Document under Review: P802.16e/D5   **Ballot Number:** 0000754   **Comment Date**

Comment # 0033   **Comment submitted by:** Carl   Eklund   Member   2004-11-04

Comment   Type Technical, Binding   **Starting Page #** 4   **Starting Line #**   **Fig/Table#**   **Section** 6.3.21.1

Several issues:

The reference model does not include an entitiy called the Paging Controller which is as it should be. Therefore no reference should be made to such an entity. Additionally the retention of information in the network after a MSS enters Idle mode is totally up to the configuration of the network. There is no need to negotiate it between MSS and BS. Additionally the parameters mentioned in the text are currently not allowed parameters for the DREG-REQ and DREG-CMD messages which again is the things should be.

Obviously there is a timer somewhere in the network (outside the scope of the air interface). Now the based on the information it receives in the DREG-CMD it wakes up to look for a message that there is something for it on its way. If the network is badly designed the information might not get to the MSS, but that is not an issue of the air interface.

On location updates: There is some empty text on Location Updates in this fuzzy section. If location updates are needed (which they should be) it would be dersirable that the protocol was clearly defined without any unecessary sugarcoated BS.

Suggested Remedy
Change lines 4-27 to :

 The MSS shall maintain an Idle Mode Timer to prompt MSS Idle Mode Location Update activity
and demonstrate MSS continued network presence
Idle Mode Timer and Idle Mode System Timer shall start on Serving BS transmission
of DREG-CMD directing MSS transition to Idle Mode. Idle Mode Timer and Idle Mode System
Timer shall reset on any successful MSS network Idle Mode Location Update. Upon expiry of the Idle Mode System
Timer the MSS shall delete any state information learned during operation.

Proposed Resolution   Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group   Decision of Group: Rejected

Motion from the floor to create a definition for Paging controller and add to section 3:
"Paging Controller: the Serving BS or other network entity administering Idle Mode activity for the MSS"

Reason for Group's Decision/Resolution
The vote on the motion from the floor to add a Paging Controller definition failed: For - 1 Against - 9
While the group agrees that the Paging controller is not defined, the proposed remedy deletes too much other material to be considered acceptable.

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: **P802.16e/D5**   **Ballot Number:** **0000754**   **Comment Date**

Comment # **0034**   **Comment submitted by:** Carl   Eklund   Member   2004-11-04

Comment   **Type** Technical, Binding   **Starting Page #** 4   **Starting Line #** 1   **Fig/Table#**   **Section** 1.4.3.1

The current reference model does not support soft hand over. It is not clear where protocols are terminated, especially on the control plane and what happens in potential race conditions.

This comment does not contest or affirm the usefulness of the concept in the standard. The point is that the group should not introduce insufficiently defined features. If it is included it should be defined in a way that a) fits the reference model, b) offers the protocol to deal with new events that will occur as a result of this added feature.

Suggested Remedy

Delete everything that has to do with soft hand over or rewrite the reference model in such a way that is supports it witout breaking the legacy protocol.

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

Reason for Recommendation

The commenter has not provided sufficient text to determine exactly what needs to be changed.

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

Reason for Group's Decision/Resolution

The commenter has not provided sufficient text to determine exactly what needs to be changed.

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: **P802.16e/D5**   **Ballot Number:** **0000754**   **Comment Date**

Comment # **0128**   **Comment submitted by:** Jonathan   Labs   Member   2004-11-04

Comment   **Type** Technical, Binding   **Starting Page #** 14   **Starting Line #** 16   **Fig/Table#**   **Section** 6.3.2.1

I believe there is a backward compatibility issue with respect to the MAC header formats. In P802.16-REVd/D5, p. 35, line 51 it states:

"Two MAC header formats are defined. The first is the generic MAC header that begins each MAC PDU
containing either MAC management messages or CS data. The second is the bandwidth request header used
to request additional bandwidth. The single-bit Header Type (HT) field distinguishes the generic MAC
header and bandwidth request header formats. The HT field shall be set to zero for the Generic Header and
to one for a bandwidth request header."

But in P802.16e/D5, three new additional MAC headers have been defined:
--Phy channel report header with HT = 1
--Mode selection feedback header with HT = 1
--BW request and UL Tx power report header with HT = 0

A fixed base station will use the HT field to determine if the MAC message is generic or a bandwidth request. It has no knowledge of the other
three types that a MSS might send. It seems to me that if a fixed BS receives, for example a Phy channel report header and tries to interpret the
message as a bandwidth request, unpredictable results will occur.

It seems to me the functionality of these special MAC headers (and it was not clear how the Phy channel report header and the BW request and UL
Tx power report header are to be used) should instead be put into MAC management messages and placed under Section 6.3.2.3.2. Or they
should be deleted all together (the Mode Selection Feedback functionality is already handled in a subheader and does not also need to have a
special MAC header).

Suggested Remedy

Delete Sections 6.3.2.1.3, 6.3.2.1.4, and 6.3.2.1.5.

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

Delete Sections 6.3.2.1.3, 6.3.2.1.4, and 6.3.2.1.5.

Reason for Recommendation

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

Reason for Group's Decision/Resolution

The commenter is incorrect. There is no backward compatibility issue, therefore these changes are not required.

Group's Notes

Group's Action Items

Document under Review: **P802.16e/D5**   **Ballot Number:** **0000754**   **Comment Date**

Comment # 0280   **Comment submitted by:** Carl   Eklund   Member   2004-11-04

Comment   Type Technical, Binding   **Starting Page #** 29   **Starting Line #** 21   **Fig/Table#** 55a   **Section** 6.3.2.3.26

The editorial instruction is totally wrong. Not all changes are shown with revision marks. Also the proposed change breaks the fixed standard. A MSS is a SS but the reverse is not true.

Suggested Remedy

Fix the editorial instruction and the content of the table.

Proposed Resolution   Recommendation: Accepted   **Recommendation by** Phil Barber

Adopt text in contribution 568.

Reason for Recommendation

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

Accept the changes in contribution IEEE C802.16e-04/568.

Reason for Group's Decision/Resolution

The accepted contribution provides the requested editorial instruction changes.

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Are these new entries? Or have they been modified? Require contribution 568 details.

Editor's Action Items

Document under Review: **P802.16e/D5**   **Ballot Number:** **0000754**   Comment Date

Comment # **0411**   **Comment submitted by:** Mika   Kasslin   Member   2004-11-04

Comment   **Type** Technical, Binding   **Starting Page #** 62   **Starting Line #** 31   **Fig/Table#**   **Section** 6.3.2.3.47

The neighbor advertisement message as described would be quite awful to decode and parse in a batter power terminal with all the possible information available one can imagine. Such a message doed not only mean a lot of management overhead but will really be quite power hungry to parse in a mobile.

Suggested Remedy

Simplify the message a lot. Please consider if it's really necessary to provide all the detailed service and resource information for every neighbor. Same applies to all the information currently in the message.

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

Reason for Recommendation

The commenter provided no text

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

Accept the changes proposed in contribution IEEE C802.16e-04/438

Reason for Group's Decision/Resolution

Although the commenter provided no text, the referenced contribution, which was accepted under comment #406, addresses the commenters concerns.

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: **P802.16e/D5**   **Ballot Number:** **0000754**   **Comment Date**

Comment # **0588**   **Comment submitted by:** Jonathan   Labs   Member   2004-11-04

Comment   **Type** Technical, Binding   **Starting Page #** 94   **Starting Line #** 59   **Fig/Table#**   **Section** 6.3.13.1.4

A mechanism for MBS support is needed for the OFDM PHY.

Suggested Remedy

1) On p. 92, line 24, insert the following:

6.3.7.5 Map relevance and synchronization

[Modify the second paragraph in Section 6.3.7.5 to:]

Information in the DL-MAP pertains to the current frame (the frame in which the message was received), unless the DL-MAP refers to bursts in an MBS zone. If the DL-MAP is specifying a burst in an MBS zone, then the map relevence may be for subsequent frames. Information carried in the UL-MAP pertains to a time interval starting at the Allocation Start Time measured from the beginning of the current frame and ending after the last specified allocation. This timing holds for both the TDD and FDD variants of operation. The TDD variant is shown in Figure 46 and Figure 47. The FDD variant is shown in Figure 48 and Figure 49.

2) On p. 95, change line 6 from:

"MBS zone may be associated with a CID for a multicast and broadcast service. Therefore, one BS may have multiple MBS zone identifiers. (see 8.4.5.3.10)"

to

"MBS zone may be associated with a CID for a multicast and broadcast service. Therefore, one BS may have multiple MBS zone identifiers. (see 8.3.6.2.10 for OFDM and 8.4.5.3.10 for OFDMA)"

3) On p. 158, line 53, modify the row to :

| Extended DIUC | 4 bits | 0x~~05~~07 .. 0x0F |

4) On p. 158, line 23, insert:

"8.3.6.2.10 Multicast and Broadcast Service MAP IE (MBS_MAP_IE) Format
In the DL-MAP a BS providing MBS (see 6.3.13.1) may transmit an extended IE with value of
0x06 to indicate that subsequent allocations are in an MBS zone.

Table 242c--MBS_MAP_IE Format

Syntax	Size	Comments	
MBS_MAP_IE {			
Extended DIUC	4 bits	MBS_MAP = 0x06	
Length	4 bits	Length = 0x1	
MBS_ZONE	7 bits	MBS Zone identifier corresponds to the identifier provided by the BS at connection initiation	
Macro diversity enhanced	1 bit	0 = Non Macro-Diversity enhanced zone 1 = Macro-Diversity enhanced zone	
}			

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

Reason for Group's Decision/Resolution
The commenter's proposed remedy is only a partial solution for MBS for OFDM. Other areas, such as security, are not addressed.

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: P802.16e/D5   **Ballot Number: 0000754**   **Comment Date**

Comment # 0619   **Comment submitted by:**   Carl   Eklund   Member   2004-11-04

Comment   **Type** Technical, Binding   **Starting Page #** 98   **Starting Line #** 48   **Fig/Table#**   **Section** 6.3.17

The fundamental mistake was already done in 802.16-2004 but since most of the text is going to change we could correct the problem now.

The problem is that H-ARQ is not a MAC layer function. This is stated clearly on line 57. ' ... and an H-ARQ packet formed by adding a CRC to the PHY PDU' .

Suggested Remedy

Move the text on H-ARQ to the appropriate PHY section. Even better define a H-ARQ sublayer.
Also move 6.3.17.1

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Although the comment has merit, the current text specifically states that "H-ARQ may be supported only for the OFDMA PHY" (See section 6.3.17, paragraph 1), therefore there is no technical error requiring a change in the draft.

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: **P802.16e/D5**   **Ballot Number:** **0000754**   **Comment Date**

Comment # **0802**   **Comment submitted by:** Vladimir   Yanover   Member   2004-11-04

Comment   **Type** Technical, Binding   **Starting Page #** 119   **Starting Line #** 57   **Fig/Table#**   **Section** 6.3.20.2.6

There are many ambiguous and incomsistent elements in specification of SHO and FBSS.
The following is a list of issues

1. There is a need in detailed specification of PHY scenarios for SHO/FBS [similar to "SHO Based Macro-Diversity Transmission Scenarios" in IEEE C802.16e-04/170r1]. For MAC operations there is a big difference between RF level combining, soft combining and selection diversity.

2. The assumption of SHO is that state machines of MAC [of specific connections] at all BSs from Active Set are tightly synchronized. At SHO two BSs must transmit SAME PHY BURST at DL that means concatenation of same MAC PDUs with same payloads, headers/subheaders, CIDs, BSNs. Can it be practically implemented other way than having a single MAC processor in which the whole burst payload is being built and then distributed to several BS transceivers? Obviously not all BSs will be implemented this way. It means that ability to participate in Active Set must be not an individual capability of BS but GROUP capability [group consists of BSs having "common MAC processor"]. So the standard needs a language to describe capability of this type. There must be a definition of process MSS follows to learn such group capability. Possible implementation: a "L1 combining group ID" might be assigned to relevant BSs so that if for two BSs "group IDs" are equal, they have "common MAC processor" and therefore may be a part of same Active Set.

3. All other topics of standard consider one MSS - one BS relationship. SHO/FBSS topic is the only one that considers one MSS - many BSs relationship. So there is a need in definition of "anchor BS -MSS", "non-anchor BS - MSS" etc. relationship. Operations [like "Anchor BS update"] must be described in these terms. See also #4.

4. It is not clear from tte text at which BS the MSS is registered while in SHO/FBSS state. According to the rest of definitions in 802.16-2004/802.16e, MSS is either registered at certain BS [then having specific connections associated with specific Service Flows, security context etc.] or it is not [and then there is no network data transfer between the MSS and the BS]. If the answer is that MSS in SHO/FBSS state is not registered to any BS then there are no authentication relationship and no MAC connections between BSs and MSS and therefore most of MAC definitions is not applicable.

5. There is a need in certain set of conditions (assumptions) for SHO/FBSS procedures to be applicable (like frame clock synch - see examples in original contribution #171r1).

6. Definitions of terms SHO and FBSS are absent (see contribution #171r1).
Why described "SHO" ["FBSS"] procedure is referred to as "handover"? MSS may stay registered at certain BS just using diversity combining of any sort. Seems more logical to redefine "SHO state" as e.g. "L1 combining with respect to Active Set X " [FBSS as "L2 combining"], both not necessarily related to any HO. Then handover of certain type will include a phase when the MSS is in "SHO" state.

7. Combining SHO and FBSS specs in same sections makes text too complicated

8. There are numerous locations where text appears incomplete. Examples:
A. "When operating in FBSS, the MSS only communicates with the Anchor BS for UL and DL unicast messages
and traffic. When operating in SHO, the MSS communicates with all BSs in the Active Set for UL and
DL unicast messages and traffic. " Questions: how broadcast (multicast) data is delivered? Does MSS in FBSS communicates only to Anchor BS? [If yes, how is it different from regular communication MSS-BS?]
B. "The second method is the MSS monitors all the BSs in the Active Set for DL control information and DL broadcast messages". Question: does it mean that all named messages [e.g.DL-MAP] must have same content when transmitted from different BSs? [impossible because of difference in BS ID]

Seems reasonable to stop here.

Above problems make impossible to understand the procedures related to SHO/FBSS. For example, how MSS transitions from state "registered at a single BS" to state "communicates simultaneously to several BSs" . So the whole concept of soft combining needs reconsideration

Suggested Remedy

Either modify text to fix mentioned problems or delete sections 6.3.20.2.6

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

Reason for Recommendation

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

During comment resolution the following remedies were adopted:

Remedy 1: In section 6.3.20.1.1.1 page 128.
Delete section 6.3.20.1.1.1 "Neighbor preference"
Change in Table 106d "Hand Off Neighbor Preference" field to reserved bits
Delete text at p. 80
"Handoff Neighbor Preference
Defines the logical preference for handing off to a neighbor base stations as determined by the
serving base station (see section 6.3.20.1.1.1)"

Remedy 2: Accept the changes proposed in contribution IEEE C802.16e-05/003r3.

Reason for Group's Decision/Resolution

The text was modified to conform with an updated contribution (IEEE C802.16e-05/003r3) provided by the commenter.

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16e/D5**   **Ballot Number:** **0000754**   Comment Date

Comment # **0882**   **Comment submitted by:** Carl   Eklund   Member   2004-11-04

Comment   Type Technical, Binding   **Starting Page #** 129 **Starting Line #** 60   **Fig/Table#**   **Section** 6.3.21

This is a standard, not marketing material!

Suggested Remedy

Delete lines 60-64

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

Reason for Group's Decision/Resolution

The text in question is considered beneficial to the propoer understanding of idle mode.

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: **P802.16e/D5**   **Ballot Number:** **0000754**   Comment Date

Comment # **0883**   **Comment submitted by:** Carl   Eklund   Member   2004-11-04

Comment   **Type** Technical, Binding   **Starting Page #** 130   **Starting Line #** 1   **Fig/Table#**   **Section** 6.3.21

The text on BS paging groups is irrelevant to the MSS Idle Mode as the heading of 6.3.21 idle mode is local to the MSS. The text contains mostly speculation, and speculation should not be included in a standards document.

Suggested Remedy

Delete text from lines 1 to 53.

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

The text in question is beneficial to the proper understanding of idle mode.

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: **P802.16e/D5**   **Ballot Number:** **0000754**   **Comment Date**

Comment # **1007**   **Comment submitted by:**   Tal   Kaitz   Member   2004-11-04

Comment   Type Technical, Binding   **Starting Page #** 147   **Starting Line #**   **Fig/Table#** 309   **Section** 8.4.6.1.2.2

[on behalf of Ran Yaniv]

There are several errors in the FUSC subcarrier allocation tables 309a-c and related text:

1) In table 309a-c - number of pilots in each set is wrong..

2) The number of used subcarriers in FUSC for FFT-512 and FFT-128 (tables 309c and 309d respectively) leads to an assymetric frequency spectrum (Nused including DC subcarrier is even).

3) FFT-512 and FFT-1024: some constant pilots overlap variable pilots when the 6-subcarrier shift is applied on the variable sets, leading to several subcarriers that are not allocated to pilots or data.

Suggested   Remedy
Apply the following corrections:

1) Table 309a:
[Apply the following changes to existing table entries:]

VariabeSet #0   ~~12~~ **36**
ConstantSet #0   ~~2~~ **6**   39,~~330~~ **333**,351,645,~~726~~ **729**,850
VariabeSet #1   ~~12~~ **35**
ConstantSet #1   ~~2~~ **5**   261,~~342~~ **345**,~~522~~ **525**,651,848

2) Table 309b:
[Apply the following changes to existing table entries:]

Number of Guard Subcarriers, Left ~~43~~**42**
Number of Used Subcarriers (Nused)   ~~426~~**427**
VariabeSet #0   ~~6~~ **18**
ConstantSet #0   ~~1~~ **3**   39, ~~330~~ **333**, 351
VariabeSet #1   ~~6~~ **18**   12,36,60,84,108,132,156,180,204,228,252,276, 300,324,348,372,396, **420**
ConstantSet #1   ~~1~~ **3**   261,~~342~~ **345**, ~~420~~**117**

3) Table 309c:
[Apply the following changes to existing table entries:]

Number of Guard Subcarriers, Left ~~11~~**10**
Number of Used Subcarriers (Nused)   ~~106~~**107**
VariabeSet #0   ~~2~~**5**
ConstantSet #0   1   ~~N/A~~**39**
VariabeSet #1   ~~2~~**4**
ConstantSet #1   ~~1~~**0**   N/A

Proposed Resolution   Recommendation: Recommendation by

Reason for Recommendation

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

This comment is superseded by comment #1341, the resolution of which is repeated below

Accept the changes in contribution IEEE C802.16e-04/410r1

Reason for Group's Decision/Resolution

The accepted contribution makes corrections to the symbol structure in scalable OFDMA modes

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: **P802.16e/D5**   **Ballot Number:** **0000754**   **Comment Date**

Comment # **1010**   **Comment submitted by:**   James   Gilb   Member   2004-11-04

Comment   **Type** Technical, Binding   **Starting Page #** 147   **Starting Line #** 25   **Fig/Table#**   **Section** 7.8.1.2.2

The cross refernces (See 7.x.x.x) are missing 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:** **Accepted**

Provide the correct subclause numbers here and throughout the draft, e.g., search for x.x.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes   **Editor's Actions**   c) instructions unclear

Editor's Questions and Concerns

What are the correct subclauses that are supposed to go in here?

Editor's Action Items

Document under Review: **P802.16e/D5**   **Ballot Number:** **0000754**   **Comment Date**

Comment # **1080**   **Comment submitted by:** Mika   Kasslin   Member   2004-11-04

Comment   **Type** Technical, Binding   **Starting Page #** 158   **Starting Line #** 65   **Fig/Table#**   **Section** 8.3.10.1.2

There seem to be no changes at all to EVM requirements set in the base standard. Those figures are reasonable for a mains powered fixed CPE but for a battery powered mobile terminal requirements are too expensive to implement.

Suggested Remedy

Please provide few dB more relax EVM requirements for mobile terminals.

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

Reason for Recommendation

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

Refer to comment #1079

Reason for Group's Decision/Resolution

This comment is essentially identical to comment # 1079, which was rejected for the following reasons:

1) The commenter has not provided any suggested text
2) The requirements set in the fixed standard 802.6-2004 were based on performance level considerations which carry over to mobile
3) The EVM requirements set in 802.16-2004 are commensurate with industry practice for OFDM such as 802.11a

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: **P802.16e/D5**   **Ballot Number:**   **0000754**   **Comment Date**

Comment #   **1107**   **Comment submitted by:**   Tal   Kaitz   Member   2004-11-04

Comment   **Type**   Technical, Binding   **Starting Page #**   161   **Starting Line #**   48   **Fig/Table#**   **Section**   8.4.4.6.3

The definition of the AAS Downlink preamble is not clear.
It is not clear what is the sector number (s= 0~3) and what n signifies.
It is not clear what is the boosting to implied The value of 9dB, as in the frame preamble, is too high. Unlike the frame preamble, this preamble does not provide low PAPR, and all its subcarriers are modulated.

Suggested Remedy
Clarify or replace text

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

Reason for Recommendation

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

Remove lines 37-41 and lines 45-60.

Reason for Group's Decision/Resolution
This clarifies the text.

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: **P802.16e/D5**   **Ballot Number:** **0000754**   **Comment Date**

Comment # **1110**   **Comment submitted by:** Tal   Kaitz   Member   2004-11-04

Comment   **Type** Technical, Binding   **Starting Page #** 162   **Starting Line #**   **Fig/Table#**   **Section** 8.4.5.3.2, 8.4.5.4.4

[on behalf of Ran Yaniv]

There are several duplicate extended DIUCs in use throughout section 8.4.5.3. As a result, a total of 18 extended DL IEs are defined while there are only 16 available extended DIUCs.

Suggested Remedy

Define a second layer of extended DIUCs and UIUCs
----

1. Add the following text before the end of section 8.4.5.3.2

In addition, a BS may transmit DIUC=15 with extended DIUC=15 to indicate that the extended IE conforms to the structure shown in table 275a. A station shall ignore an extended IE entry with an extended[2] DIUC value for which the station has no knowledge. In the case of a known extended[2] DIUC value but with a length field longer than expected, the station shall process information up to the known length and ignore the remainder of the IE.

Table 275a — DL-MAP extended[2] IE format

Syntax	Size	Notes
DL_Extended_IE() {		
Extended DIUC	4 bits	Extended DIUC = 0x0F
Length	4 bits	Length in bytes of Unspecified data field plus one
Extended[2] DIUC	8 bits	0x00..0xFF
Unspecified data	variable	
}		

2. Add the following text before the end of section 8.4.5.4.4

In addition, a BS may transmit UIUC=15 with extended UIUC=15 to indicate that the extended IE conforms to the structure shown in table 289a. A station shall ignore an extended IE entry with an extended[2] UIUC value for which the station has no knowledge. In the case of a known extended[2] UIUC value but with a length field longer than expected, the station shall process information up to the known length and ignore the remainder of the IE.

Table 289a — UL-MAP extended[2] IE format

Syntax	Size	Notes
UL_Extended_IE() {		
Extended UIUC	4 bits	Extended UIUC = 0x0F

Length	4 bits	Length in bytes of Unspecified data field plus one
Extended[2] UIUC	8 bits	0x00..0xFF
Unspecified data	variable	

}

3. *solve duplicate assignment of extended DIUCs by moving IEs with duplicate extended DIUC to use extended[2] DIUC.*

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

Accept the changes in contribution IEEE C802.16e-05/088.

Reason for Recommendation

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

Accept the changes in contribution IEEE C802.16e-05/088.

Reason for Group's Decision/Resolution

This comment was originally rejected, however, during comment resolution, the cited contribution, which corrects and clarifies the extended DIUC and UIUC text, was accepted.

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: P802.16e/D5	**Ballot Number:** 0000754	**Comment Date**

Comment # 1133   **Comment submitted by:** Tal   Kaitz   Member   2004-11-04

Comment   Type Technical, Binding   **Starting Page #** 165   **Starting Line #**   **Fig/Table#** 281a   **Section** 8.4.5.3.8

[on behalf of Ran Yaniv]

The encoding of the bits in the 'STC' field of the DL zone switch IE has been changed in the previous meeting. This change should be reflected in MIMO_DL_Basic_IE and MIMO_DL_Enhanced_IE.

Suggested   Remedy

1. [Modify table 281a as follows:]

Matrix_indicator   2   STC matrix (see 8.4.8.1.4)
                                                STC = STC mode indicated in the latest STC_Zone_IE().
                                                Ant23 = '2/3 antennas select' as indicated in the latest STC_Zone_IE().
                                                if (STC == 0b~~00~~**01 and Ant23 == 0**) {
                                                        00 = Matrix A
                                                        01 = Matrix B
                                                        10-11 = Reserved
                                                }
                                                elseif (STC == 0b~~01~~**01 and Ant23 == 1) or (STC == 0b10)** {
                                                        00 = Matrix A
                                                        01 = Matrix B
                                                        10 = Matrix C
                                                        11 = Reserved
                                                }
                                                else {
                                                        00 - 11 = Reserved
                                                }

2. [Modify table 282a as follows:]

Matrix_indicator   2   STC matrix (see 8.4.8.1.4)
                                                STC = STC mode indicated in the latest STC_Zone_IE().
                                                Ant23 = '2/3 antennas select' as indicated in the latest STC_Zone_IE().
                                                if (STC == 0b~~00~~**01 and Ant23 == 0**) {
                                                        00 = Matrix A
                                                        01 = Matrix B
                                                        10-11 = Reserved
                                                }
                                                elseif (STC == 0b~~01~~**01 and Ant23 == 1) or (STC == 0b10)** {
                                                        00 = Matrix A
                                                        01 = Matrix B
                                                        10 = Matrix C

```
        11 = Reserved
}
else {
    00 - 11 = Reserved
}
```

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16e/D5**   **Ballot Number:** **0000754**   Comment Date

Comment # **1255**   **Comment submitted by:** Tal   Kaitz   Member   2004-11-04

Comment **Type** Technical, Binding   **Starting Page #** 188   **Starting Line #**   **Fig/Table#**   **Section** 8.4.5.4.14
[on behalf of Ran Yaniv]

The UL PHY modifier IE is defined for the purpose of allowing to distinct between multiple overlapping AAS preambles in SDMA transmissions. However, the UL allocation method does not allow such overlapping allocations: the starting slot of each allocation IE is the slot following the last slot of the previous allocation IE.

Suggested Remedy
Define a new IE AAS_UL_Basic_IE( ) similar in concept to the MIMO_UL_Basic_IE( ):

Section 8.4.5.4.22 AAS UL Basic IE Format

In the UL-MAP, an AAS-enabled BS may transmit UIUC=15 with the AAS_UL_Basic_IE() to describe uplink allocations assigned to AAS-enabled SSs in an AAS zone. The MIMO mode and preamble parameters indicated in the AAS_UL_Basic_IE() shall only apply to the allocations described in the IE.

An AAS-enabled shall track the slot offset within the UL zone by accumulating duration for each layer independently. For the purpose of tracking the slot offset, an AAS-enabled SS shall regard allocations described by a regular UL-MAP_IE as assigned to the first layer.

Table 300a - AAS UL basic IE format

Syntax	Size	Notes
AAS_UL_Basic_IE() {		
Extended_UIUC	4 bits	AAS_BASIC = 0xE
Length	4 bits	variable
Num_Layers	2 bits	
Preamble Type	1 bit	
reserved	1 bit	Shall be set to zero
For (j=0; j<Num_Layers; j++) {		
Layer_Index	2 bits	
CID	16 bits	
UIUC	4 bits	
MIMO_Control	3 bits	0b000: STTD 0b001: SM 0b010: Collaborative SM, pilot pattern A 0b011: Collaborative SM, pilot pattern B 0b100: Non-MIMO 0b101-0b111: reserved
Preamble Shift Index	4 bits	
Duration	10 bits	In OFDMA slots (see 8.4.3.1)

reserved	1 bit	Shall be set to zero

```
}
If (! byte boundary) {
        Padding nibble          4 bits          Padding to reach byte boundary
    }
}
```

Num_Layers
This value plus one indicates the number of layers for which allocations are described in this IE.

Preamble Type
The preamble type (either frequency-shifted or time-shifted) to use for the allocations defined in this IE (as defined in section 8.4.5.4.14).

Layer_Index
Index of the layer to be used for transmitting this allocation.

CID
Unicast CID to which the allocation is assigned.

MIMO_Control
MIMO_Control field specifies the MIMO mode of the UL burst.

Preamble Shift Index
Either preamble frequency shift index or preamble time shift index, depending on the 'Preamble Type' field. See section 8.4.5.4.14.

Proposed Resolution   Recommendation: Accepted   Recommendation by
Define a new IE AAS_UL_Basic_IE( ) similar in concept to the MIMO_UL_Basic_IE( ):

Section 8.4.5.4.22 AAS UL Basic IE Format

In the UL-MAP, an AAS-enabled BS may transmit UIUC=15 with the AAS_UL_Basic_IE() to describe uplink allocations assigned to AAS-enabled SSs in an AAS zone. The MIMO mode and preamble parameters indicated in the AAS_UL_Basic_IE() shall only apply to the allocations described in the IE.

An AAS-enabled shall track the slot offset within the UL zone by accumulating duration for each layer independently. For the purpose of tracking the slot offset, an AAS-enabled SS shall regard allocations described by a regular UL-MAP_IE as assigned to the first layer.

Table 300a - AAS UL basic IE format

Syntax	Size	Notes
AAS_UL_Basic_IE() {		
Extended_UIUC	4 bits	AAS_BASIC = 0xE
Length	4 bits	variable

```
    Length                         1 bits        variable
    Num_Layers                     2 bits
    Preamble Type                  1 bit
    reserved                       1 bit         Shall be set to zero
    For (j=0; j<Num_Layers; j++) {
            Layer_Index            2 bits
            CID                    16 bits
            UIUC                   4 bits
            MIMO_Control           3 bits        0b000: STTD
                                                 0b001: SM
                                                 0b010: Collaborative SM, pilot pattern A
                                                 0b011: Collaborative SM, pilot pattern B
                                                 0b100: Non-MIMO
                                                 0b101-0b111: reserved
            Preamble Shift Index   4 bits
            Duration               10 bits       In OFDMA slots (see 8.4.3.1)
            reserved               1 bit         Shall be set to zero
    }
    If (! byte boundary) {
            Padding nibble         4 bits        Padding to reach byte boundary
    }
}
```

Num_Layers
This value plus one indicates the number of layers for which allocations are described in this IE.

Preamble Type
The preamble type (either frequency-shifted or time-shifted) to use for the allocations defined in this IE (as defined in section 8.4.5.4.14).

Layer_Index
Index of the layer to be used for transmitting this allocation.

CID
Unicast CID to which the allocation is assigned.

MIMO_Control
MIMO_Control field specifies the MIMO mode of the UL burst.

Preamble Shift Index
Either preamble frequency shift index or preamble time shift index, depending on the 'Preamble Type' field. See section 8.4.5.4.14.

Reason for Recommendation

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

Accept the changes proposed in contribution IEEE C802.16e-05/084r4.

Reason for Group's Decision/Resolution

This comment was originally rejected, however, during comment resolution, the harmonized contribution, to which the commenter is a co-author, containing revisions to both the UL and DL AAS IEs, was accepted.

Group's Notes

PHY

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: **P802.16e/D5**   **Ballot Number:** **0000754**   **Comment Date**

Comment # **1315**   **Comment submitted by:** Tal   Kaitz   Member   2004-11-04

Comment   **Type** Technical, Binding   **Starting Page #** 199   **Starting Line #**   **Fig/Table#**   **Section** 8.4.6

[on behalf of Ran Yaniv]

In AAS systems, it is advantageous to use the same subcarriers in the DL and UL for transmission to an SS. This facilitates obtaining the channel response from the UL transmission by taking advantage of channel reciprocity.

Of the permutations currently defined for the DL channel, only the AMC permutation in the AAS mode supports such symmetric allocations along with assigning training pilots to specific user subchannels. However, this permutation lacks frequency diversity and does not provide ample training information for channel tracking of multiple users (SDMA).

A downlink tile-based permutation similar to the existing UL permutations is beneficial.

Suggested Remedy

Adopt contribution C80216e-04/467 ("Symmetric UL/DL diversity permutations for OFDMA PHY").

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

Reason for Recommendation

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

Superseded by comment #1314

Reason for Group's Decision/Resolution

This comment is superseded by comment #1314, which accepted updated contribution IEEE C802.16e_04/467r8.

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: **P802.16e/D5**   **Ballot Number:** **0000754**   **Comment Date**

Comment # **1532**   **Comment submitted by:** Tal   Kaitz   Member   2004-11-04

Comment   **Type** Technical, Binding   **Starting Page #** 239   **Starting Line #** 34   **Fig/Table#**   **Section** 8.4.8.3.4

The definition of 3 antennas STC is not clear. It is not clear how the 3x4 matrices map to two OFDMA symbols and two subcarriers. Also it not clear what is a 'logical -data-subcarrier_number_for_first_tone_of-code' and how it is related to the Bin structure defined in 8.4.6.3.

Suggested Remedy

Clarify or delete

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

Reason for Recommendation

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

Accept the changes proposed in contribution IEEE C802.16e-04/557r5

Reason for Group's Decision/Resolution

The accepted contribution clarifies the text referred to in the comment.

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: P802.16e/D5   **Ballot Number:** 0000754   Comment Date

Comment # 1550   **Comment submitted by:** Tal   Kaitz   Member   2004-11-04

Comment   Type Technical, Binding   **Starting Page #** 242   **Starting Line #** 29   **Fig/Table#**   **Section** 8.4.8.3.6

It is not clear how the weight coefficients w are mapped to fast-feedback message. Section 8.4.5.4.10.2 and its enhanced counterpart 8.4.5.4.10.6 only define the physical mapping of a single coefficient. It is not clear how to map a matrix of coefficients.

Suggested Remedy

Clarify. It is worth clarifying also for the vector w case. (8.4.8.3.5 etc.)

Proposed Resolution   Recommendation: Recommendation by

Reason for Recommendation

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

Accept the changes proposed in contribution IEEE C802.16e-04/552r7, section 8.4.5.4.10.6

Reason for Group's Decision/Resolution

The accepted contribution clarifies the text cited in the comment.

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: **P802.16e/D5**   **Ballot Number:** **0000754**   **Comment Date**

Comment # **1582**   **Comment submitted by:** Nico   van Waes   Member   2004-11-04

Comment   **Type** Technical, Binding   **Starting Page #** 259   **Starting Line #**   **Fig/Table#**   **Section** 8.4.8.9

[Identical comment submitted by Nico van Waes and Victor Stolpman.]
In Table 314m, the STC subpacket combining is defined for the 4 transmit antenna case. However, it only includes the case where the initial transmission is of spatial rate of 4 symbols/channel use (spatial multiplexing, matrix C).

Suggested Remedy

Adopt text in contribution C80216e-04/477, in which the method currently in the spec is extended to allow the case where the initial transmission has a spatial rate of 2 symbols/channel use.

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

voted 12-7, rejecting contribtion IEEE C802.16e-04/477r1

Reason for Recommendation

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

Reason for Group's Decision/Resolution

This contribution needs more clarification. It is not clear how the second packet is combined with the first packet.
It is also not shown in the document that the proposed scheme is the optimal given the channel condition; for example, the gain is acheived in PER regions that a SS would not normally operate in.

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: **P802.16e/D5**   **Ballot Number:** **0000754**   **Comment Date**

Comment # **1590**   **Comment submitted by:** David   Castelow   Member   2004-11-04

Comment   **Type** Technical, Binding   **Starting Page #** 260   **Starting Line #** 10   **Fig/Table#** 254a   **Section** 8.4.9.1

As defined, the randomiser seed may be all zeros: not a good idea.

DAC45

Suggested Remedy

Page 260, line 20, Make initializer for B5 = 1.

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

Reason for Recommendation

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

This comment was originally rejected. As a result of further comment resolution, it was accepted modified as follows:

Page 362, line 49, Make initializer ([MSB] 0 1 1 0 1 1 1 0 0 0 1 0 1 0 1 [LSB])

Reason for Group's Decision/Resolution

During comment resolution, a different solution was developed and accepted.

Group's Notes

Group's Action Items

Editor's Notes   **Editor's Actions**   i) to do

pg & line #

Editor's Questions and Concerns

Editor's Action Items

Document under Review: P802.16e/D5   **Ballot Number:** 0000754   **Comment Date**

Comment # 1625   **Comment submitted by:** Mika   Kasslin   Member   2004-11-04

Comment   **Type** Technical, Binding   **Starting Page #** 270   **Starting Line #** 13   **Fig/Table#**   **Section** 8.4.12.1

There seems to be no changes to transmit power level control requirements which means that even a mobile terminal should meet the relative accuracy of +/- 0.5 dB. This is somewhat too tight requirement to be met with a reasonable cost implementation.

Suggested Remedy

Relax requirements at leats to +/- 1 dB for a MSS.

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

The commenter has not provided any analysis showing the potential implementation cost savings achieved by changing the requirement from +/- 0.5 dB to +/- 1dB.   Without such analysis, the group is unwilling to relax the stated value, feeling that a +/- 0.5 dB accuracy is attainable at a reasonable cost.

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: **P802.16e/D5**   **Ballot Number:** **0000754**   **Comment Date**

Comment # **1627**   **Comment submitted by:** Mika   Kasslin   Member   2004-11-04

Comment   Type Technical, Binding   **Starting Page #** 270 **Starting Line #** 24   **Fig/Table#**   **Section** 8.4.12.3

EVM requirements inherited from the base standard are too tight for a mobile terminal. Such requirements are impractical for a reasonable size terminal.

Suggested Remedy

Relax EVM requirements for all the burst types.

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Same comment as comment #1626 and similar to comments #1079 and #1080

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: **P802.16e/D5**   **Ballot Number:** **0000754**   Comment Date

Comment # **1640**   **Comment submitted by:**   David   Castelow   Member   2004-11-04

Comment   **Type** Technical, Binding   **Starting Page #** 274   **Starting Line #** 48   **Fig/Table#** 343   **Section**

Remove the explicit mention of Multicast CIDs. There is no need to distinguish these from other Transport CIDs and
certainly the limit of 95 is too small.

Note also that if this change is rejected, the change in line 45 to the CID range will need highlighting as a change.
DAC50

Suggested Remedy
Delete Page 274, lines 48 and 49.
As this is the only change in the table, delete the table in its entirety.
Delete Page 274, lines 33-62.
Then, as the comment following the table is orphaned, add at Page 274, line 63:
[Add at the end of section 10.4:]

If it is felt necessary, adjust the text at page 274, line 64 to the effect
that it includes Multicast CIDs.

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution
There is a need for an idle MS to distinguish Multicast CIDs from normal Transport CIDs for purposes of power savings and traffic management.

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: **P802.16e/D5**　　　**Ballot Number:** **0000754**　　　　　Comment Date

Comment # **1643**　　　**Comment submitted by:** Jonathan　　Labs　　　　　Member　　　2004-11-04

Comment　　**Type** Technical, Binding　　**Starting Page #** 277　**Starting Line #** 1　　**Fig/Table#**　　**Section** 11

Blanks, X's and nn's are not valid values for Type in a TLV.

Suggested Remedy

Specify type values for:

--p. 278, line 8: OMAC Tuple definition
--p. 278, line 47: DCD_settings
--p. 278, line 57: UCD_settings
--p. 280, line 18: Allow AAS Beam Select Messages
--p. 280, line 27: Use CQICH indication flag
--p. 280, line 32: MSS-specific power offset adjustment step

and the many others throughout section 11...

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

No specific text was provided by 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: **P802.16e/D5**   **Ballot Number:** **0000754**   **Comment Date**

Comment # **1851**   **Comment submitted by:** Carl   Eklund   Member   2004-11-04

Comment   **Type** Technical, Binding   **Starting Page #** 311   **Starting Line #**   **Fig/Table#**   **Section** 12

There are no system profiles defined for mobile operation.
The current transmitter EVM requirements defined for the fixed OFDMA SS are not realistic for a MSS. The MSS power amplifier efficiency becomes too low when trying to meet the higher order modulations. For 16 QAM in .16 the efficiency is comparable to 64 QAM in .11 due to constellation error requirements.

Suggested Remedy
Add a system profile
Make 16 QAM optional for a MSS in the uplink.

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution
During comment resolution, the working group did consider additional profiles. However, consensus could not be reached on acceptable text.

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: **P802.16e/D5**   **Ballot Number:** **0000754**   **Comment Date**

Comment # **1867**   **Comment submitted by:** James   Gilb   Member   2004-11-04

Comment   **Type** Technical, Binding   **Starting Page #** 319 **Starting Line #**   **Fig/Table#**   **Section** C

[Page 319-332; various lines]
The following commands are in the figure, but not 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:** **Rejected**

Reason for Group's Decision/Resolution

These messages are backbone messages which are not passed over the air. Appendix C is purely informative text. It is expected that these messages will be defined further in P802.16g.

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: P802.16e/D5   **Ballot Number:** 0000754   **Comment Date**

Comment # 1874   **Comment submitted by:** James   Gilb   Member   2004-11-04

Comment **Type** Technical, Binding   **Starting Page #** 332   **Starting Line #** vario   **Fig/Table#**   **Section** 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:** Rejected

Reason for Group's Decision/Resolution

These messages are backbone messages which are not passed over the air. Appendix C is purely informative text. It is expected that these messages will be defined further in P802.16g.

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: **P802.16e/D5**   **Ballot Number:** **0000754**   **Comment Date**

Comment # 1902   **Comment submitted by:** James   Gilb   Member   2004-11-04

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:** **Rejected**

Reason for Group's Decision/Resolution

This comment was rejected due to the comment's lack of specific text for the empty subclauses, however, it is recognized that such text is needed and it is currently under development by members of the working group.

Group's Notes

Group's Action Items

Editor's Notes   **Editor's Actions**   i) to do

Remove undefined clauses E.1.1 and E.1.2?

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16e/D5**　　　　　**Ballot Number:** **0000754**　　　　　　　**Comment Date**

Comment # **1930**　　　　　**Comment submitted by:** Tal　　　Kaitz　　　　　　　　Member　　　　2004-11-04

Comment **Type** Technical, Binding　　　　　**Starting Page #** 501　　**Starting Line #**　　　**Fig/Table#**　　　**Section** 8.4.4

[on behalf of Ran Yaniv]

In the current IEEE P802.16-2004 specification, a frame contains a single DL-MAP and UL-MAP, each transmitted at a single rate. This constraint leads to large map overheads, especially in AA (Adaptive Antenna) systems where the single broadcast map must be transmitted at a very robust rate in order to bridge the gap between AAS transmissions and broadcast transmissions.

Multiple broadcast maps at varying rates can aid to reduce the resulting map overheads.

Suggested Remedy

Adopt contribution C80216e-04/468 ("Multiple Broadcast Maps for OFDMA PHY").

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

Reason for Recommendation

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

Accept the changes proposed in contribution IEEE C802.16e-05/023r5

Reason for Group's Decision/Resolution

During comment resolution, contribution IEEE C802.16e-05/023r5 was proposed and accepted. The commenter (Ran Yaniv), who had submitted a revised contribution, IEEE C802.16e-04/468r3, withdrew his comment and the associated contribution.

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: **P802.16e/D5**   **Ballot Number:** **0000754**   **Comment Date**

Comment # **1945**   **Comment submitted by:** Jonathan   Labs   Member   2004-11-04

Comment   Type Technical, Binding   **Starting Page #** 865   **Starting Line #** 65   **Fig/Table#**   **Section**

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:** **Superceded**

This comment has been superseded by comment #71.

Reason for Group's Decision/Resolution

This comment has been superseded by comment #71 which changes the usage of MSS and SS.

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: **P802.16e/D5**   **Ballot Number:** **0000754**   Comment Date

Comment # **1955**   **Comment submitted by:** Mika   Kasslin   Member   2004-11-04

Comment   **Type** Technical, Binding   **Starting Page #** 999   **Starting Line #**   **Fig/Table#**   **Section**

Draft does not provide any (good) power save methods which could be used together with real-time services (especially UGS). Sleep-mode as defined in 6.3.19 is not very efficient since it requires the MSS to return to normal mode to receive/transmit data. Such a power save facility is missing, which allows periodic transmissions as per commonly agreed service parameters without exiting a kind of sleep-mode.

Suggested Remedy

Provide a kind of sleep-mode which can be used easily and effectivley in combination with e.g. real-time services with some periodicity in transmissions.

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

Reason for Recommendation

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

Accept the changes as defined in the resolution of comment #634, which are repeated below:

Resolution of comment # 636 provides the following resolution for sleep mode only:

A(1). Accept the changes in contribution IEEE C80216e-04/459r2.pdf
A.(2)
   Accept the changes in contribution IEEE C802.16e-05/28r2 with the following change:
   Change table 13b "Generic Downlink Sleep ~~Header~~Subheader"
B .
   [Page 19, line 44]: MOB_SLP-~~D~~ULC_Message_Format()
   [Page 20, line 36]: MOB_SLP-~~U~~DLC_Message_Format()
   [Page 20, line 7]: Encoded as ~~000~~101b
   [Page 21, line 4]: Encoded as ~~100~~000b
C.
   Modify the MOB_SLP-REQ message in Table 106a, as follows :
      1. Delete 'N_Sleep_CID' in the Table 106a, page 68, line 11.
      2. Move 'HMAC Tuple' from line 17 to line 21 before the last parenthesis.

   Remove N_Sleep_CID from table 106a, change the "For" loop on line 13 to replace "N_Sleep_CID" to "Number of Sleep CIDs"
D.
   1. Insert a new row,'Number_of_Classes', in tables 106a (line 21), and 106b (line 12), as follows:

Syntax	Size	Notes

   MOB_SLP-RSP_Message_Format() {
      Management message type = 51   8 bits
      Number_of_Classes   8 bits   Number of Power Saving Classes
      for (i=0;i<Number_of_Classes;i++) {
E.

[In 6.3.19.2 Power Saving Classes of type 1, page 124, line 51, add the text as follows.]

For definition and/or activation of one or several Power Saving Classes of Type 1 the MSS shall send MOB_SLP-REQ; the BS shall   respond with an MOB-SLP_RSP message. The MSS may retransmit MOB-SLP-REQ message if it does not receive the MOB-SLP-RSP   message within the T30 timer.

[In 6.3.19.3 Power Saving Classes of type 2, page 126, line 1, modify the text as follows.]

Power Saving Classes of this type are defined/activated/deactivated by MOB_SLPREQ/MOB_SLP-RSP transaction. The MSS may retransmit MOB-SLP-REQ message if it does not receive the MOB-SLP-RSP message within the T30 timer.

[In 6.3.19.4 Power Saving Classes of type 3, page 126, line 19, modify the text as follows.]

Power Saving Classes of this type are defined/activated by MOB_SLP-REQ/MOB_SLP-RSP transaction. The MSS may retransmit MOB-SLP-REQ message if it does not receive the MOB-SLP-RSP message within the T30 timer.

F.
    section 6.3.19.1 of C80216e-04_459r2.pdf , Figure NNN should be Figure 130a.
    section 6.3.20.2 , Figure 0a should be Figure 130b.
    section 6.3.20.2.1, Figure 0b should be Figure 130c.
    section 6.3.20.5, Figure 0c should be Figure 130d.
    section 6.3.20.5, Figure 0d should be Figure 130e.
    section 6.3.20.2.6.2.2, Table 131 looks more like a figure (Figure 130f) (and if not then it should be Table 131a).

Reason for Group's Decision/Resolution

Although the commenter provided no suggested text for the group to review, during comment resolution , contribution IEEE 802.16e-04/459r2 was accepted under comment #634 and #636. This contribution provides the requested remedy.

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