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 entity 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 I) none needed

Editor's Questions and Concerns

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 I) none needed

Editor's Questions and Concerns

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

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

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

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

Decision of Group: Accepted Resolution of Group

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.

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 I) none needed

Editor's Questions and Concerns

IEEE 802.16-05/010r3

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 (1) none needed

Editor's Questions and Concerns

Comment Date

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

5000

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 I) none needed

Editor's Questions and Concerns

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 I) none needed

Editor's Questions and Concerns

Comment # 1010

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

Comment submitted by: James

Member 2004-11-04

Comment Date

Section 7.8.1.2.2 Type Technical, Binding Starting Page # 147 Starting Line # 25 Comment

Gilb

Fig/Table#

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

Decision of Group: Accepted Resolution of Group

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?

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 I) none needed

Editor's Questions and Concerns

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

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 I) none needed

Editor's Questions and Concerns

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 I) none needed

Editor's Questions and Concerns

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 I) none needed

Editor's Questions and Concerns

IEEE 802.16-05/010r3

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 I) none needed

Editor's Questions and Concerns

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

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?

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

IEEE 802.16-05/010r3

Comment Date

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

Ballot Number: 0000754

Comment Type Technical, Binding Starting Page # 339 Starting Line # 14 Fig/Table# Section E

This annex has empty subclauses, e.g., E.1.1

Document under Review: P802.16e/D5

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

IEEE 802.16-05/010r3

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 |) none needed

Editor's Questions and Concerns

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 HeaderSubheader"
B.

[Page 19, line 44]: MOB_SLP-DULC_Message_Format()
[Page 20, line 36]: MOB_SLP-UDLC_Message_Format()
[Page 20, line 7]: Encoded as 000101b
[Page 21, line 4]: Encoded as 100000b
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. <u>The MSS may retransmit MOB-SLP-REQ message if it does not receive the MOB-SLP-RSP message within the T30 timer.</u>

[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 I) none needed

Editor's Questions and Concerns