 348a and Table 348b.

~~When included in a MAC management message, the CMAC tuple shall always be the final tuple in the message.~~

A message received, that contains an CMAC tuple, shall not be considered authentic if the length field of the tuple is **incorrect** ~~not 13~~, or if the locally computed value of the digest does not match the digest in the message.

~~Non authentic messages shall be discarded.~~

NOTE: It would be appropriate for a MIB to increment an error count on receipt of a non authentic message, so that management can detect an active attack.

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

This parameter contains the CMAC key sequence number, the CMAC Packet Number Counter (CMAC_PN_*), and the CMAC value used for message authentication. The CMAC-Tuple attribute format is shown in Table 348a and Table 348b.

~~When included in a MAC management message, the CMAC tuple shall always be the final tuple in the message.~~

A message received, that contains an CMAC tuple, shall not be considered authentic if the length field of the tuple is **incorrect** ~~not 13~~, or if the locally computed value of the digest does not match the digest in the message.

~~Non authentic messages shall be discarded.~~

NOTE: It would be appropriate for a MIB to increment an error count on receipt of a non authentic message, so that management can detect an active attack.

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

This parameter contains the CMAC key sequence number, the CMAC Packet Number Counter (CMAC_PN_*), and the CMAC value used for message authentication. The CMAC-Tuple attribute format

is shown in Table 348a and Table 348b.

~~When included in a MAC management message, the CMAC tuple shall always be the final tuple in the message.~~

A message received, that contains an CMAC tuple, shall not be considered authentic if the length field of the tuple is **incorrect** ~~not 13~~, or if the locally computed value of the digest does not match the digest in the message.

~~Non authentic messages shall be discarded.~~

NOTE: It would be appropriate for a MIB to increment an error count on receipt of a non authentic message, so that management can detect an active attack.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6352**

Comment submitted by: Jeff

Mandin

Member

2005/07/14

Comment Type Starting Page # **234** Starting Line # **55** Fig/Table# Section **7.8.1**

The 802.16e 3 way handshake is based on a commonly-used crypto algorithm called "Bellare-Rogaway".

However to actually implement this algorithm correctly we must include the identities of the BS and MS in the handshake.

Also, there are a couple of open issues regarding the handshake from the IETF EAP WG Review

Suggested Remedy

Adopt contribution "Resolutions to outstanding 3 way handshake issues".

Proposed Resolution

Recommendation:

Recommendation by

Adopt C802.16e-05/326r1

Reason for Recommendation

Resolution of Group

Decision of Group: Rejected

Reason for Group's Decision/Resolution

Remedy 1: Rejected 1-6

This feature is not needed because the authenticator can be co-located with a BS, so the authenticator ID can be the BS ID.

Remedy 2: not proposed or voted because of the result of Remedy 1 vote.

Because Remedy 1 was rejected, there is no point in advertising the authenticator ID if it is not used in the handshake.

Remedy 3 (red text only): Rejected 1-5

The reference to the authenticator is out of scope.

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6353**

Comment submitted by: **Jeff**

Mandin

Member

2005/07/14

Comment Type **Technical, Non-binding** Starting Page # **219** Starting Line # **44** Fig/Table# Section **7.2.2.4**

There needs to be specific description of PMK context

Suggested Remedy

Adopt C80216e-05_301r2.doc

Proposed Resolution

Recommendation: **Accepted-Modified**

Recommendation by

Adopt C802.16e-05/301r5

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Adopt C802.16e-05/301r5

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Contribution C802.16e-05/301r5 is a complete disaster. I can't tell which parts of it are actual editorial directives, which are change markups caused by the 5 revisions of this document, and which are simply idle doodles. Here's what I assumed: I assumed anything marked with strikethrough was to be deleted. I assumed that anything marked with underscore was to be added. I assumed that anything without color or markup was existing text.

I have no idea how much damage I've done by following the directions in this contribution, but I wish we'd never had accepted it in its current state.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6354**

Comment submitted by: Vladimir Yanover

Member

2005/07/14

Comment Type **Editorial** Starting Page # **999** Starting Line #

Fig/Table# Section

"ARQ connection" and "non-ARQ connection" are both regrettable jargon expressions

Suggested Remedy

Change all appearances of "ARQ connection" to "connection with ARQ enabled"
Change all appearances of "non-ARQ connection" to "connection with ARQ disabled"

Proposed Resolution Recommendation: Accepted Recommendation by

Change all appearances of "ARQ connection" to "connection with ARQ enabled"
Change all appearances of "non-ARQ connection" to "connection with ARQ disabled"

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

Change all appearances of "ARQ connection" to "connection with ARQ enabled"
Change all appearances of "non-ARQ connection" to "connection with ARQ disabled"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Leave HARQ connection alone.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6355**

Comment submitted by: Peiying

Zhu

Member

2005/07/14

Comment Type **Editorial**

Starting Page # **999**

Starting Line #

Fig/Table#

Section **8.4**

There are two terms used for the same purpose: Num_Layers and Num_Streams

Suggested Remedy

Select one term and use it consistently.

Proposed Resolution

Recommendation: **Accepted-Modified**

Recommendation by

After Figure 251b, line 21, page 438 add the following definitions

A "layer" is defined as an information path fed to the STC encoder as an input, and a "Stream" is defined as each information path encoded by the STC encoder that is passed to subcarrier mapping and sent through one antenna, or passed to the beamformer. Therefore, the number of layers in a system with vertical encoding is one, but in case of horizontal encoding it depends on the number of encoding/modulation paths. The number of streams in both vertical and horizontal encoding systems is the same as the number of output paths of the STC encoder.

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

After Figure 251b, line 21, page 438 add the following definitions

A "layer" is defined as an information path fed to the STC encoder as an input, and a "Stream" is defined as each information path encoded by the STC encoder that is passed to subcarrier mapping and sent through one antenna, or passed to the beamformer. Therefore, the number of layers in a system with vertical encoding is one, but in case of horizontal encoding it depends on the number of encoding/modulation paths. The number of streams in both vertical and horizontal encoding systems is the same as the number of output paths of the STC encoder.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6356**

Comment submitted by: Rajesh

Bhalla

Member

2005/07/14

Comment	Type	Technical, Satisfied (was	Starting Page #	178,	Starting Line #	Fig/Table#	Section	6.3.21.2.2,6.3.21.3.
---------	------	---------------------------	-----------------	------	-----------------	------------	---------	----------------------

There are some abmiguity in the HO procedure defined in the D9 to address race conditions between BS and MS.

The current standard reads:" If an MS that transmitted a MOB_MSHO-REQ message detects an incoming MOB_BSHO-REQ message, it may respond with a MOB_MSHO-REQ or a MOB_HO-IND message and ignore its own previous request. A BS that transmitted a MOB_BSHO-REQ message and detects an incoming MOB_MSHO-REQ message from the same MS shall ignore its MOB_MSHO-REQ. A BS that transmitted a MOB_BSHO-REQ message and detects an incoming MOB_HO-IND message from the same MS shall ignore its own previous request."

If the MS choose to send a MOB_MSHO-REQ after it detects a race condition, the BS will (or may) ignore the message as it's described in the text. It creates unnecessary complexity and confusion in this scenario.

Suggested Remedy

Proposed change:

1. In Section 6.3.21.2.2, page 178, line 9:

" The HO notification is recommended, but not required. Acknowledgment to the HO notification is required. An MS shall respond with a MOB_HO-IND message after receiving a MOB_BSHO_REQ message from BS. A BS shall respond with a MOB_BSHO-RSP after receiving a MOB_MSHO_REQ message except when it just transmitted a MOB_BSHO-REQ message. ~~Acknowledgement with MOB_BSHO-RSP of a notification is required.~~

If an MS that transmitted a MOB_MSHO-REQ message detects an incoming MOB_BSHO-REQ message, it ~~may~~ shall respond with ~~a MOB_MSHO-REQ or~~ a MOB_HO-IND message and ignore its own previous request. A BS that transmitted a MOB_BSHO-REQ message and detects an incoming MOB_MSHO-REQ message from the same MS shall ignore its MOB_MSHO-REQ. ~~A BS that transmitted a MOB_BSHO-REQ message and detects an incoming MOB_HO-IND message from the same MS shall ignore its own previous request."~~

2. In section 6.3.21.3.1, page 187, line 60:

~~" The decision to update the Active Set or Anchor BS begins with a notification by the MS through the MOB_MSHO-REQ message or by the BS through the MOB_BSHO-REQ management message. Acknowledgement with MOB_BSHO-RSP of a notification is required, but one with MOB_BSHO-RSP is recommended by not required.~~

Process of updating Active Set begins with MOB_MSHO-REQ from MS or MOB_BSHO-REQ from the Anchor BS. Process of Anchor BS update may also begin with MOB_MSHO-REQ from MS or MOB_BSHO-REQ from the Anchor BS or it may begin with Anchor switching indication via Fast Feedback channel.

If an MS that transmitted a MOB_MSHO-REQ message detects an incoming MOB_BSHO-REQ message, it ~~may~~ shall respond with ~~a MOB_MSHO-REQ or~~ MOB_HO-IND message and ignore its own previous request. ~~Similarly, a~~ A BS that transmitted a MOB_BSHO-REQ message and detects an incoming MOB_MSHO-REQ ~~or MOB_HO-IND~~ message from the same MS shall ignore its ~~own previous request~~ MOB_MSHO-REQ."

3. In section 6.3.21.3.2, page 189, line 1:

" If an MS that transmitted a MOB_MSHO-REQ message detects an incoming MOB_BSHO-REQ message, it ~~may~~ shall respond with a ~~MOB_MSHO-REQ or~~ MOB_HO-IND message and ignore its own previous request. ~~Similarly, a~~ A BS that transmitted a MOB_BSHO-REQ message and detects an incoming MOB_MSHO-REQ ~~or MOB_HO-IND~~ message from the same MS shall ignore its ~~own previous request.~~MOB_MSHO-REQ."

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

[See 6133.](#)

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) [none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6357**Comment submitted by: **Rajesh****Bhalla**

Member

2005/07/14

Comment Type **Technical, Satisfied (was** Starting Page # **295**, Starting Line # Fig/Table# Section **8.4.5.3.21**,
 For MIMO H-ARQ, each layer could transmit an independent H-ARQ packet regardless if MU_Indication is set to 0 or 1. However, the ACK mechanism is not specified when MU_Indication is set to 0 and the number of layers per burst allocation is larger than 1.

Suggested Remedy

Modify the following paragraphs:

1. Section 8.4.5.3.21, page 304, line 1:

"~~When MU Indicator = 1 for a particular loop index j in~~ For MIMO H-ARQ allocation specified in the MIMO DL Chase H-ARQ Sub-Burst IE, MIMO DL IR H-ARQ Sub-Burst IE, or the MIMO DL IR H-ARQ for CC Sub-Burst IE, each layer shall be allocated its associated ACK channel. ~~In this case, t~~The number of ACK channels associated with the sub-burst IE will be maybe greater than N_sub_burst."

2. Section 8.4.5.4.23, page 368, line 50:

" ~~When MU Indicator = 1 for a particular loop index j~~ For MIMO H-ARQ allocation specified in in the MIMO UL Chase H-ARQ Sub-Burst IE, MIMO UL IR H-ARQ Sub-Burst IE, or the MIMO UL IR H-ARQ for CC Sub-Burst IE, each layer shall be allocated its associated bit position in the ACK channel bitmap. ~~In this case, t~~The number of bits in the ACK channel bitmap associated with the sub-burst IE will be maybe greater than N_sub_burst."

Proposed Resolution Recommendation: Accepted**Recommendation by**

Modify the following paragraphs:

1. Section 8.4.5.3.21, page 304, line 1:

"~~When MU Indicator = 1 for a particular loop index j in~~ For MIMO H-ARQ allocation specified in the MIMO DL Chase H-ARQ Sub-Burst IE, MIMO DL IR H-ARQ Sub-Burst IE, or the MIMO DL IR H-ARQ for CC Sub-Burst IE, each layer shall be allocated its associated ACK channel. ~~In this case, t~~The number of ACK channels associated with the sub-burst IE will be maybe greater than N_sub_burst."

2. Section 8.4.5.4.23, page 368, line 50:

" ~~When MU Indicator = 1 for a particular loop index j~~ For MIMO H-ARQ allocation specified in in the MIMO UL Chase H-ARQ Sub-Burst IE, MIMO UL IR H-ARQ Sub-Burst IE, or the MIMO UL IR H-ARQ for CC Sub-Burst IE, each layer shall be allocated its associated bit position in the ACK channel bitmap. ~~In this case, t~~The number of bits in the ACK channel bitmap associated with the sub-burst IE will be maybe greater than N_sub_burst."

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Modify the following paragraphs:

1. Section 8.4.5.3.21, page 304, line 1:

~~"When MU Indicator = 1 for a particular loop index j in~~ For MIMO H-ARQ allocation specified in the MIMO DL Chase H-ARQ Sub-Burst IE, MIMO DL IR H-ARQ Sub-Burst IE, or the MIMO DL IR H-ARQ for CC Sub-Burst IE, each layer shall be allocated its associated ACK channel. ~~In this case, t~~The number of ACK channels associated with the sub-burst IE will be maybe greater than N_sub_burst."

2. Section 8.4.5.4.23, page 368, line 50:

~~" When MU Indicator = 1 for a particular loop index j~~ For MIMO H-ARQ allocation specified in in the MIMO UL Chase H-ARQ Sub-Burst IE, MIMO UL IR H-ARQ Sub-Burst IE, or the MIMO UL IR H-ARQ for CC Sub-Burst IE, each layer shall be allocated its associated bit position in the ACK channel bitmap. ~~In this case, t~~The number of bits in the ACK channel bitmap associated with the sub-burst IE will be maybe greater than N_sub_burst."

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions) none needed

Text changed/removed by other comments.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: 802.16e/D9

Ballot Number: 0001056

Comment Date

Comment # 6358

Comment submitted by: Rajesh Bhalla

Member

2005/07/14

Comment Type Technical, Satisfied (was Starting Page # 303, Starting Line # Fig/Table# Section 8.4.5.3.21 &
 In all MIMO H-ARQ sub-burst allocation IE, Dedicated MIMO Control Indicator is included. When Dedicated MIMO Control Indicator is set to 0, the Dedicated MIMO Control IE will not be included in the sub-burst allocation IE. However, when the Dedicated MIMO Control IE is omitted from the allocation IE, how would the N_Layer information be determined? (It's set in the Dedicated MIMO Control IE)

Also, what is the purpose of including an Dedicated MIMO Control Indicator? Shouldn't Dedicated MIMO Control IE be always included when MU_Indication is set to 0?

Suggested Remedy

Propose the following change:

1. Remove all references to Dedicated MIMO DL Control Indicator in table 286p, 286q, 286r and 286s. Delete the following lines from each of the table:

Syntax	Size	Note
.....
Dedicated MIMO DL Control Indicator	4	
.....
if (Dedicated MIMO DL Control Indicator == 1) {		
Dedicated MIMO DL Control IE ()	Variable	
}		

2. Remove all reference to Dedicated MIMO UL Control Indicator from table 302m, 302n, 302o, and 302p.

Remove the following lines from each of the table:

Syntax	Size	Note
.....
Dedicated MIMO UL Control Indicator	4	
.....
if (Dedicated MIMO UL Control Indicator == 1) {		

Dedicated MIMO UL Control IE ()	Variable	
✎		

Proposed Resolution **Recommendation: [Accepted-Modified](#)** **Recommendation by**

1. Insert the following paragraph after table 286 p, on Page 304, line 1

When a MS receives a MIMO HARQ burst allocation with Dedicated MIMO DL Control Indicator set to '1', the MS shall store the information in Dedicated MIMO DL Control IE . When a MS receives a MIMO HARQ burst allocation with Dedicated MIMO DL Control Indicator is set to '0', the MS shall use the stored Dedicated MIMO DL Control information from the last burst allocation where this information was included.

2. Insert the following paragraph after table 302m, on page 368, line 49:

When a MS receives a MIMO HARQ burst allocation with Dedicated MIMO UL Control Indicator set to '1', the MS shall store the information in Dedicated MIMO UL Control IE . When a MS receives a MIMO HARQ burst allocation with Dedicated MIMO UL Control Indicator is set to '0', the MS shall use the stored Dedicated MIMO UL Control information from the last burst allocation where this information was included.

Reason for Recommendation

Resolution of Group **Decision of Group: [Accepted-Modified](#)**

1. Insert the following paragraph after table 286 p, on Page 304, line 1

When a MS receives a MIMO HARQ burst allocation with Dedicated MIMO DL Control Indicator set to '1', the MS shall store the information in Dedicated MIMO DL Control IE . When a MS receives a MIMO HARQ burst allocation with Dedicated MIMO DL Control Indicator is set to '0', the MS shall use the stored Dedicated MIMO DL Control information from the last burst allocation where this information was included.

2. Insert the following paragraph after table 302m, on page 368, line 49:

When a MS receives a MIMO HARQ burst allocation with Dedicated MIMO UL Control Indicator set to '1', the MS shall store the information in Dedicated MIMO UL Control IE . When a MS receives a MIMO HARQ burst allocation with Dedicated MIMO UL Control Indicator is set to '0', the MS shall use the stored Dedicated MIMO UL Control information from the last burst allocation where this information was included.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6359**

Comment submitted by: **Rajesh**

Bhalla

Member

2005/07/14

Comment Type **Technical, Satisfied (was** Starting Page # **304**, Starting Line # **18** Fig/Table# Section **8.4.5.3.21**,

For MIMO H-ARQ, each layer could be allocated to a different MS with a different burst. Hence, the allocation for each layer should include H-ARQ burst information such as SPID/ACID. In Table 286q and 302n, MIMO IR H-ARQ Sub-burst IE format, the H-ARQ related information should be moved inside of the for(N_Layer) loop.

Suggested Remedy

[Adopt contribution C80216e-05_336.pdf](#)

Proposed Resolution Recommendation: **Accepted**

Recommendation by

[Adopt contribution C80216e-05_336.pdf](#)

Reason for Recommendation

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

[Adopt contribution C80216e-05_336.pdf](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6360L**

Comment submitted by: **Herbert**

Ruck

Member

Comment Type **Editorial**

Starting Page # **30**

Starting Line # **18**

Fig/Table# **7j**

Section **6.3.2.1.2.2.1.1**

This feedback header can report a composite channel condition, each bit represents ...

Suggested Remedy

Correct spelling feedback to feedback

This feedback header can report a composite channel condition, each bit represents ...

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Correct spelling feedback to feedback

This feedback header can report a composite channel condition, each bit represents ...

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Correct spelling feedback to feedback

This feedback header can report a composite channel condition, each bit represents ...

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6361L**

Comment submitted by: **Herbert**

Ruck

Member

Comment Type **Editorial**

Starting Page # **386**

Starting Line # **31**

Fig/Table# **308**

Section **8.4.5.8.2**

[Include Feedback header](#)

Suggested Remedy

[Correct spelling of feedback to feedback](#)

[Include Feedback header](#)

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

[Correct spelling of feedback to feedback](#)

[Include Feedback header](#)

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

[Correct spelling of feedback to feedback](#)

[Include Feedback header](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6362L**

Comment submitted by: Phillip

Barber

Member

2005/07/14

Comment	Type	Technical, Non-binding	Starting Page #	212	Starting Line #	53	Fig/Table#	Section	7.2.2.2.2
---------	------	------------------------	-----------------	-----	-----------------	----	------------	---------	-----------

Overview

A Master Session Key (MSK) is generated from the Root Key MK. This key is derived as recommended in the IETF RFC 3748 "Extensible Authentication Protocol" section 7.10, and is known only to Authentication Server (AAA Server) and the supplicant (MSS) . From the MSK, a Pairwise Master Key (PMK) and, optionally, the EAP Integrity Key (EIK) are derived. The IEEE 802.16e specifies that these keys are derived from the MSK via truncation by both the MSS and Authenticator. Generation of PMK marks the successful completion of Credential Verification and User Authentication. Finally from PMK, an Authorization Key (AK) is generated for a MSS and the BS by both the MSS and the Authenticator. Additional keys are derived from AK and are documented in the IEEE 802.16e draft.

Problem

A potential problem may manifest itself in the future, when the same MSK key material is used for different purposes and security protocols, which is specifically contemplated and intended. At this time, we specify that a portion of the MSK is used for PMK while other parts of it are used as EIK, etc. This approach is currently sufficient, but should another key be needed in the future, there will be not enough independent key material in the current MSK.

Proposed Solution

We suggest that the MSK key material is used for generating the application-specific keys, rather than just using different portions of the MSK. Specifically, we suggest that an initial value of the Pairwise Master Key (PMK) generated at the completion of the EAP Access Authentication is defined as follows:

PMK = SHA (MSK || "PMK")

The term SHA denotes the one-way hash function SHA-1 based on FIPS-180-2.

The proposed solutions allows more flexibility and extensibility of current key hierarchy, and is only a computational change, not requiring any new messaging or information element addition.

Suggested Remedy

[In 7.2.2.2.2 EAP authentication, page 212, line 53, modify as:]

7.2.2.2.2 EAP authentication

If a RSA mutual authorization took place before the EAP exchange, the EAP messages may be protected using EIK - EAP Integrity Key derived from pre-PAK (see 7.2.2.2.1). EIK is 128 bits long.

The product of the EAP exchange which is transferred to 802.16 layer is the MSK. This key is derived (or may be equivalent to the 512-bits Master Session Key (MSK)). This key is known to the AAA server, to the Authenticator* (transferred from AAA server) and to the MS. The MS and the authenticator derive a PMK (Pairwise Master Key) and optional EIK ~~by truncating the MSK to 288 bits.~~

The PMK derivation from the MSK is as follows:

The initial value of PMK is generated in the Authenticator and the MSS as the one-way application-specific hash of the MSK, specifically, PMK = H(MSK || "PMK") where H is a hash function SHA-1 as in FIPS-180-2, the || denotes concatenation, and "... " denotes the string. The PMK may subsequently be refreshed between the Authenticator and the MSS without invoking the EAP exchange.

~~PMK = truncate (MSK, 160)~~

~~The value of EIK is generated in the Authenticator and the MSS as the one-way application-specific hash of the MSK, specifically, $EIK = H(MSK || "EIK")$ where H is a hash function SHA-1 as in FIPS-180-2, the || denotes concatenation, and "... " denotes the string. The 128 Least Significant bits of the result will be used as the EIK.~~

~~If more keying material is needed for future link ciphers, the key length of the PMK may be increased similar key derivation method can be used with different string.~~

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

[In 7.2.2.2.2 EAP authentication, page 212, line 53, modify as:]

7.2.2.2.2 EAP authentication

If a RSA mutual authorization took place before the EAP exchange, the EAP messages may be protected using EIK - EAP Integrity Key derived from pre-PAK (see 7.2.2.2.1). EIK is 128 bits long.

The product of the EAP exchange which is transferred to 802.16 layer is the MSK. This key is derived (or may be equivalent to the 512-bits Master Session Key (MSK)). This key is known to the AAA server, to the Authenticator* (transferred from AAA server) and to the MS. The MS and the authenticator derive a PMK (Pairwise Master Key) and optional EIK ~~by truncating the MSK to 288 bits.~~

The PMK derivation from the MSK is as follows:

~~The initial value of PMK is generated in the Authenticator and the MSS as the one-way application-specific hash of the MSK, specifically, $PMK = H(MSK || "PMK")$ where H is a hash function SHA-1 as in FIPS-180-2, the || denotes concatenation, and "... " denotes the string. The PMK may subsequently be refreshed between the Authenticator and the MSS without invoking the EAP exchange.~~

~~PMK = truncate (MSK, 160)~~

~~The value of EIK is generated in the Authenticator and the MSS as the one-way application-specific hash of the MSK, specifically, $EIK = H(MSK || "EIK")$ where H is a hash function SHA-1 as in FIPS-180-2, the || denotes concatenation, and "... " denotes the string. The 128 Least Significant bits of the result will be used as the EIK.~~

~~If more keying material is needed for future link ciphers, the key length of the PMK may be increased similar key derivation method can be used with different string.~~

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

Vote: 17-15

Reason: current method is adequate.

Group's Notes**Group's Action Items****Editor's Notes**

Editor's Actions |) none needed

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6363LL**

Comment submitted by: **David**

Castelow

Comment	Type Editorial	Starting Page # 65	Starting Line # 60	Fig/Table#	Section
----------------	------------------------------	----------------------------------	----------------------------------	-------------------	----------------

Mixed style: use words or digits: compare page 66 line 8 with page 66 line 21.

Suggested Remedy

replace (page 65, line 60)
HARQ mode ="CTC IR"
by
HARQ mode = 0
and (page 66 line 8)
HARQ mode = "Generic"
by
HARQ mode = 1

Proposed Resolution **Recommendation: Accepted**

Recommendation by

replace (page 65, line 60)
HARQ mode ="CTC IR"
by
HARQ mode = 0
and (page 66 line 8)
HARQ mode = "Generic"
by
HARQ mode = 1

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

replace (page 65, line 60)
HARQ mode ="CTC IR"
by
HARQ mode = 0
and (page 66 line 8)
HARQ mode = "Generic"
by
HARQ mode = 1

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

2005/08/12

IEEE 802.16-045r4

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6364LL**

Comment submitted by: David

Castelow

Comment	Type	Technical, Non-binding	Starting Page #	78	Starting Line #	40	Fig/Table#	Section	6.3.2.3.43.6.8
---------	------	------------------------	-----------------	----	-----------------	----	------------	---------	----------------

Page 78, line 40:

DL-MAP Subtype

The DL-MAP Subtype value specifies the extended map type as HARQ mode switch.

How does the subtype value specify the map type? Please provide value that is used/cross reference to other table.

Suggested Remedy

Provide value or cross reference in Table 101d, page 78, line 27.

Proposed Resolution **Recommendation: Accepted-Modified****Recommendation by***Modify Table 101d as indicated:*DL-MAP subtype | 5 | Extension subtype. Value = 1*Modify text below Table 101d as indicated:*

DL-MAP Subtype

The DL-MAP Subtype value specifies the extended map type defined in Table 101a as HARQ mode switch.*Modify Table 101a, as indicated:*

1	<u>HARQ mode switch</u>	
42-31	Reserved	

Reason for Recommendation**Resolution of Group****Decision of Group: Accepted-Modified***Modify Table 101d as indicated:*DL-MAP subtype | 5 | Extension subtype. Value = 1*Modify text below Table 101d as indicated:*

DL-MAP Subtype

The DL-MAP Subtype value specifies the extended map type defined in Table 101a as HARQ mode switch.*Modify Table 101a, as indicated:*

1	<u>HARQ mode switch</u>	
42-31	Reserved	

FILE OF RECEIVED

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6365LL**

Comment submitted by: **David**

Castelow

Comment Type **Technical, Non-binding**

Starting Page # **79**

Starting Line # **14**

Fig/Table# **101e**

Section **6.3.2.3.43.6.9**

Missing type for Compact MBS_MAP_IE

Suggested Remedy

Page 79, line 14

Supply type

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Page 79, line 14:

DL_MAP Type = 3 | 3 | --

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Page 79, line 14:

DL_MAP Type = 3 | 3 | --

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6366LL**

Comment submitted by: **David**

Castelow

Comment	Type Editorial	Starting Page # 85	Starting Line # 42	Fig/Table#	Section 6.3.2.3.43.7.8
---------	-----------------------	---------------------------	---------------------------	------------	-------------------------------

Incorrect reference to figure 1, page 85, line 42:
Figure 1 exemplifies the UL HARQ subframe structure, where the 1x6 AMC type is depicted.

Suggested Remedy

Replace
Figure 1 exemplifies the UL HARQ subframe structure, where the 1x6 AMC type is depicted.
by
Figure <PLEASE COMPLETE> exemplifies the UL HARQ subframe structure, where the 1x6 AMC type is depicted.

Proposed Resolution

Recommendation: Accepted

Recommendation by

Replace
Figure 1 exemplifies the UL HARQ subframe structure, where the 1x6 AMC type is depicted.
by
Figure 23a exemplifies the UL HARQ subframe structure, where the 1x6 AMC type is depicted.

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Replace
Figure 1 exemplifies the UL HARQ subframe structure, where the 1x6 AMC type is depicted.
by
Figure 23a exemplifies the UL HARQ subframe structure, where the 1x6 AMC type is depicted.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6367LL**

Comment submitted by: **David**

Castelow

Comment Type **Editorial**
Grammar

Starting Page # **85**

Starting Line # **47**

Fig/Table#

Section **6.3.2.3.43.7.8**

Suggested Remedy

Page 85, line 47, Replace
Both MIMO diversity and MIMO AMC zones shall contain multiple of 6 symbols.
by
Both MIMO diversity and MIMO AMC zones shall contain multiples of 6 symbols.

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Page 85, line 47, Replace
Both MIMO diversity and MIMO AMC zones shall contain multiple of 6 symbols.
by
Both MIMO diversity and MIMO AMC zones shall contain multiples of 6 symbols.

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Page 85, line 47, Replace
Both MIMO diversity and MIMO AMC zones shall contain multiple of 6 symbols.
by
Both MIMO diversity and MIMO AMC zones shall contain multiples of 6 symbols.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6368LL**Comment submitted by: **David****Castelow**

Comment	Type	Starting Page #	Starting Line #	Fig/Table#	Section
Maintain nibble alignment of messages in UL-MAP.	Technical, Non-binding	86	29		6.3.2.3.43.7.8

Suggested Remedy

Include 2 bit padding field at Page 86, line 29:

| Reserved | 2 | Shall be set to zero. |

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6369LL**

Comment submitted by: David

Castelow

Comment	Type	Editorial	Starting Page #	87	Starting Line #	1	Fig/Table#	Section
---------	------	-----------	-----------------	----	-----------------	---	------------	---------

The table 108b ought to have a section of its own (6.3.2.3.43.7.9???)

Also at page 87, line 53, incorrect reference to Table 14c, and text not formatted correctly: description of Num_layer should be introduced as follows:

Suggested Remedy

At page 87, line 1 Insert new section title:
6.3.2.3.43.7.9 SDMA Compact UL-MAP IE format
(+ description??)

Page 87, line 53, replace "14c" by "108b"

Page 87, line 54:

Num_layer

~~The Num_layer means~~specifies the number of SDMA layers,~~and~~ It is ~~also~~ interpreted as the number of transmit antennas (as defined in 8.4.8),~~and~~ ~~t.~~ The first layer/user will~~shall~~ use pilot pattern A and the second layer/user ~~will~~shall use pilot pattern B.

Proposed Resolution **Recommendation: Accepted-Modified****Recommendation by**

[At page 87, line 1 Insert new section title:]

6.3.2.3.43.7.9 SDMA Compact UL-MAP IE format

[Move the text currently on lines 53-57 to before the table]

Page 87, line 53, replace "14c" by "108b"

[Modify the moved text as indicated:]

Num_layer

~~The Num_layer means~~specifies the number of SDMA layers,~~and~~ It is ~~also~~ interpreted as the number of transmit antennas (as defined in 8.4.8),~~and~~ ~~t.~~ The first layer/user will~~shall~~ use pilot pattern A and the second layer/user ~~will~~shall use pilot pattern B. The third layer/user shall use pilot pattern C and the fourth layer/user shall use pilot pattern D.

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

[At page 87, line 1 Insert new section title:]

6.3.2.3.43.7.9 SDMA Compact UL-MAP IE format

[Move the text currently on lines 53-57 to before the table]

Page 87, line 53, replace "14c" by "108b"

[Modify the moved text as indicated:]

(moving the moved text as indicated.)

Num_layer

~~The Num_layer means~~specifies the number of SDMA layers, ~~and~~ It is ~~also~~ interpreted as the number of transmit antennas (as defined in 8.4.8), ~~and~~ ~~t.~~ The first layer/user will~~shall~~ use pilot pattern A and the second layer/user ~~will~~~~shall~~ use pilot pattern B. The third layer/user shall use pilot pattern C and the fourth layer/user shall use pilot pattern D.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6370LL**

Comment submitted by: David

Castelow

Comment Type **Technical, Non-binding** Starting Page # **91** Starting Line # **61** Fig/Table# **108d** Section **6.3.2.3.45**
Align data structure ahead of loop:

Suggested Remedy

Insert the following at page 91, line 62 (below "Number_of_CIDs")

```
| Padding | 0 or 4 bits | The padding bits are used to ensure the contents within the layer loop are an  
integer number of bytes. Shall be set to zero. |
```

Proposed ResolutionRecommendation: **Accepted**

Recommendation by

Insert the following at page 91, line 62 (below "Number_of_CIDs")

```
| Padding | 0 or 4 bits | The padding bits are used to ensure the contents within the layer  
| loop are an integer number of bytes. Shall be set to zero.
```

Reason for Recommendation**Resolution of Group**Decision of Group: **Withdrawn****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes**

Editor's Actions |) none needed

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6371LL**

Comment submitted by: **David**

Castelow

Comment Type **Editorial**

Starting Page # **92**

Starting Line # **54**

Fig/Table#

Section **6.3.2.3.45**

Typo

Suggested Remedy

Page 92, line 54, Replace "Apporved" by "Approved"

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Page 92, line 54, Replace "Apporved" by "Approved"

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Page 92, line 54, Replace "Apporved" by "Approved"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

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

Fixed by another comment (text re-write).

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6372LL**Comment submitted by: **David****Castelow**

Comment Type **Technical, Non-binding** Starting Page # **95** Starting Line # **53** Fig/Table# **108e** Section **6.3.2.3.46**
Byte alignment ahead of TLVs.

Suggested Remedy

Insert at page 95, line 53:

| Padding | 0 or 4 bits | The padding bits are used to ensure byte alignment of subsequent elements. Shall
be set to zero. |

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6373LL**

Comment submitted by: **David**

Castelow

Comment Type **Technical, Non-binding** Starting Page # **105** Starting Line # **25** Fig/Table# **108i** Section **6.3.2.3.49**
Better byte alignment.

Suggested Remedy

Delete page 105, line 25:

~~| reserved | 1 | Shall be set to zero. |~~

Move page 105, lines 30-33 to page 105, line 25.

Insert the following at page 105, line 62 to maintain nibble alignment.

| reserved | 1 | Shall be set to zero. |

Page 106, line 12: replace:

| Padding | variable | - |

with

| Padding | 0 or 4 bits | The padding bits are used to ensure byte alignment of subsequent elements. Shall be set to zero. |

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Withdrawn**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6374LL**

Comment submitted by: David

Castelow

Comment Type **Technical, Non-binding** Starting Page # **108** Starting Line # **15** Fig/Table# **108j** Section **6.3.2.3.50**
 Better byte alignment.

Suggested Remedy

Insert at page 108, line 16

Comp_NBR_BSID_IND	1	-
N_current_BSs	3	When FBSS/SHO is supported, N_current_BSs is the number of BSs currently in the active set; When FBSS/SHO is not supported or the MS has an empty active set, N_current_BSs is set to 1.
Reserved	3	Shall be set to zero.

Delete page 108, line 26-27:

Comp_NBR_BSID_IND	1	-
-------------------	---	---

Delete page 108, line 34-40:

N_current_BSs	3	When FBSS/SHO is supported, N_current_BSs is the number of BSs currently in the active set; When FBSS/SHO is not supported or the MS has an empty active set, N_current_BSs is set to 1.
Reserved	3	Shall be set to zero

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

Insert at page 108, line 16

Comp_NBR_BSID_IND	1	-
N_current_BSs	3	When FBSS/SHO is supported, N_current_BSs is the number of BSs currently in the active set; When FBSS/SHO is not supported or the MS has an empty active set, N_current_BSs is set to 1.
Reserved	3	Shall be set to zero.

Delete page 108, line 26-27:

Comp_NBR_BSID_IND	1	-
-------------------	---	---

Delete page 108, line 34-40:

N_current_BSs	3	When FBSS/SHO is supported, N_current_BSs is the number of BSs currently in the active set; When FBSS/SHO is not supported or the MS has an empty active set, N_current_BSs is set to 1.
Reserved	3	Shall be set to zero

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Insert at page 108, line 16

Comp_NBR_BSID_IND	1	-
N_current_BSs	3	When FBSS/SHO is supported, N_current_BSs is the number of BSs currently in the active set; When FBSS/SHO is not supported or the MS has an empty active set, N_current_BSs is set to 1.
Reserved	3	Shall be set to zero.

Delete page 108, line 26-27:

Comp_NBR_BSID_IND	1	
-------------------	---	--

Delete page 108, line 34-40:

N_current_BSs	3	When FBSS/SHO is supported, N_current_BSs is the number of BSs currently in the active set; When FBSS/SHO is not supported or the MS has an empty active set, N_current_BSs is set to 1.
Reserved	3	Shall be set to zero

Tee

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6375LL**

Comment submitted by: David

Castelow

Comment Type **Technical, Non-binding** Starting Page # **111** Starting Line # **16** Fig/Table# **108k** Section **6.3.2.3.51**

Better byte alignment. Because all subsequent items are bytes, the byte alignment may as well go at the front:

Suggested Remedy

Page 111, line 16:

| Padding | 37 | Shall be set to zero.

Delete Page 111, line 50-52:

~~| Padding | 4 | Padding bits to complement message length to an integer number of bytes |~~**Proposed Resolution**Recommendation: **Accepted**

Recommendation by

Page 111, line 16:

| Padding | 37 | Shall be set to zero.

Delete Page 111, line 50-52:

~~| Padding | 4 | Padding bits to complement message length to an integer number of bytes |~~**Reason for Recommendation****Resolution of Group**Decision of Group: **Accepted**

Page 111, line 16:

| Padding | 37 | Shall be set to zero.

Delete Page 111, line 50-52:

~~| Padding | 4 | Padding bits to complement message length to an integer number of bytes |~~**Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes**

Editor's Actions |) none needed

Table modified by other comments.

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6376LL**Comment submitted by: **David****Castelow**

Comment Type **Technical, Non-binding** Starting Page # **113** Starting Line # **43** Fig/Table# **108l** Section **6.3.2.3.52**
 Better byte alignment.

Suggested Remedy

Insert at page 113, line 43:

HO_authorization policy indicator	1	To indicate if authorization negotiation is used in HO procedure.
		0: EAP authorization and the value of the MAC mode field in the current BS (default)
		1: The authorization policy for the target BS is negotiated.
Padding	1	To ensure nibble alignment.

Delete page 113, lines 51-57:

HO_authorization policy indicator	1	To indicate if authorization negotiation is used in HO procedure.
		0: EAP authorization and the value of the MAC mode field in the current BS (default)
		1: The authorization policy for the target BS is negotiated.

Proposed ResolutionRecommendation: **Accepted**

Recommendation by

Insert at page 113, line 43:

HO_authorization policy indicator	1	To indicate if authorization negotiation is used in HO procedure.
		0: EAP authorization and the value of the MAC mode field in the current BS (default)
		1: The authorization policy for the target BS is negotiated.
Padding	1	To ensure nibble alignment.

Delete page 113, lines 51-57:

HO_authorization policy indicator	1	To indicate if authorization negotiation is used in HO procedure.
		0: EAP authorization and the value of the MAC mode field in the current BS (default)
		1: The authorization policy for the target BS is negotiated.

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Insert at page 113, line 43:

HO_authorization policy indicator	1	To indicate if authorization negotiation is used in HO procedure.
		0: EAP authorization and the value of the MAC mode field in the current BS (default)
		1: The authorization policy for the target BS is negotiated.
Padding	1	To ensure nibble alignment.

Delete page 113, lines 51-57:

HO_authorization policy indicator	1	To indicate if authorization negotiation is used in HO procedure.
		0: EAP authorization and the value of the MAC mode field in the current BS (default)
		1: The authorization policy for the target BS is negotiated.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: 802.16e/D9

Ballot Number: 0001056

Comment Date

Comment # 6377LL

Comment submitted by: David

Castelow

Comment Type Technical, Non-binding Starting Page # 114 Starting Line # 59 Fig/Table# 108l Section 6.3.2.3.52

Better byte (or at least nibble) alignment.
Using 3 bit fields in a loop is messy, and considering size of message, unnecessarily complex.

Suggested Remedy

- Page 114, line 19: insert
| Reserved | 1 | Shall be set to zero. |
- Page 114, line 59: insert
| Reserved | 1 | Shall be set to zero. |
- Page 115, line 3: insert
| Reserved | 1 | Shall be set to zero. |
- Page 115, line 7: insert
| Reserved | 1 | Shall be set to zero. |
- Page 115, line 12: insert
| Reserved | 1 | Shall be set to zero. |
- Page 115, line 42: insert
| Reserved | 1 | Shall be set to zero. |
- Page 115, line 49: insert
| Reserved | 1 | Shall be set to zero. |
- Page 115, line 49: insert
| Reserved | 1 | Shall be set to zero. |
- Page 115, line 53: insert
| Reserved | 1 | Shall be set to zero. |
- Page 115, line 58: insert
| Reserved | 1 | Shall be set to zero. |
- Page 116, line 14: insert
| Reserved | 1 | Shall be set to zero. |
- Page 116, line 24: insert
| Reserved | 1 | Shall be set to zero. |
- Page 116, line 38: insert
| Reserved | 1 | Shall be set to zero. |
- Page 116, line 44: insert
| Reserved | 1 | Shall be set to zero. |
- Page 116, line 60: insert
| Reserved | 1 | Shall be set to zero. |
- Page 117, line 7: insert
| Reserved | 1 | Shall be set to zero. |
- Page 117, line 55: insert
| Reserved | 1 | Shall be set to zero. |

Page 117, line 61: insert

| Reserved | 1 | Shall be set to zero. |

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: **Withdrawn**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6378LL**

Comment submitted by: David

Castelow

Comment Type **Technical, Non-binding** Starting Page # **120** Starting Line # **47** Fig/Table# **108** Section **6.3.2.5.53**
 Better byte alignment.

Suggested Remedy

Insert after page 120, line 48:

N_new_BSs	3	Number of new BSs that are recommended by the MS.
Padding	4	Shall be set to zero.

~~Delete page 121, line 3-7:~~

N_new_BSs	3	Number of new BSs that are recommended by the MS.
Padding	4	Shall be set to zero.

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

Insert after page 120, line 48:

N_new_BSs	3	Number of new BSs that are recommended by the MS.
Padding	4	Shall be set to zero.

~~Delete page 121, line 3-7:~~

N_new_BSs	3	Number of new BSs that are recommended by the MS.
Padding	4	Shall be set to zero.

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

Insert after page 120, line 48:

N_new_BSs	3	Number of new BSs that are recommended by the MS.
Padding	4	Shall be set to zero.

~~Delete page 121, line 3-7:~~

N_new_BSs	3	Number of new BSs that are recommended by the MS.
Padding	4	Shall be set to zero.

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

2005/08/12

IEEE 802.16-045r4

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Table fixed by other comments.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: 802.16e/D9

Ballot Number: 0001056

Comment Date

Comment # 6379

Comment submitted by: Mo-han Fong

Comment Type Technical, Non-binding Starting Page # 92 Starting Line # 14 Fig/Table# 108d Section 6.3.2.3.45

I object to the text implementation in the p802.16e/D9 for the resolution of comment #5179, because some naming error and missing text.

Suggested Remedy

[Modify Table 108d, page 92, lines 14as follows]

```

-----|
if (Maintained Active Set and Anchor BS) {          |   | -          |
-----|

```

[Modify page 94, lines 8 to 15 as follows]

Maintain Active Set and Anchor BS

1: Active set and Anchor BS shall be maintained while in sleep mode for SHO/FBSS duration

0: Active set and Anchor BS shall not be maintained while in sleep mode ~~SHO/FBSS duration (s)~~

SHO/FBSS duration (s)

Active set and Anchor BS shall be maintained for 10x2exp(s) frames after the Power Saving Class is activated.

[Add a subsection 6.3.20.6 to describe the maintainence of SHO/FBSS active set in sleep mode. Add the following text to page 169, after line 65]

[Modify page 170, lines 29 - 33 as follows]

Before the SHO/FBSS duration expires, the MS ~~may~~ shall continue to monitor the signal strength of neighbor BS

Proposed Resolution

Recommendation: Accepted

Recommendation by

[Modify Table 108d, page 92, lines 14as follows]

```

-----|
if (Maintained Active Set and Anchor BS) {          |   | -          |
-----|

```

[Modify page 94, lines 8 to 15 as follows]

Maintain Active Set and Anchor BS

1: Active set and Anchor BS shall be maintained while in sleep mode for SHO/FBSS duration

0: Active set and Anchor BS shall not be maintained while in sleep mode ~~SHO/FBSS duration (s)~~

SHO/FBSS duration (s)

Active set and Anchor BS shall be maintained for 10x2exp(s) frames after the Power Saving Class is activated

Active set and Anchor BS shall be maintained for $10 \times 2 \exp(s)$ frames after the Power Saving Class is activated.

[Add a subsection 6.3.20.6 to describe the maintainence of SHO/FBSS active set in sleep mode. Add the following text to page 169, after line 65]

[Modify page 170, lines 29 - 33 as follows]

Before the SHO/FBSS duration expires, the MS ~~may~~ shall continue to monitor the signal strength of neighbor BS

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

[Modify Table 108d, page 92, lines 14as follows]

if (Maintained Active Set and Anchor BS) {			-	
--	--	--	---	--

[Modify page 94, lines 8 to 15 as follows]

Maintain Active Set and Anchor BS

1: Active set and Anchor BS shall be maintained while in sleep mode for SHO/FBSS duration

0: Active set and Anchor BS shall not be maintained while in sleep mode ~~SHO/FBSS duration (s)~~

SHO/FBSS duration (s)

Active set and Anchor BS shall be maintained for $10 \times 2 \exp(s)$ frames after the Power Saving Class is activated.

[Add a subsection 6.3.20.6 to describe the maintainence of SHO/FBSS active set in sleep mode. Add the following text to page 169, after line 65]

[Modify page 170, lines 29 - 33 as follows]

Before the SHO/FBSS duration expires, the MS ~~may~~ shall continue to monitor the signal strength of neighbor BS

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6380**

Comment submitted by: Mo-han

Fong

Comment Type **Technical, Non-binding** Starting Page # **135** Starting Line # **36** Fig/Table# Section **6.3.2.3.56**

I object to the text change for the resolution of comment #5214, because some text change was omitted, and section reference needs to be corrected.

Suggested Remedy

[Make the following text change on section 6.3.2.3.56, page 135, line 36

CDMA code and transmission opportunity assignment (11.187.1)

[Make the following text change on section 6.3.2.3.56, page 135, line 48]

Page-Response window (11.187.2)

[Make the following text change on section 11.17.1, page 576, lines 26-44]

11.17.1 CDMA code and transmission opportunity assignment

The 'CDMA code and transmission opportunity assignment' TLV indicates the assigned code and the transmission opportunity for a MS who is paged to use over dedicated CDMA ranging channelregion.

Type	Length (bits)	Value	Scope
150	variable; (8 N_assign + N_assign x 8 16)	Bit #0 - #7: N_assign Subsequent (N_assign x 8 16) bits: for (i = 0, i < N_assign, i++) { 8-bits code index assigned to a MS who is paged <u>8 bits transmission opportunity offset assigned</u> <u>to a MS who is paged</u> }	OFDMA

[Make the following text change on section 11.17.2, page 576, line 51]

The 'Page-Response Window' field TLV indicates ...

Proposed Resolution

Recommendation: Accepted

Recommendation by

[Make the following text change on section 6.3.2.3.56, page 135, line 36

CDMA code and transmission opportunity assignment (11.187.1)

[Make the following text change on section 6.3.2.3.56, page 135, line 48]

Page-Response window (11.187.2)

[Make the following text change on section 11.17.1, page 576, lines 26-44]

11.17.1 CDMA code and transmission opportunity assignment

The 'CDMA code and transmission opportunity assignment' TLV indicates the assigned code and the transmission opportunity for a MS who is paged to use over dedicated CDMA ranging channelregion.

Scope	Type	Length (bits)	Value
OFDMA	150	variable;	Bit #0 - #7: N_assign
		(8N_assign + N_assign x 8)	Subsequent (N_assign x 8) bits:
			for (i = 0, i < N_assign, i++) {
			8-bits code index assigned to a MS who is paged
			<u>8 bits transmission opportunity offset assigned to a MS who is paged</u>
			}

[Make the following text change on section 11.17.2, page 576, line 51]

The 'Page-Response Window' field TLV indicates ...

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

[Make the following text change on section 6.3.2.3.56, page 135, line 36]

CDMA code and transmission opportunity assignment (11.187.1)

[Make the following text change on section 6.3.2.3.56, page 135, line 48]

Page-Response window (11.187.2)

[Make the following text change on section 11.17.1, page 576, lines 26-44]

11.17.1 CDMA code and transmission opportunity assignment

The 'CDMA code and transmission opportunity assignment' TLV indicates the assigned code and the transmission opportunity for a MS who is paged to use over dedicated CDMA ranging channelregion.

Type	Length (bits)	Value	Scope
150	variable; (8N_assign + N_assign x 816)	Bit #0 - #7: N_assign Subsequent (N_assign x 816) bits: for (i = 0, i < N_assign, i++) { 8-bits code index assigned to a MS who is paged <u>8 bits transmission opportunity offset assigned</u> <u>to a MS who is paged</u> }	OFDMA

[Make the following text change on section 11.17.2, page 576, line 51]

The 'Page-Response Window' field TLV indicates ...

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6381**

Comment submitted by: Mo-han

Fong

Comment	Type	Technical, Non-binding	Starting Page #	174	Starting Line #	1	Fig/Table#	Section	6.3.21.1.3.2
---------	------	------------------------	-----------------	-----	-----------------	---	------------	---------	--------------

I object to the resolution of comment #5254, because some further clean of the naming of ranging region is required.

Suggested Remedy

[Make the following text change on page 174, line 1]

regular ranging ~~window~~ region

[Make the following text change on page 173, lines 56 to page 174, line 11, because some text is misplaced]

— The MS shall synchronize to the neighbor BS at the first frame immediately following the "rendezvous time", read the UL_MAP transmitted at this frame, and extract the description of the dedicated ranging region (ranging region with "Dedicatd ranging indicator" bit set to 1). The dedicated ranging region will appear after the time specified by the Resource Allocation Start Time field in the UL_MAP. The MS shall determine the specific region it should use for transmission of the dedicated CDMA code by applying the offset defined by the "transmission opportunity offset" field in MOB_SCN_RSP, which was received from the serving BS, to the dedicated ranging region definition in the UL_MAP of the neighbor BS. If no ranging window exists with "Dedicated ranging indicator" set to 1 but a regular (non-dedicated) ranging region is allocated by the BS at the Rendezvous time, then MS may use this allocation for the coordination process. In this case, the MS may transmit the allocated CDMA code in the region defined in the regular ranging ~~window~~ region. The MS shall also in this case ignore the value of the "transmission opportunity offset" field of the MOB_SCN_RSP message it received from the serving BS during the association negotiation. The neighbor BS that decides to provide a regular (non-dedicated) ranging region instead of a ranging region with "Dedicated ranging indicator" set to 1, should expect to receive the allocated CDMA code in the regular (non-dedicated) ranging region.

~~If no ranging window exists with "Dedicated ranging indicator" set to 1 but a regular (non-dedicated) ranging window is allocated by the BS at the Rendezvous time, then MS may use this allocation for the coordination process.~~

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

See 6122

2005/08/12

IEEE 802.16-045r4

[see 0122](#)

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) [none needed](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6382**

Comment submitted by: Mo-han

Fong

Comment	Type	Technical, Non-binding	Starting Page #	168	Starting Line #	59	Fig/Table#	Section	6.3.20.4
---------	------	------------------------	-----------------	-----	-----------------	----	------------	---------	----------

I oppose to the text change for comment #5242, because some text for sleep control header/subheader are still missing.

Suggested Remedy

Make the following text change on page 168, lines 59-60]

The MS may retransmit MOBSLP-REQ message or Bandwidth request and uplink sleep control header if it does not receive the MOB-SLP-RSP message or DL Sleep control extended subheader within the T43 timer.

Proposed ResolutionRecommendation: **Accepted-Modified**

Recommendation by

Make the following text change on page 168, lines 59-60]

The MS may retransmit MOBSLP-REQ message (or Bandwidth request and uplink sleep control header) if it does not receive the MOB-SLP-RSP message (or DL Sleep control extended subheader) within the T43 timer.

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

Make the following text change on page 168, lines 59-60]

The MS may retransmit MOBSLP-REQ message (or Bandwidth request and uplink sleep control header) if it does not receive the MOB-SLP-RSP message (or DL Sleep control extended subheader) within the T43 timer.

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

Editor's Actions k) done

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6383**

Comment submitted by: Mo-han

Fong

Comment	Type	Starting Page #	Starting Line #	Fig/Table#	Section
	Technical, Non-binding	37	3		6.3.2.2.7.7

I object to the resolution of comment #5075 because some clarification on the assigned UL region is required.

Suggested Remedy

The SN request extended subheader is sent by the BS to request the MS to send the SN report header ~~on the assigned UL region~~. The fields of the SN request extended subheader are defined in Table 13j.

Proposed ResolutionRecommendation: **Accepted**

Recommendation by

The SN request extended subheader is sent by the BS to request the MS to send the SN report header ~~on the assigned UL region~~. The fields of the SN request extended subheader are defined in Table 13j.

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

The SN request extended subheader is sent by the BS to request the MS to send the SN report header ~~on the assigned UL region~~. The fields of the SN request extended subheader are defined in Table 13j.

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

Editor's Actions k) done

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6384**

Comment submitted by: Mo-han

Fong

Comment	Type	Technical, Non-binding	Starting Page #	192	Starting Line #	43	Fig/Table#	Section	6.3.21.3.5
---------	------	------------------------	-----------------	-----	-----------------	----	------------	---------	------------

I object to the implementation of the resolution of comment #5287, because some text are missing. Also, some text is needed to clarify this section is only applicable to FBSS only.

Suggested Remedy

[Add the following tex to page 192, line 43 as follows]

For the connections that have SN Feedback enabled, the following procedures shall be performed by the BS and the MS:

[Add the following text to page 192, line 32 as follows]

The following procedure shall only be supported for FBSS.

Proposed ResolutionRecommendation: **Accepted**

Recommendation by

[Add the following tex to page 192, line 43 as follows]

For the connections that have SN Feedback enabled, the following procedures shall be performed by the BS and the MS:

[Add the following text to page 192, line 32 as follows]

The following procedure shall only be supported for FBSS.

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

[Add the following tex to page 192, line 43 as follows]

For the connections that have SN Feedback enabled, the following procedures shall be performed by the BS and the MS:

[Add the following text to page 192, line 32 as follows]

The following procedure shall only be supported for FBSS.

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

2005/08/12

IEEE 802.16-045r4

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6385**

Comment submitted by: Mo-han

Fong

Comment Type **Technical, Non-binding** Starting Page # **380** Starting Line # **13** Fig/Table# Section **8.4.5.4.28**

I object to the resolution of comment #5527 because some text error still needs to be corrected on the IE.

Suggested Remedy

[Make the following text change on page 380, line 13]

... starting from the frame defined by ~~Allocation_offset~~ **Frame Offset**

[Make the following text change on page 378, lines 49-52]

No dedicated UL resource is allocated in **this** feedback polling IE. BS shall provide UL allocation for the Feedback header transmission **through UL-MAP** at each designated

Proposed Resolution

Recommendation: Accepted-Modified

Recommendation by

[Make the following text change on page 378, lines 49-52]

No dedicated UL resource is allocated in **this** feedback polling IE. BS shall provide UL allocation for the Feedback header transmission **through UL-MAP** at each designated

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

[Make the following text change on page 378, lines 49-52]

No dedicated UL resource is allocated in **this** feedback polling IE. BS shall provide UL allocation for the Feedback header transmission **through UL-MAP** at each designated

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6386**

Comment submitted by: Mo-han

Fong

Comment	Type	Technical, Non-binding	Starting Page #	534	Starting Line #	27	Fig/Table#	Section	11.7.24
---------	------	------------------------	-----------------	-----	-----------------	----	------------	---------	---------

I object to the resolution comment #5052, because some text is still missing and in error.

Suggested Remedy

[Modify the following text in page 534, lines 26-27]

Omission of this field from the RNG-REQ/RSP message indicates that none of the headers and sub-headers are supported.

[Modify the following text in page 534, lines 36-37, in the table]

Bit #1: Bandwidth request and ~~downlink burst profile change request~~ CINR report header support

Proposed Resolution Recommendation: Accepted**Recommendation by**

[Modify the following text in page 534, lines 26-27]

Omission of this field from the RNG-REQ/RSP message indicates that none of the headers and sub-headers are supported.

[Modify the following text in page 534, lines 36-37, in the table]

Bit #1: Bandwidth request and ~~downlink burst profile change request~~ CINR report header support

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

[Modify the following text in page 534, lines 26-27]

Omission of this field from the RNG-REQ/RSP message indicates that none of the headers and sub-headers are supported.

[Modify the following text in page 534, lines 36-37, in the table]

Bit #1: Bandwidth request and ~~downlink burst profile change request~~ CINR report header support

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

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6387**

Comment submitted by: Mo-han

Fong

Comment	Type	Technical, Non-binding	Starting Page #	11	Starting Line #	Fig/Table#	5a	Section	6.3.2.1.1
---------	------	------------------------	-----------------	----	-----------------	------------	----	---------	-----------

I object to the text change in D9 corresponding to the naming of BR with DL burst profile change request, as the change is not propagated to all relevant places in the document. Also, the other header naming needs to be made consistent throughout the document.

Suggested Remedy

[Modify table 5a, line 20 as follows]

BR with ~~DL burst profile change request~~ and CINR report

[Modify table 5a, line 18 as follows]

BR with and UL Tx Power Report

[Modify table 5a, line 22 as follows]

BR with and UL sleep control

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

See 6008

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6388**

Comment submitted by: Mo-han

Fong

Comment	Type	Technical, Non-binding	Starting Page #	171	Starting Line #	28	Fig/Table#	Section	6.3.21.1.2
---------	------	------------------------	-----------------	-----	-----------------	----	------------	---------	------------

I object to the text change corresponding to the event triggered scanning, because it is not explicit stated in the text that if both serving BS DCD message includes the trigger function and trigger action for neighbor BS, and the NGB-ADV message also includes another set of trigger function and action for neighbor BS, how those trigger functions/actions are consolidated or aligned or one override the other etc.

This is an important issue that needs to be fixed. Otherwise, there will be ambiguity in MS behavior, thus make this feature impossible to be supported.

Suggested Remedy

Fix the problem.

Proposed ResolutionRecommendation: **Accepted-Modified**

Recommendation by

[Add the following sentences at the end of paragraph on page 171, line 49:]

If the trigger type, trigger function and trigger action for a particular neighbor BS as defined in MOB_NBR-ADV are the same as the neighbor BS trigger type, trigger function and trigger action defined in the serving BS DCD, the trigger value and trigger averaging duration defined in the MOB_NBR-ADV shall take precedence.

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

[Add the following sentences at the end of paragraph on page 171, line 49:]

If the trigger type, trigger function and trigger action for a particular neighbor BS as defined in MOB_NBR-ADV are the same as the neighbor BS trigger type, trigger function and trigger action defined in the serving BS DCD, the trigger value and trigger averaging duration defined in the MOB_NBR-ADV shall take precedence.

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

Editor's Actions k) done

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6389**

Comment submitted by: Mo-han

Fong

Comment	Type	Technical, Non-binding	Starting Page #	513	Starting Line #	15	Fig/Table#	Section	11.3.1
---------	------	------------------------	-----------------	-----	-----------------	----	------------	---------	--------

More clarification text is needed for the text change corresponding to the use of fast feedback channel to indicate the need for feedback header transmission.

Suggested Remedy*[Modify table 353a, page 513, lines15-20]*

The N MSB values of this field represents the N-bit payload value on the Fast Feedback channel reserved as indication flag for MS to initiate feedback on the Feedback header, where N is the number of payload bits used for S/N measurement feedback on the Fast Feedback channel ~~or enhanced Fast_feedback channel.~~

The value shall not be set to all zeros.

Proposed Resolution **Recommendation: Accepted****Recommendation by***[Modify table 353a, page 513, lines15-20]*

The N MSB values of this field represents the N-bit payload value on the Fast Feedback channel reserved as indication flag for MS to initiate feedback on the Feedback header, where N is the number of payload bits used for S/N measurement feedback on the Fast Feedback channel ~~or enhanced Fast_feedback channel.~~

The value shall not be set to all zeros.

Reason for Recommendation**Resolution of Group****Decision of Group: Accepted***[Modify table 353a, page 513, lines15-20]*

The N MSB values of this field represents the N-bit payload value on the Fast Feedback channel reserved as indication flag for MS to initiate feedback on the Feedback header, where N is the number of payload bits used for S/N measurement feedback on the Fast Feedback channel ~~or enhanced Fast_feedback channel.~~

The value shall not be set to all zeros.

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

2005/08/12

IEEE 802.16-045r4

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6390**

Comment submitted by: Mo-han

Fong

Comment	Type	Technical, Non-binding	Starting Page #	528	Starting Line #	31	Fig/Table#	Section	11.7.11
---------	------	------------------------	-----------------	-----	-----------------	----	------------	---------	---------

I object to the text change related to Handover supported TLV since some fix is required.

Suggested Remedy

[Make the following text change to the Value field in the table, lines 31-44]

Bit #0: SHO/FBSS HO not supported when it is set to 1. When this bit is set to 1, the BS shall ignore all other bits.

~~Bit #1: FBSS/SO DL RF combining supported with monitoring single MAP from anchor BS when this bit is set to 1.~~

Bit #21: If set to 0, indicate FBSS/SO DL RF combining supported with monitoring single MAP from anchor BS. If set to 1, indicate FBSS/SO DL RF Combining supported with monitoring MAPs from all active BS when this bit is set to 1

Bit #32: SHO DL soft Combining supported with monitoring single MAP from anchor BS when this bit is set to 1.

Bit #43: SHO DL soft combining supported with monitoring MAPs from all active BS when this bit is set to 1

~~Bit #5: FBSS/SO UL single transmission~~

Bit #64: If set to 0, indicate SHO UL single transmission. If set to 1, indicate SHO UL Multiple transmission

sBit #7: reserved, shall be set to zero

Proposed ResolutionRecommendation: **Accepted-Modified**

Recommendation by

[Make the following text change to the Value field in the table, lines 31-44]

Bit #0: SHO/FBSS HO not supported when it is set to 1. When this bit is set to 1, the BS shall ignore all other bits.

~~Bit #1: FBSS/SO DL RF combining supported with monitoring single MAP from anchor BS when this bit is set to 1.~~

Bit #21: FBSS/SO DL RF Combining supported with monitoring MAPs from all active BSs when this bit is set to 1

Bit #32: SHO DL soft Combining supported with monitoring single MAP from anchor BS when this bit is set to 1.

Bit #43: SHO DL soft combining supported with monitoring MAPs from all active BSs when this bit is set to 1

~~Bit #5: FBSS/SO UL single transmission~~

Bit #64: SHO UL Multiple transmissions

Bits #5-7: reserved, shall be set to zero

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Resolution of Group

Decision of Group: Accepted modified

[Make the following text change to the Value field in the table, lines 31-44]

Bit #0: SHO/FBSS HO not supported when it is set to 1. When this bit is set to 1, the BS shall ignore all other bits.

~~Bit #1: FBSS/SO DL RF combining supported with monitoring single MAP from anchor BS when this bit is set to 1.~~

Bit #2¹: FBSS/SO DL RF Combining supported with monitoring MAPs from all active BSs when this bit is set to 1

Bit #3²: SHO DL soft Combining supported with monitoring single MAP from anchor BS when this bit is set to 1.

Bit #4³: SHO DL soft combining supported with monitoring MAPs from all active BSs when this bit is set to 1

~~Bit #5: FBSS/SO UL single transmission~~

Bit #6⁴: SHO UL Multiple transmissions

Bits #5-7: reserved, shall be set to zero

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6391**

Comment submitted by: **Mo-han**

Fong

Comment Type **Editorial**

Starting Page # **542**

Starting Line #

Fig/Table#

Section **11.8.3.7.16**

This section is duplicate of 11.8.3.7.15.

Suggested Remedy

Remove 11.8.3.7.16.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

Reason for Group's Decision/Resolution

See comment 6325

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6392**

Comment submitted by: Mo-han Fong

Comment Type **Editorial** Starting Page # **534** Starting Line # **25** Fig/Table# Section **11.7.24**

The formatting of this TLV is not correct.

Suggested Remedy

Modify Type field to "~~MAG header and extended sub header support Type-42~~"

Modify Scope field to "REG-REQ/RSP"

Also, on line 25, change MSS to MS.

Proposed Resolution

Recommendation: **Accepted**

Recommendation by

Modify Type field to "~~MAG header and extended sub header support Type-42~~"

Modify Scope field to "REG-REQ/RSP"

Also, on line 25, change MSS to MS.

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

Modify Type field to "~~MAG header and extended sub header support Type-42~~"

Modify Scope field to "REG-REQ/RSP"

Also, on line 25, change MSS to MS.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6393**Comment submitted by: **Wen****Tong**

Comment Type **Technical, Non-binding** Starting Page # **328** Starting Line # Fig/Table# **298a** Section **8.4.5.4.10.3**
 Table 298a and 298g sepcify the Antenna selection option 0-8, however, the text did not clearly defined the meaning of these options. Need to clarify these values.

Suggested Remedy

Modify the table 298a description column

Antenna selection option 0 (see table 317f for 3 Tx and table 317g for 4Tx)
 Antenna selection option 1 (see table 317f for 3 Tx and table 317g for 4Tx)
 Antenna selection option 2 (see table 317f for 3 Tx and table 317g for 4Tx)
 Antenna selection option 3 (see table 317f for 3 Tx and table 317g for 4Tx)
 Antenna selection option 4 (see table 317f for 3 Tx and table 317g for 4Tx)
 Antenna selection option 5 (see table 317f for 3 Tx and table 317g for 4Tx)
 Antenna selection option 6 (see table 317f for 3 Tx and table 317g for 4Tx)

Modify Table 298g

Antenna selection option 0 (see table 317f for 3 Tx and table 317g for 4Tx)
 Antenna selection option 1 (see table 317f for 3 Tx and table 317g for 4Tx)
 Antenna selection option 2 (see table 317f for 3 Tx and table 317g for 4Tx)
 Antenna selection option 3 (see table 317f for 3 Tx and table 317g for 4Tx)
 Antenna selection option 4 (see table 317f for 3 Tx and table 317g for 4Tx)
 Antenna selection option 5 (see table 317f for 3 Tx and table 317g for 4Tx)
 Antenna selection option 6 (see table 317f for 3 Tx and table 317g for 4Tx)

Row 2 column 2 replace 110000 with 0b110000 (option 1)
 Row 2 column 3 replace 110001 with 0b110001 (option 2)
 Row 2 column 4 replace 110010 with 0b110010 (option 3)

After table 317f insert

Stream k=2 indicates TLV=176, with Bit #1 and Bit#16 set

Page 454

Table 317g

*clarify the table definition

*remedy

Change title to Mapping of Pre-coding matrix and CQICH for 4 antennas 4 Tx Matrix C with Antenna Selection

Row 2 column 2 replace 0b110000 with 0b110000 (option 1)
 Row 2 column 3 replace 0b110001 with 0b110001 (option 2)
 Row 2 column 4 replace 0b110010 with 0b110010 (option 3)
 Row 2 column 2 replace 0b110011 with 0b110011 (option 4)
 Row 2 column 3 replace 0b110100 with 0b110100 (option 5)
 Row 2 column 4 replace 0b110101 with 0b110101 (option 6)

After table 317f insert

Stream k=2 indicates TLV=176, with Bit #1 and Bit#16 set
 Stream k=3 indicates TLV=176, with Bit #11 and Bit#16 set

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

Reason for Recommendation

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

Modify the table 298a description column

Antenna selection option 0 (see table 317f for 3 Tx and table 317g for 4Tx)
 Antenna selection option 1 (see table 317f for 3 Tx and table 317g for 4Tx)
 Antenna selection option 2 (see table 317f for 3 Tx and table 317g for 4Tx)
 Antenna selection option 3 (see table 317f for 3 Tx and table 317g for 4Tx)
 Antenna selection option 4 (see table 317f for 3 Tx and table 317g for 4Tx)
 Antenna selection option 5 (see table 317f for 3 Tx and table 317g for 4Tx)
 Antenna selection option 6 (see table 317f for 3 Tx and table 317g for 4Tx)

Modify Table 298g

Antenna selection option 0 (see table 317f for 3 Tx and table 317g for 4Tx)
 Antenna selection option 1 (see table 317f for 3 Tx and table 317g for 4Tx)
 Antenna selection option 2 (see table 317f for 3 Tx and table 317g for 4Tx)
 Antenna selection option 3 (see table 317f for 3 Tx and table 317g for 4Tx)
 Antenna selection option 4 (see table 317f for 3 Tx and table 317g for 4Tx)
 Antenna selection option 5 (see table 317f for 3 Tx and table 317g for 4Tx)
 Antenna selection option 6 (see table 317f for 3 Tx and table 317g for 4Tx)

[Modify Table 317f](#)

Row 2 column 2 replace 110000 with 0b110000 (option 1)
 Row 2 column 3 replace 110001 with 0b110001 (option 2)
 Row 2 column 4 replace 110010 with 0b110010 (option 3)

Page 454

Table 317g

*clarify the table definition

*remedy

Change title to Mapping of Pre-coding matrix and CQICH for ~~4-antennas~~ 4 Tx Matrix C with Antenna Selection

Row 2 column 2 replace 0b110000 with 0b110000 (option 1)

Row 2 column 3 replace 0b110001 with 0b110001 (option 2)

Row 2 column 4 replace 0b110010 with 0b110010 (option 3)

Row 2 column 2 replace 0b110011 with 0b110011 (option 4)

Row 2 column 3 replace 0b110100 with 0b110100 (option 5)

Row 2 column 4 replace 0b110101 with 0b110101 (option 6)

Modifv the table in line 39~60 page 541 (section 11.8.3.7.12) as followinga

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6394**

Comment submitted by: **Wen**

Tong

Comment	Type	Editorial	Starting Page #	Starting Line #	Fig/Table#	Section
2ms frame OFDMA PHY is missing (it is in IEEE802.16-2004)						11.4.1

Suggested Remedy

insert --> 0b0000 = 2.0ms

Change:

- 0b0001 = 2.5 ms
- 0b0010 = 4ms
- 0b0011 = 5 ms
- 0b0100 = 8 ms
- 0b0101 = 10 ms
- 0b0110 = 12.5 ms
- 0b0111 = 20ms
- 0b1000 ~ 0b1111= reserved

Proposed Resolution

Recommendation: **Accepted-Modified**

Recommendation by

In table 384b change as follows:

In Frame Duration Code (line 24)

insert --> 0b0000 = 2.0ms

Change:

- 0b0001 = 2.5 ms
- 0b0010 = 4ms
- 0b0011 = 5 ms
- 0b0100 = 8 ms
- 0b0101 = 10 ms
- 0b0110 = 12.5 ms
- 0b0111 = 20ms
- 0b1000 ~ 0b1111= reserved

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

In table 384b change as follows:

In Frame Duration Code (line 24)

insert --> 0b0000 = 2.0ms

Change:

0b0001 = 2.5 ms

0b0010 = 4ms

0b0011 = 5 ms

0b0100 = 8 ms

0b0101 = 10 ms

0b0110 = 12.5 ms

0b0111 = 20ms

0b1000 ~ 0b1111= reserved

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6395**

Comment submitted by: [Wen](#)

[Tong](#)

Comment	Type	Starting Page #	Starting Line #	Fig/Table#	Section
Clean up on the terms of streams and layers	Technical, Non-binding				8.4.8.3.1.2.1

Suggested Remedy

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

Reason for Group's Decision/Resolution

[By comment #6355](#)

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6396**Comment submitted by: **Wen****Tong**

Comment	Type	Technical, Non-binding	Starting Page #	6	Starting Line #	Fig/Table#	Section	Section 3.82
Change soft hand over (SHO) to Micro diversity combining handover (MCHO)								
Global replace SHO with MCHO								

Suggested RemedyProposed Resolution Recommendation: **Accepted-Modified** Recommendation by*[Change text in Clause 3 as indicated]:*3.83 ~~soft handover (SHO)~~3.83 Macro diversity handover (MDHO)*[Global replace SHO with MDHO]**[Global replace soft handover with macro diversity handover]**[Change Clause 4 as indicated, and place in the correct position (alphabetical)]*SHO soft handoverMDHO macro diversity handover**Reason for Recommendation**Resolution of Group Decision of Group: **Accepted-Modified***[Change text in Clause 3 as indicated]:*3.83 ~~soft handover (SHO)~~3.83 Macro diversity handover (MDHO)*[Global replace SHO with MDHO]**[Global replace soft handover with macro diversity handover]**[Change Clause 4 as indicated, and place in the correct position (alphabetical)]*SHO soft handoverMDHO macro diversity handover**Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items**

2005/08/12

IEEE 802.16-045r4

Editor's Notes

Editor's Actions k) done

Do this one last (to catch new instances of soft handover).

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6397**

Comment submitted by: **Wen**

Tong

Comment Type **Technical, Non-binding**

Starting Page # **5**

Starting Line #

Fig/Table#

Section **3.5.4**

Change active set to serving set

Suggested Remedy

Global replace active with serving set

Proposed Resolution

Recommendation: **Accepted-Modified**

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted-Modified**

Global replace "active set" with "diversity set"

Reason for Group's Decision/Resolution

Vote to accept a global replace "active set" with "diversity set"

In favor: 32

Against: 8

Passes

Vote to accept the change to FBSS

In favor: 37

Against: 29

Fails

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions **k) done**

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **6398LLL**

Comment submitted by: Mo han

Fong

Comment Type **Technical, Non-binding** Starting Page # **527** Starting Line # **20** Fig/Table# Section **11.7.9**

I object to the implementation of the resolution of comment #5306 because some of the resolution changes were not implemented in D9.

Suggested Remedy

[Change the text of page 527, line 20 as follows:]

Old_GIDSFID 24.2 24 Service flow ID~~Old GID before hand-over from old BSs.~~

Proposed Resolution Recommendation: Accepted

Recommendation by

[Change the text of page 527, line 20 as follows:]

Old_GIDSFID 24.2 24 Service flow ID~~Old GID before hand-over from old BSs.~~

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

[Change the text of page 527, line 20 as follows:]

Old_GIDSFID 24.2 24 Service flow ID~~Old GID before hand-over from old BSs.~~

Reason for Group's Decision/Resolution

Vote: 21-11 Increases overhead

Vote 2: Unanimous acceptance

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6399LLL**

Comment submitted by: Vladimir Yanover

Comment	Type	Technical, Non-binding	Starting Page #	510	Starting Line #	19	Fig/Table#	349	Section
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In Rev2004, the UCD message (6.3.2.3.3) contains non-TLV values, which are:

Ranging backoff start
 Ranging backoff end
 Request backoff start
 Request backoff end.

These same parameters appear in D9, table 349 under similar names, all marked as for OFDMA only :

Initial ranging backoff start
 Initial ranging backoff end
 Bandwidth request backoff start
 Bandwidth request backoff end

Looks like TLV values has no utility as fields in UCD are mandatory.

Suggested Remedy

Delete named parameters from Table 349

Proposed Resolution **Recommendation: Accepted-Modified** **Recommendation by**

[In Table 349, add the following text to the value field for each of the listed rows:]

Initial ranging backoff start
 Initial ranging backoff end
 Bandwidth request backoff start
 Bandwidth request backoff end

"This TLV shall be used in NBR-ADV message only to represent corresponding values that appear in UCD message fields."

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

[In Table 349, add the following text to the value field for each of the listed rows:]

Initial ranging backoff start
 Initial ranging backoff end
 Bandwidth request backoff start
 Bandwidth request backoff end

"This TLV shall be used in NBR-ADV message only to represent corresponding values that appear in UCD message fields."

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **6400LLL**

Comment submitted by: Vladimir

Yanover

Comment Type **Editorial** Starting Page # **513** Starting Line # **53** Fig/Table# **353a** Section **11.3.1**

table 353a, there is a list of TLV values, which are OFDMA specific.

The problem is, that type 153 appears twice:

1. As periodic ranging backoff start
2. The last TLV: Normalized C/N for channel sounding

Suggested Remedy

to modify line 53 in page 513:

Normalized C/N for Channel Sounding | ~~-453~~ 197 | 1 | Signed integer for the required C/N (dB) for Channel Sounding. This value shall override C/N for the channel sounding in Table 334a

Proposed Resolution Recommendation: **Accepted**

Recommendation by

to modify line 53 in page 513:

Normalized C/N for Channel Sounding | ~~-453~~ 197 | 1 | Signed integer for the required C/N (dB) for Channel Sounding. This value shall override C/N for the channel sounding in Table 334a

Reason for Recommendation

Resolution of Group

Decision of Group: **Accepted**

to modify line 53 in page 513:

Normalized C/N for Channel Sounding | ~~-453~~ 197 | 1 | Signed integer for the required C/N (dB) for Channel Sounding. This value shall override C/N for the channel sounding in Table 334a

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

[Check the value when you implement this](#)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

2004-11-04

Comment # **1010R**

Comment submitted by: James

Gilb

Comment Type **Technical, Binding**

Starting Page # **147**

Starting Line # **25**

Fig/Table#

Section **7.8.1.2.2**

The cross references (See 7.x.x.x) are missing in the subclause numbers.

Suggested Remedy

Provide the correct subclause numbers here and throughout the draft, e.g. search for x.x.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group:

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **1867R**

Comment submitted by: James

Gilb

2004-11-04

Comment	Type	Starting Page #	Starting Line #	Fig/Table#	Section
	Technical, Binding	319			C

[Page 319-332; various lines]

The following commands are in the figure, but not in the document: HO-notification-*, HO-pre*. Are they defined in 802.16-2004?

Suggested Remedy

If they are not defined in 802.16-2004, these need to be replaced with the actual command name that is passed over the air.

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

A re-work of Annex C removed the commands in question.

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **1874R**

Comment submitted by: James

Gilb

2004-11-04

Comment	Type	Starting Page #	Starting Line #	Fig/Table#	Section
	Technical, Binding	332			C

The MSC references 2 commands, I-am-host-of and MSS-info-req, that do not appear in this document or in 802.16-2001, are they defined in 802.16-2004?

Suggested Remedy

If they are not defined in 802.16-2004, these need to be replaced with the actual command name that is passed over the air.

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

A re-work of Annex C removed the commands in question.

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

2004-11-04

Comment # **1902R**

Comment submitted by: James

Gilb

Comment Type **Technical, Binding**

Starting Page # **339**

Starting Line # **14**

Fig/Table#

Section **E**

This annex has empty subclauses, e.g. E.1.1

Suggested Remedy

Either delete the subclause or provide the missing information for all of the empty subclauses.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group:

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

This material has now been added.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **1945R**

Comment submitted by: Jonathan

Labs

2004-11-04

Comment	Type	Technical, Satisfied (was	Starting Page #	865	Starting Line #	65	Fig/Table#	Section
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I do not like the way the acronym MSS has been used to replace SS in text that has been pulled from the base document. For example, comparing Table 55--Action Codes and Actions in the P802.16-REVd/D5 (p. 78, line 42) with Table 55a in P802.16e/D5 (p. 29, line 20), one can see that the 'SS' acronym has been replaced by the 'MSS' acronym in the description of the Actions. Such a change tells me that those Action Codes now only apply to mobile SS's and not SS's in general, whether they are fixed or mobile.

(On a side note, the definition of Action Code 0x00 is being redefined in 16e, which I think breaks backward compatibility.)

Suggested Remedy

Throughout the document, use 'SS' when the function can apply to both fixed and mobile SS's and use 'MSS' when the function only applies to mobile SS's.

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **3384R**

Comment submitted by: James

Gilb

2005-03-09

Comment	Type	Technical, Satisfied (was	Starting Page #	319	Starting Line #	Fig/Table#	Section	C
---------	------	---------------------------	-----------------	-----	-----------------	------------	---------	---

{pages 319-332:}

"The following commands are in the figure, but not the document: HO-notification-*, HO-pre-*. It is incorrect to justify it by claiming a forward reference to an unpublished draft, i.e., 802.16g."

Suggested Remedy

"Either define the commands or delete them. If the MSCs don't work without them, then delete the MSCs because they can't possibly inform the reader if they use undefined commands"

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

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **4379R**

Comment submitted by: Brian

Kiernan

2005-04-28

Comment	Type	Technical, Satisfied (was	Starting Page #	573	Starting Line #	Fig/Table#	Section	12
---------	------	---------------------------	-----------------	-----	-----------------	------------	---------	----

I object to the resolution of comments #3520 and #3521, both of which dealt with system profiles. Without adoption of definitive system profiles 802.16e cannot, by any stretch of the imagination, be called a standard. It can't even be called a "cookbook". In reality it is more like a shopping list from which anybody can pick any combination of non-interoperable ingredients. Definitive system profiles are absolutely required. Despite the shortcomings identified as the reason for their rejection, the system profiles proposed during the last recirc were at least a starting point in defining an interoperable set of parameters.

Suggested Remedy

Adopt contribution C80216e-05_60r2 or any subsequent updates or revisions to it.

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

Reason for Recommendation

Resolution of Group	Decision of Group: Superseded
---------------------	--------------------------------------

[See comment 4353](#)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **4384R**

Comment submitted by: Jonathan

Labs

Comment	Type	Technical, Satisfied (was	Starting Page #	Starting Line #	Fig/Table#	Section
---------	------	---------------------------	-----------------	-----------------	------------	---------

I object to the resolutions of comments 3034, 3233, 3269, 3474 and 3480 in IEEE 802.16-05/019 (or database IEEE 802.16-05/12r3). All these comments address the usage of SS versus MS versus FSS. The resolution of the group was: "Change all SS to MS in 802.16e draft for new text or modified text; do not change SS in unmodified/duplicated instances. Delete the definition of FS".

I feel this is a quick and not very careful attempt at solving a major problem with the amendment. Here is just one example where this solution does not solve the problem: Look at page 52, line 19, section 6.3.2.3.23 which is titled in 802.16-2004 "SS Basic Capability Request (SBC-REQ) message", but is now titled in 16e/D7 as "MS basic capability request (SBC-REQ) message". To me this is telling me that with the changes from the amendment, SBC-REQ are now only defined for MS and not fixed SS.

I think it gets worse if one looks at the text changes in 6.3.2.3.26 De/Re-register command (DREG-CMD) message, specifically at Table 55--Action codes and actions. All action codes are now defined for MSs, not SSs. This tells me that there are now no action codes for a fixed SS.

In my mind an SS can be either a mobile SS or a fixed SS. MS is only a mobile SS.

These are just a few examples of the problem. There are many others. I provided an extensive list of modifications in the last ballot to clean this problem up, but I do not believe they were considered by the Ballot resolution committee. I will not provide "specific text" again, only to have it ignored.

This problem will slap you in the face when this amendment is eventually integrated with 802.16-2004 to form a new revision.

Suggested Remedy

Fix up the usage of MS versus SS, such that the text does not break the operation of fixed systems. I would recommend reviewing again comments 3034, 3233, 3269, 3474 and 3480 in IEEE 802.16-05/019 as a starting guide.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

See 4353

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Extensive MS/SS repairs were adopted during the ballot resolution meeting and for D10.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **4387R**

Comment submitted by: Remi

Chayer

Comment	Type	Technical, Satisfied (was	Starting Page #	Starting Line #	Fig/Table#	Section
---------	------	---------------------------	-----------------	-----------------	------------	---------

I object to the resolution of Comment 3250 in 80216-05_12r3 (which was related to comments #1850, #1859, #1861 and #1864 in 80216-05_010). It is important to include complete profiles in the document. Contribution C80216e-05_60r2 was a start.

Suggested Remedy

The working group should start developing complete profiles based on the input from the participants.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group: Rejected-Duplicate**[See comment 4353](#)**Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** |) none needed**Editor's Questions and Concerns****Editor's Action Items**

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **5004R**

Comment submitted by: James

Gilb

Comment	Type	Technical, Binding	Starting Page #	9	Starting Line #	Fig/Table#	Section	3
---------	------	--------------------	-----------------	---	-----------------	------------	---------	---

Definitions need to stand on their own, so acronyms need to be spelled out in each of the definitions. In most cases it is better to avoid using them altogether. 3.73 is an example, BS, MSS and HO need to be spelled out.

Suggested Remedy

Replace "handoff" with "handover" throughout the text (5 instances)".

In Clause 4, remove the definition for "BBM - break before make"

In Clause 4, remove the definition for "MBB - make before break"

[In 3. Definitions, page 9, line 1, modify identified definitions as:]

'3.5.1 neighbor BS: For any mobile station (MS), a neighbor BS is a base station (BS) (other than the serving BS) whose downlink transmission can be received by the mobile station (MS).

3.5.2 serving BS: For any mobile station (MS), the serving BS is the base station (BS) with which the mobile station (MS) has most recently completed registration at initial network-entry or during an handover (HO).

3.5.3 target BS: The base station (BS) that an mobile station (MS) intends to be registered with at the end of a handover (HO).

3.5.4 active BS: An active BS is informed of the mobile station (MS)' capabilities, security parameters, service flows and full MAC context information. For soft handover (SHO), the mobile station (MS) transmits/receives data to/from all active BSs in the active set.'

'3.71 active set: Active set is applicable to SHO and FBSS. The active set contains a list of active BSs to the mobile station (MS). The active set is managed by the mobile station (MS) and base station (BS). The active set is applicable to soft handover (SHO) and fast BS switching (FBSS)'

3.73 anchor BS: For soft handover (SHO) or fast BS switching (FBSS) supporting mobile station (MS)s, this is a base station (BS) where the mobile station (MS) is registered, synchronized with, performs ranging with and monitors the downlinkDL for control information. For fast BS switching (FBSS) supporting mobile station (MS), this is the serving BS that is designated to transmit/receive data to/from the mobile station (MS) at a given frame.

3.74 FA index: A network specific logical frequency assignment (FA) index assignment. FA index assignment is used in combination with operator specific configuration information provided to the mobile station (MS) in a method outside the scope of this standard.

3.75 fast BS switching (FBSS): base station (BS) switching that utilizes a fast switching mechanism to improve link quality. The mobile station (MS) is only transmitting/receiving data to/from one of the active BS (anchor BS) at any given frame. The anchor BS can change from frame to frame depending on the base station (BS) selection scheme.

3.76 frequency assignment (FA): A frequency assignment (FA) denotes a logical assignment of downlinkDL center frequency and channel bandwidth programmed to the base station (BS).

3.77 handover (HO): The process in which an mobile station (MS) migrates from the air-interface provided by one base station (BS) to the air-interface provided by another base station (BS).

3.78 group key encryption key (GKEK): Encrypted by the KEK that is derived from the AK. The GKEK is a random number generated by the BS or an ASA used to encrypt the GTEKs sent in multicast messages by the BS to MSs in the same multicast group.'

3.80 mobile station (MS): A subscriber station (SS) capable of communicating while in motion. A mobile station (MS) is always a subscriber station (SS) unless specifically excepted otherwise in the standard.

3.81 Oorderly power down procedure: The procedure that the mobile station (MS) performs when powering down as directed by (e.g., user input or prompted by a automatic power down mechanism).

3.82 scanning interval: A time period intended for the mobile station (MS) to monitor neighbor BSs to determine the suitability of the base station (BS)s as targets for handover (HO).

3.83 soft handover (SHO): The process in which an mobile station (MS) migrates from the air-interface provided by one or more base station (BS)s to the air-interface provided by other one or more base station (BS)s. This process is accomplished in the downlinkDL by having two or more base station (BS)s transmitting the same MAC/PHY protocol data unit (PDU)s to the mobile station (MS) such that diversity combining can be performed by the mobile station (MS). In the uplinkUL it is accomplished by having two or more base station (BS)s receiving (demodulating,

decoding) the same protocol data unit (PDU)s from the mobile station (MS), such that diversity combining of the received protocol data unit (PDU)s can be performed among the base station (BS)s.'

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **5269R**

Comment submitted by: James

Gilb

Comment	Type	Starting Page #	Starting Line #	Fig/Table#	Section
	Technical, Binding	181			6.3.21.2.8

Another missing command, HO-RSP. This also occurs in Annex C and possibly other places

Suggested Remedy

Change "MSS HO-RSP pending" to "MOB_BSHO-RSP" in this figure as well as in Figures 130d line 50 and in Figure 130e lines 3, 22, and 39.

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

Reason for Recommendation

Resolution of Group

Decision of Group:

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Notes: Could not find "MSS HO-RSP" in Figure 130e line 22; others are done.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **5344R**

Comment submitted by: James

Gilb

Comment	Type Technical, Binding	Starting Page # 216	Starting Line #	Fig/Table#	Section 7.2.2.4.1
---------	--------------------------------	----------------------------	-----------------	------------	--------------------------

Table 133 is missing the headers from the part that continues onto the next page.

Make the headers appear on the second part of the table and add "(continued)" to the title on the second page (there is an auto-magic field in Framemaker for this.) Fix this here and all other locations in the draft. Almost all of the tables now have a consistent format, nevertheless, check all of the tables to make sure that the formatting is consistent throughout the draft.

Suggested Remedy

Format Table 133 appropriately

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group:****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** i) to do

This comment addresses "continued" on tables. I've tried to correct as many as I can during the editorial process, but some of the existing tables may still lack proper continuation flags. The difficult part about this is that a given table may not cross a page boundary when it is examined, so it looks okay until text that precedes the table is added, causing a split between pages. We expect that, as part of the IEEE editorial clean-up process, any remaining tables will be corrected.

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **5480R**

Comment submitted by: James

Gilb

Comment	Type	Starting Page #	Starting Line #	Fig/Table#	Section
	Technical, Binding	327			8.4.5.4.10.4

Table 298d is missing "(continued)" in the title on the second page and the table format (double-ruled lines) doesn't match the other tables.

Suggested Remedy

Add "(continued)" and fix the table format.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group:****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** i) to do

This comment addresses "continued" on tables. I've tried to correct as many as I can during the editorial process, but some of the existing tables may still lack proper continuation flags. The difficult part about this is that a given table may not cross a page boundary when it is examined, so it looks okay until text that precedes the table is added, causing a split between pages. We expect that, as part of the IEEE editorial clean-up process, any remaining tables will be corrected.

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

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **5606R**

Comment submitted by: [James](#)

[Gilb](#)

Comment Type **Technical, Binding**

Starting Page # **475**

Starting Line #

Fig/Table#

Section **8.4.9.2.5.2**

It is not proper to mark a subclause as informative (see 2005 IEEE Style Guide).

Suggested Remedy

[Move this text to an Informative Annex "LDPC Direct Encoding"](#).

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group:

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **5689R**

Comment submitted by: James

Gilb

Comment Type **Technical, Binding**

Starting Page # **577**

Starting Line #

Fig/Table#

Section **C.1.1**

The command HO-IND appears in the figure but not in the draft. Is this supposed to be MOB-HO-IND?

Suggested Remedy

Change the command name here and in all other locations to match a command in the standard or delete all of the figures that refer to it. I found occurances in Figure C.6, C.7, D.1, D.2, D.3, etc.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group:

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

This was addressed by a global clean-up of MOB_HO-IND.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**

Ballot Number: **0001056**

Comment Date

Comment # **5695R**

Comment submitted by: [James](#)

[Gib](#)

Comment	Type	Starting Page #	Starting Line #	Fig/Table#	Section
I am continuing to find commands in MSCs that don't exist elsewhere.	Technical, Binding				

Suggested Remedy

Review each MSC and figure to verify that every command referenced in figure is the correct name for it. If the names don't match, the standard is broken.

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

Reason for Recommendation

Resolution of Group **Decision of Group:**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

[Informative Annexes C and D](#) were updated for consistency with normative text.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **5696R**

Comment submitted by: James

Gilb

Comment	Type	Technical, Binding	Starting Page #	Starting Line #	Fig/Table#	Section
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The table heading needs to repeat across pages at the top of each continuation of the table and the table title should include one of "continuation", "cont." or a suitable notation. Tables 298r and 298t are examples of this.

Suggested Remedy

Change as indicated here and throughout the draft. This is a repeat of my earlier comment, which apparently did not get applied to the entire draft as I have found at least two table that violate this requirement. This time, check the entire draft for this mistake and correct it.

Proposed Resolution**Recommendation:****Recommendation by****Reason for Recommendation****Resolution of Group****Decision of Group:****Reason for Group's Decision/Resolution****Group's Notes****Group's Action Items****Editor's Notes****Editor's Actions** i) to do

This comment addresses "continued" on tables. I've tried to correct as many as I can during the editorial process, but some of the existing tables may still lack proper continuation flags. The difficult part about this is that a given table may not cross a page boundary when it is examined, so it looks okay until text that precedes the table is added, causing a split between pages. We expect that, as part of the IEEE editorial clean-up process, any remaining tables will be corrected.

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

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **5700R**Comment submitted by: **Greg****Phillips**

Comment	Type	Technical, Satisfied (was	Starting Page #	Starting Line #	Fig/Table#	Section
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In light of the report from the IETF on the security review of IEEE 802.16e D8. I cast a disapprove ballot.

If we knowingly allow the adoption of this standard after a report showing that the security of data transferred under the 802.16 standard can be compromised we can expect significant resistance from the market in adopting this technology.

One section of the specific text from the report that highlights these concerns is:

"Overall, significant issues were found in the usage of EAP by 802.16e. Issues were found with IEEE 802.16e compatibility with RFC 3748, the EAP Key Management Framework as well as AAA Key Management Requirements. Several of the issues discovered are considered "critical" in that if they are not repaired, IEEE 802.16e will provide little in the way of guaranteed security."

Their are many other items presented in addition to those relating to interoperability of AAA servers and failings of the current document.

I strongly make note that the work undertaken in this review process should not be ignored. These are very serious considerations that have been raised in the past and now we have highly qualified team describe them in sufficient detail for us not to ignore.

Suggested Remedy

Due to the late nature of this report sufficient time to draft a total remedy is not available. I suggest that the remedy process be undertaken as outlined in the report.

The review is available at <http://www.drizzle.com/~aboba/EAP/review.txt>.

Proposed Resolution

Recommendation:

Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: **Superseded**

no text proposed, see comments No text proposed. See comments 5129, 5135, 5320, 5321, 5329, 5341, 5614, 5669.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions |) none needed

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **802.16e/D9**Ballot Number: **0001056**

Comment Date

Comment # **5733R**

Comment submitted by: Jonathan

Labs

Comment	Type	Technical, Satisfied (was	Starting Page #	Starting Line #	Fig/Table#	Section
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I object to the resolutions of comments 3034, 3233, 3269, 3474 and 3480 in IEEE 802.16-05/019 (or database IEEE 802.16-05/12r3) and comment 4384 in IEEE 802.16-05/23r5. All these comments address the improper usage of SS versus MS versus FSS. The resolution of the group was: "Change all SS to MS in 802.16e draft for new text or modified text; do not change SS in unmodified/duplicated instances. Delete the definition of FS" for the first set of comments from 05/12r3. For comment 4384, there was not even a reason given for rejection!

I feel this is a major problem with the amendment and it is not being corrected by the group. Here is one example of the problem: if one looks at the text changes in 6.3.2.3.26 De/Re-register command (DREG-CMD) message, specifically at Table 55--Action codes and actions. All action codes are now defined for MSs, not SSs. This tells me that there are now no action codes for a fixed SS.

In my mind an SS can be either a mobile SS or a fixed SS. MS is only a mobile SS.

I provided an extensive list of modifications in a previous recirc ballot to clean this problem up, but I do not believe they were considered by the Ballot resolution committee. I will not provide "specific text" again, only to have it ignored. Phil Barber also submitted a contribution at the meeting in Sorrento to try to clean up the problem for the MAC section but not part of it was accepted.

This problem will become very apparent when this amendment is eventually integrated with 802.16-2004 to form a new revision.

Suggested Remedy

Fix up the usage of MS versus SS, such that the text does not break the operation of fixed systems. Phil Barber made some concerted effort at Session 37 in Sorrento to fix the problem in the MAC section (refer to comment 4001), but the entire contribution was rejected by the group. I would recommend reviewing it again, as well as comments 3034, 3233, 3269, 3474 and 3480 in IEEE 802.16-05/019.

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

MS/SS use was extensively cleaned up for D10.

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