Comment on P802.16e/D6
Part 16: Air Interface for Fixed and Mobile Broadband Wireless Access Systems
Amendment for Physical and Medium Access Control Layers for Combined Fixed
and Mobile Operation in Licensed Bands
2005 February 22

General:

The document is fairly well done with respect to adherence to the SI. However
a few places need some cleaning up.

Generally this amounts to checking to ensure that quantity symbols are in
slanted typeface, except within code listings of course. In contrast, math and unit
symbols are to be in upright typeface. Note the incorrectly slanted “dB” in the equation 107 series. Along those lines, units and their symbols are algebraic
entities. Thus, in equation 107c, the third line would read
\[ \frac{S}{N} > (27 - \Delta) \text{ dB} \]
and so forth. The meaning of \( \Delta \) is given below that and one sees that it is purely numerical (as is the number 27 above), that is, of dimension 1.

Also, it should be pointed out that subscripts are treated separately in this regard. Perhaps some of the subscripts in equation 138 series, for example,
are not variables but merely qualification indications and thus should be upright. This may be something that occurs elsewhere in the document, as well.

The symbol for second is s, not sec as is seen in table 342a and perhaps elsewhere. Similarly, the symbol for millisecond is ms and not msec.

Spaces should appear between the numbers and unit symbols; these are missing in table 342a and perhaps elsewhere.

Summary:

The emendations needed in this document to deal with the above is editorial in nature so the document should not need recirculation after that is
done—at least from the point of view of SCC14. However, the document is quite complicated and it would best be done by the WG and not left to the IEEE
editorial staff.

James R. Fry sing er
Vice Chair, SCC14
j.frysinger@ieee.org (aliased to frysingerj@cofc.edu)

Suggested Remedy

Proposed Resolution Recommendation: Accepted Recommendation by
Resolution of Group: Accepted

Reason for Recommendation

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Generally this amounts to checking to ensure that quantity symbols are in slanted typeface, except within code listings of course. In contrast, math and unit symbols are to be in upright typeface. Note the incorrectly slanted “dB” in the equation 107 series. Along those lines, units and their symbols are algebraic entities. Thus, in equation 107c, the third line would read

$$\frac{S}{N} > (27 - \Delta) \text{dB}$$

and so forth. The meaning of $\Delta$ is given below that and one sees that it is purely numerical (as is the number 27 above), that is, of dimension 1.

Also, it should be pointed out that subscripts are treated separately in this regard. Perhaps some of the subscripts in equation 138 series, for example, are not variables but merely qualification indications and thus should be upright. This may be something that occurs elsewhere in the document, as well.

The symbol for second is s, not sec as is seen in table 342a and perhaps elsewhere. Similarly, the symbol for millisecond is ms and not msec.

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James R. Fryninger
Vice Chair, SCC14
j.fryninger@ieee.org (aliased to fryningerj@cofc.edu)
I fixed the specific places he referred and a several others that I found using the search engine. However, equations should always be looked at to make sure they use the italic and upright text correctly.

**Editor's Notes**

I submitted 18 comments, but only 3 were answered in the files that were provided. I am repeating essentially all of my comments because the group did not bother to address them.

**Suggested Remedy**

The group needs to make sure that all comments are addressed before going out to ballot.

**Proposed Resolution**

**Recommendation by**

**Reason for Recommendation**

**Resolution of Group**

**Decision of Group: Accepted**

All comments, including those of Mr. Gilb, have always been, and will continue to be, addressed.

In the previous recirculation package, we recirculated the responses to all four of Mr. Gilb's comments that he had marked as "Technical". We did not recirculate the responses to the 14 comments Mr. Gilb had marked as "Editorial". In the current recirculation, we will provide access to the responses to editorial as well as technical comments.

**Group Notes**

**Group Action Items**

**Editor's Notes**

**Editor's Actions**

**Editor's Questions and Concerns**

**Editor's Action Items**
The level of editorial problems with this draft is such that even a 40 day ballot would not be sufficient to list all of them in detail.

**Suggested Remedy**

Spend some time to fix the draft so that it adheres to the 2005 IEEE Style Guide and have a 40 day ballot to review the draft.

**Proposed Resolution**

**Recommendation:** Accepted-Modified

**Reason for Recommendation**

Substantial editorial changes are being implemented in the standard and will comply with 2005 style guidelines.

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

**Decision of Group:** Accepted-Modified

The 2005 Style Manual is actually in the "review" stages at this point. Sections of it still have to be presented to ProCom. The important change that is being implemented now is to the reference clause. The title has been changed to "Normative References," which I did, but the group will have to change the introductory paragraph as needed. See the Style Guide for more info.

**Editor’s Action Items**

1) none needed
The tables lack a uniform application of borders. It is both distracting and unprofessional. The first draft to ballot might have some of these, but a recirculation should not have the level of editorial mistakes that is present in this draft.

Suggested Remedy
Fix all of the table to use the correct borders as per the 2005 IEEE Style Guide.

Proposed Resolution Recommendation: Fix all of the table to use the correct borders as per the 2005 IEEE Style Guide.

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Fix all of the table to use the correct borders as per the 2005 IEEE Style Guide.

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes
They seemed fine to me.

Editor’s Questions and Concerns

Editor’s Action Items
There are many editorial changes that are needed, but may take some technical expertise to understand the correct solution. These have been documented in the dvj80216lists.pdf file [IEEE C802.16e-05/180] that I sent, on the page labelled Unclear Questions.

Suggested Remedy
The Chief editor should review these questions, incorporate the changes that are clearly editorial. Questions that are technical should be partitioned out and resolved by the working group.

Proposed Resolution  Recommendation: Accepted
Adopt the changes listed in C802.16e-05/180

Reason for Recommendation

Resolution of Group  Decision of Group: Accepted
Adopt the changes listed in C802.16e-05/180

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes  Editor's Actions  k) done

Editor's Questions and Concerns

Editor's Action Items
There are many editorial changes that are needed, that are extensive but clear to the average editor. These have been documented in the dvj80216lists.pdf file [IEEE C802.16e-05/180] that I sent, on the page labelled Clear Questions.

**Suggested Remedy**
Due to the extensive changes, the best thing might be to illustrate these changes via change-bars that would illustrate how the document would (if accepted) be affected.

**Proposed Resolution**

**Recommendation by**

**Reason for Recommendation**

**Resolution of Group**

**Decision of Group: Accepted**

Due to the extensive changes, the best thing might be to illustrate these changes via change-bars that would illustrate how the document would (if accepted) be affected.

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

**Group’s Notes**

**Group’s Action Items**

**Editor’s Notes**

**Editor's Actions** k) done

**Editor's Questions and Concerns**

**Editor's Action Items**
Many of the tables have implied subtable listings, which enumerate the specific values of the row’s variable, for example.

These are done in a rather adhoc and confusing fashion.

Problems include:
1) Only about 1/4 of the page is available for text, since the text must be within the cell.
2) Its hard to use tables and other techniques with the table cell.
3) Some table cells have grown to nearly a page, which is not only ugly, but limits the ability to assert new changes (which could overflow a page) in the future.
4) Text is often repeated afterwards, causing confusion over which is the correct one.

**Suggested Remedy**

Insert a narrow "Row" number column within such tables.
Then, below the table, include extended definitions of the rows (as is now being done). These can be written as:

Row 1: The meaning of the 2-bit foobar field depends on the farout mode value, as listed in the table below.

--- TABLE PROVIDED ---

I can show how this was done well within 802.17, and may be able to take a more 802.16 specific example to illustrate how this could be done.
The new draft defines FS and MS for fixed and mobile subscribers. Then throughout the document, there is no more occurrence of FS, and most references to SS and MSS are replaced with MS, even including sections that clearly apply to both MS and FS such as the common MAC portions and Privacy sublayers, etc. Clearly, certain functions specific to MS or FS or both can be for technical and regulatory reasons. Thus, without knowing whether this was an editorial error, or a deliberate technical decision, I regret to vote No with technical comments to ensure a resolution.

Suggested Remedy
The definitions and the superceding relationship between FS, MS, SS must be clarified further in the definitions section. The use of FS, MS, SS shall be consistently applied throughout the document, based on technical or other reasons to limit certain parts of the draft to FS or MS.

Proposed Resolution Recommendation:
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

Resolution of Group: Accepted-Modified
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

Group's Notes
Group's Action Items

Editor's Notes
Editor's Actions
k) done

Editor's Questions and Concerns
Editor's Action Items
This comment is similar to that of J Kim. 802.16e is an amendment to 802.16-2004 and should support combined fixed/mobile operation. However, the most recent draft D6 introduces new terms/acronyms FS (fixed subscriber station) and MS (mobile subscriber station). FS is not used in the document, and most references to SS and MSS are replaced with MS, even including sections that clearly apply to both MS and FS such as the common MAC portions and Privacy sublayers, etc. I am concerned that this may preclude the use of 802.16e enhancements for fixed subscriber stations. In some situations, it is perhaps not sufficient to say that a fixed subscriber is just a mobile station that happens to be stationary.

Suggested Remedy
The definitions and the superceding relationship between FS, MS, SS must be clarified further in the definitions section. Use SS or a new term for a station that could be FS or MS.||The use of FS, MS, SS, or new terms shall be consistently applied throughout the document, based on technical or other reasons to limit certain parts of the draft to FS or MS.

Proposed Resolution Recommendation: Recommendation by
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

Reason for Recommendation

Resolution of Group Decision of Group: Accepted-Modified
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

Reason for Group’s Decision/Resolution

Group’s Notes
Group’s Action Items

Editor’s Notes Editor’s Actions duplicate

Editor’s Questions and Concerns

Editor’s Action Items
Copyright notices on Pages i and ii said 2004 instead of 2005 (in original release of D6).

**Proposed Resolution**

Ensure that copyright notices on Pages i and ii are updated to 2005.

**Reason for Recommendation**

Ensure that copyright notices on Pages i and ii are updated to 2005.

**Resolution of Group**

Decision of Group: Accepted

k) done
"WirelessMAN" should be followed by the circle-R mark ("®") instead of "TM", since the mark is now registered.

Suggested Remedy

In the Keywords, change the "TM" after "WirelessMAN" to the circle-R mark ("®"). Also, use the updated version of the WirelessMAN logo, included the circle-R.

Proposed Resolution

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

In the Keywords, change the "TM" after "WirelessMAN" to the circle-R mark ("®"). Also, use the updated version of the WirelessMAN logo, included the circle-R.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions

Logo is not changed.

Editor's Questions and Concerns

Editor's Action Items
"TM" after "WirelessMAN" is obsolete.

Suggested Remedy
Change the "TM" after "WirelessMAN" to the circle-R symbol ("®").

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Change the "TM" after "WirelessMAN" to the circle-R symbol ("®").

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes Editor’s Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
Conflicting acronym definitions.

Suggested Remedy

Delete the "(HO)" from the title of 1.4.1.
Change "(HOC)" to "(HO)" on line 57.

Proposed Resolution

Delete the "(HO)" from the title of 1.4.1.
Change "(HOC)" to "(HO)" on line 57.

Resolution of Group

Decision of Group: Accepted

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions

Editor's Action Items
Acronyms should be introduced only once

Suggested Remedy
Delete "(HO)"

Proposed Resolution Recommendation:  

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Delete "(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
The change to the definition of "Bandwidth stealing" is to make it meaningless. What can an SS do with an UL grant? It can either send data or messages, including BW requests. Now the definition of "Bandwidth stealing" reads that an SS can send data or messages. The original text was neither broken nor ambiguous. The new text is certainly ambiguous.

Suggested Remedy
Delete Page 4, lines 22-27.

Proposed Resolution Recommendation: Withdrawn

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 1) none needed

Editor’s Questions and Concerns

Editor’s Action Items
The MAC defines two kinds of connections: management connections and transport connections.

The new definition of "connection" refers to "management connection", but in the base standard there is no corresponding definition, only for "primary management connection" and "secondary management connection". Therefore text should read:

Proposed Resolution

Recommendation: Withdrawn

Recommendation by David Castelow

The MAC defines three kinds of connections: primary management connections, secondary management connections and transport connections.
Table 1b: The table header should stay with the table.

Suggested Remedy
Make the table stay on one page and don't allow it to split.
I suggest that we remove it.

Proposed Resolution: **Accepted**

Remove Figure 1c.

Reason for Recommendation

Resolution of Group: **Accepted**

Remove Figure 1c.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions: k) done

Editor's Questions and Concerns

Editor's Action Items
Comment 1959 is not satisfied as the Convergence Sublayer still does not support MBS

Suggested Remedy
Accept contribution C802.16e-05_121 (Supporting MBS in the 802.16 Convergence Sublayer)

Proposed Resolution Recommendation: 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 1) none needed

Editor's Questions and Concerns

Editor's Action Items
Section 2, Page 7 of diffmarked version, References must be published standards, not drafts. Missing reference to RFC 3748.

Suggested Remedy

Proposed Resolution Recommendation: Accepted-Modified Recommendation by
See resolution of comment 3123

Reason for Recommendation

Resolution of Group Decision of Group: Accepted-Modified
See resolution of comment 3123

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
Suggested Remedy
Add reference to RFC 3748

Proposed Resolution: Accepted-Modified

Resolution of Group: Accepted-Modified

See resolution of comment 3123

k) done
The draft document is incomplete because it does not deal with the following problem. The definition of the contents of the 802.3/Ethernet PDU are ambiguous because of the definitions of frames in 802.3. In 802.3 there is a definition of an entire frame. This includes the inter-frame gap, the preamble at the beginning and the FCS at the end. However there is no definition in that standard of an entity that includes the necessary components (e.g. source and destination MAC address) and does not include these extraneous items. Therefore 802.16 needs to be explicit about what data is included.

See contribution for further supporting argument.

Suggested Remedy

At page 8, line 5 add text as follows:
5.2.4.1 After Figure 13, add this text:

The IEEE Std. 802.3/Ethernet PDU consists of the following fields: Destination MAC address, source MAC address, length/type, data. Note that the Ethernet frame check sequence (FCS) does not form part of the IEEE 802.3/Ethernet PDU in the CS.

At page 8, line 25 add text as follows:
5.2.5.1 After Figure 15, add this text:

The IEEE Std. 802.3/Ethernet PDU consists of the following fields: Destination MAC address, source MAC address, length/type, tag control information, data. Note that the Ethernet frame check sequence (FCS) does not form part of the IEEE802.1Q VLAN tagged frame PDU in the CS.

Proposed Resolution  Recommendation: Withdrawn  Recommendation by David Castelow

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
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
Spell out the acronyms in each of the definitions.

Proposed Resolution Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Spell out the acronyms in each of the definitions.

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions e) editor disagrees
Per IEEE editorial staff: "This is not necessary if those in the industry almost always use the acronym when speaking or working with the technology." Staff also believes it makes more sense to use neighbor BS than neighbor base station (BS).

Editor’s Questions and Concerns

Editor’s Action Items
It is not enough to demodulate signal for receiving messages from BS

Proposed Resolution

Resolution of Group: Accepted

Reason for Group's Decision/Resolution

Acceptance of Recommendation

Resolution of Group: Accepted
Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
Differently from SHO, FBSS selects one BS itself among active BSs, not a frame from two BSs. Therefore, Fast switching of BS is sufficient to define FBSS.

Suggested Remedy

[Modify section 3.76 as follows:] 3.75 fast BS switching (FBSS): BS switching that utilizes selection diversity and fast switching mechanism to improve link quality. The 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 BS selection scheme.

Proposed Resolution  Recommendation: Accepted-Modified  Recommendation by

[Modify section 3.75 as follows:] 3.75 fast BS switching (FBSS): BS switching that utilizes selection diversity and fast switching mechanism to improve link quality. The 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 BS selection scheme.

Reason for Recommendation

Resolution of Group  Decision of Group: Accepted-Modified

[Modify section 3.75 as follows:] 3.75 fast BS switching (FBSS): BS switching that utilizes selection diversity and fast switching mechanism to improve link quality. The 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 BS selection scheme.

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes  Editor's Actions  k) done

Editor's Questions and Concerns

Editor's Action Items
do we have a definition for "service start" and "service disconnect"?

For example, in the case of the make before break HO, does it mean seamless HO without losing any packets?

Suggested Remedy

on page 10 line 14, insert the following definitions:

3.85 service start The MS completes the registration process in the network entry with the target BS during HO.

3.86 service disconnect The MS terminates with its serving BS during HO.

Proposed Resolution

on page 10 line 14, insert the following definitions:

3.85 service start The MS completes the registration process in the network entry with the target BS during HO.

3.86 service disconnect The MS terminates with its serving BS during HO.

Reason for Recommendation

Resolution of Group Decision of Group: Rejected

Reason for Group's Decision/Resolution

Vote: 0-7
This terminology is not used in the document, therefore, these are unnecessary definitions.

Editor's Notes

Editor's Actions: 1) none needed

Editor's Questions and Concerns

Editor's Action Items
The definition of MS should explicitly state that a MS is a subscriber station (SS). Otherwise any protocol that is defined with the SS as the protocol peer will from the point of view of the MS be irrelevant. Another problem with the definition adopted as a result of the comment from Jose Costa is that it refers to 'the mobile service' which is 802.16 isn't defined. To me it unfortunately seems that if we want to harmonize our definition with the definition used in ITU this would require tens if not hundreds of changes to 802.16-2004.

Suggested Remedy

Replace the current definition for the MS with "mobile station(MS): A subscriber station that supports communications while in motion"

Proposed Resolution

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

Resolution of Group

Decision of Group: Accepted-Modified

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

Editor's Notes

duplicate
there are many places in the spec the use MSS instead of MS. The Editor should do global search for all instances of MSS

Suggested Remedy
change to MS throughout the document

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items
There is no need to change the secondary management connection from IP to IP over Ethernet. It is not broken as written, and the secondary management connection is unicast, so cannot transfer Ethernet broadcast data in any case. All other traffic can go over IP and save Ethernet framing overhead.

Suggested Remedy
Remove underlined text and strikeout text at page 10, line 10, i.e. replace
These messages are carried using Ethernet convergence sublayer in IP datagrams, as specified in 5.2.6 5.2.4.
with
These messages are carried in IP datagrams, as specified in 5.2.6 5.2.4.

Proposed Resolution Recommendation: Withdrawn
Recommendation by David Castelow

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

Editor’s Questions and Concerns

Editor’s Action Items
Suggested Remedy
"Change "Mobile Base Station"" to "Multicast and Broadcast Services"

Proposed Resolution
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

Reason for Recommendation

Resolution of Group
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

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions
1) none needed

duplicate

Editor’s Questions and Concerns

Editor’s Action Items
Add in §4. Abbreviations and acronyms
TUSC: tile usage of subchannels

Suggested Remedy
Abbreviations missing

Proposed Resolution Recommendation: Accepted-Modified Recommendation by
Add in §4. Abbreviations and acronyms
TUSC: tile usage of subchannels

Reason for Recommendation

Resolution of Group Decision of Group: Accepted-Modified
Add in §4. Abbreviations and acronyms
TUSC: tile usage of subchannels

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
More abbreviations/acronyms need to be added in section 4.

Suggested Remedy

add the following:

TUSC
SDMA
AMC
BBM
MBB

Proposed Resolution

Recommendation: Accepted-Modified

Resolution of Group

Decision of Group: Accepted-Modified

TUSC  tile usage of subchannels
SDMA  spatial division multiple access
AMC  adaptive modulation and coding
BBM  break before make
MBB  make before break

Editor's Action Items

k) done
The titles of the clauses and subclauses are supposed to have only the first letter capitalized (ther than acronyms and proper names)

Suggested Remedy
Fix all of the subclause titles in the draft to use the correct capitalization. That means fixing just about every one of them.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

Fix all of the subclause titles in the draft to use the correct capitalization. That means fixing just about every one of them.

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes Editor’s Actions e) editor disagrees
Per IEEE editorial staff: "Make it a rule to never change the capitalization for all 802 standards as they have learned that there is a specific way 802 groups like terms to appear." This cleanup is an ongoing editorial process.

Editor’s Questions and Concerns

Editor’s Action Items
I object to the resolution of comment 1945 in IEEE 802.16-05/010. This comment is about how the term MSS (now MS) has replaced SS in text pulled from the base document. The Decision of the Group was to superecede that comment by comment #71, and the reason for the Group's Decision was that "This comment has been superseded by comment #71 which changes the usage of MSS and SS." However, I cannot find comment #71 listed in IEEE 802.16-05/010 or IEEE 802.16-04/011. Going back to IEEE 802.16-04/69r4, I find comment #71 (which is also technically binding), and the resolution of the group for that comment was "DJ, possibly David Castelow, possibly others to supply a specific list of changes to be made."

If this action item was done, I do not find that all the necessary fixes were made. The title of this amendment is "Part 16: Air Interface for Fixed and Mobile Broadband Wireless Access Systems, Amendment for Physical and Medium Access Control Layers for Combined Fixed and Mobile Operation in Licensed Bands" I think many sections of this document lose sight of the fact that fixed systems must also be able operate.

My Suggested Remedy is an attempt to fix the SS/FS/MS language in all sections up to and including section 6. MAC Common part sublayer.

Suggested Remedy
1) On page 34, line 59, change "Initial ranging CID if the MSS has not yet registered" to "Initial ranging CID if the SS has not yet registered" (this feature for RNG_REQ messages are for both fixed and mobile SSs).

2) On page 35, line 4, change "the MS shall make UL BW request of sufficient size" to "the SS shall make UL BW request of sufficient size" (this feature for RNG_REQ messages are for both fixed and mobile SSs).

3) On page 35, line 8, change "when the MSS is attempting to join" to "when the SS is attempting to join" (the parameter that follow are for both fixed and mobile SSs).

4) On page 49, line 3, change "6.3.2.3.24 MS basic capability response (SBC-RSP) message" to "6.3.2.3.24 SS basic capability response (SBC-RSP) message"

5) On page 50, line 60, change "6.3.2.3.42 MS De-registration Request (DREG-REQ) message" to "6.3.2.3.42 SS De-registration Request (DREG-REQ) message"

6) On page 51, line 13, change "MSS De-Registration request from BS" to "SS De-Registration request from BS" (this De-Registration_Request_Code applies to both fixed and mobile SS's)

7) On page 51, line 26, change "An MSS shall generate MSS DREG-REQs including the following parameters:" to "An SS shall generate SS DREG-REQs including the following parameters:"

8) On page 52, line 45, change "basic CID of SS connected with the BS" to "basic CID of SS connected with the BS" (text in D6 does not correctly copy the original text from 802.16-2004)

9) On page 52, line 49, change "n-bits of LSB of CID of MS." to "n-bits of LSB of CID of MS." (again text in D6 does not correctly copy the original text from 802.16-2004).

10) On page 54, line 22, change "the MS." to "the SS." (again text in D6 does not correctly copy the original text from 802.16-2004).
11) On page 54, line 26, change "by the MS in every 2^p frames." to "by the SS in every 2^p frames." (again text in D6 does not correctly copy the original text from 802.16-2004).

12) On page 54, line 29, change "The MS starts reporting at the frame of which the number has the same 3 LSB as the specified frame offset. If the current frame is specified, the MS should start reporting in 8 frames." to "The MSS starts reporting at the frame of which the number has the same 3 LSB as the specified frame offset. If the current frame is specified, the MSS should start reporting in 8 frames." (the original text from 802.16-2004 incorrectly refers to an MSS which is not defined for 802.16-2004).

13) On page 54, line 36, change "A CQI feedback is transmitted on the CQI channels indexed by the (CQI Channel Index) by the MS for 2^{(d-I)} frames. If d is 0b1111, the MS should report until the BS commands the MS to stop." to "A CQI feedback is transmitted on the CQI channels indexed by the (CQI Channel Index) by the SS for 2^{(d-I)} frames. If d is 0b1111, the MSS should report until the BS commands the MSS to stop." (text in D6 does not correctly copy the original text from 802.16-2004, and the original text from 802.16-2004 incorrectly refers to an MSS which is not defined for 802.16-2004).

14) On page 74, line 6, change "MS sends CQI report in CQI region." to "SS sends CQI report in CQI region." (According to the text in 802.16-2004, this statement also applies to fixed SS's.)

15) On page 74, line 9, change "When there exist a need to allocate multiple CQICHs to a SS, the number of used subchannels for CQICH region shall be increased by the total number of additional CQICHs for all MS within the frame" to "When there exist a need to allocate multiple CQICHs to a SS, the number of used subchannels for CQICH region shall be increased by the total number of additional CQICHs for all SS within the frame" (The sentence starts to talk about SS's and later only MS's, which I try to fix).

16) On page 125, line 30, change "the MSS can request to change the size of the request opportunity using the extended piggyback and request headers." to "the SS can request to change the size of the request opportunity using the extended piggyback and request headers." (the text in the following paragraph seems to indicate that this feature is applicable to both mobile and fixed SS's.)

17) On page 126, line 18, change

"Otherwise, for fixed SS and for MSs using IPv4 and not using mobile IP, the SS/MS shall invoke DHCP mechanisms [IETF RFC 2131] in order to obtain an IP address and any other parameters needed to establish IP connectivity. If the SS has a configuration file, the DHCP response shall contain the name of a file which contains further configuration parameters. For MS using IPv6 the SS/MS shall either invoke DHCPv6 [IETF RFC 3315] or IPv6 Stateless Address Autoconfiguration [IETF RFC 2462] based on the value of a TLV tuple in REG_RSP. Establishment of IP connectivity shall be performed on the SS's Secondary Management Connection (see Table 110)."

to

"Otherwise, for FSs and for MSs using IPv4 and not using mobile IP, the SS shall invoke DHCP mechanisms [IETF RFC 2131] in order to obtain an IP address and any other parameters needed to establish IP connectivity. If the SS has a configuration file, the DHCP response shall contain the name of a file which contains further configuration parameters. For SS using IPv6 the SS shall either invoke DHCPv6 [IETF RFC 3315] or IPv6 Stateless Address Autoconfiguration [IETF RFC 2462] based on the value of a TLV tuple in REG_RSP. Establishment of IP connectivity shall be performed on the SS's Secondary Management Connection (see Table 110)."

18) In 6.3.17 MAC support for H-ARQ starting on page 133, line 57, replace all instances of MS with SS. Otherwise, the text would indicate that
HARQ is no longer supported for fixed systems.

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

Resolution of Group: Accepted-Modified

Decision of Group: Accepted-Modified

Proposed Resolution

Reason for Recommendation

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions: 1) none needed

duplicate

Editor’s Questions and Concerns

Editor’s Action Items
Table 5a: The table format does not match the rest of the document or the standard which it is ammending. There are many other tables, e.g., 13f, that also have this problem.

Suggested Remedy

"Fix the table format for this table and all others in the document, especially the borders, to match the rest of the document and 802.16-2004."

Proposed Resolution

Resolution of Group: Accepted

"Fix the table format for this table and all others in the document, especially the borders, to match the rest of the document and 802.16-2004."

Group's Notes

Editor's Questions and Concerns

Editor's Action Items
I object to the text change in D6 related to the SN Report header, because the SN Report header is omitted in section 6.3.2.1.

**Suggested Remedy**

Change the first paragraph of 6.3.2.1 as shown below:

"In the DL, there is one MAC header which is the generic MAC header that begins each MAC PDU containing either MAC management messages or CS data."

In the UL, six 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 bandwidth. The third is the PHY channel report header used for the MS to send a PHY channel report to the BS. The fourth is the feedback header used for MS to provide its feedback. The fifth is the bandwidth request and UL TX power report header for the MS to send bandwidth request and UL Tx power report. The sixth is the SN report header used by the MS to feedback SDU SN during fast BS switching. The single-bit header type (HT) field distinguishing the generic MAC header and the rest of the header formats. The HT field shall be set to zero for the generic header and set to one for other MAC headers."

**Proposed Resolution**

In addition to the above suggested remedy, make changes such that the SN reporting in the SN report header is in ascending order of SFIDs instead of CIDs. This is because the new Anchor BS may not have information on the CID values belong to the old Anchor BS.

Modify section 6.3.2.1.6, line 39-42, page 25 as follows:

"... At most 3 three SNs can be provided in each SN R header in numerical ascending order of the CID SFID values of the connections with SN feedback enabled."
<table>
<thead>
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<th>Carl Eklund</th>
<th>Member</th>
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<tr>
<td>Suggested Remedy</td>
<td></td>
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**Proposed Resolution**

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**Reason for Recommendation**

**Resolution of Group**

<table>
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</table>

**Follow guidelines for editorial instructions in http://standards.ieee.orgguides/style2005Style.pdf**

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

**Group’s Notes**

**Group’s Action Items**

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<th>Editor’s Actions</th>
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<td>Editor's Questions and Concerns</td>
<td>Editor's Action Items</td>
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<td>Starting Line #</td>
</tr>
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</table>

This text is also appearing on page 26 line 46. It is almost the same text. Why do we need it in both places?

**Suggested Remedy**

delete line 46 to line 53

**Proposed Resolution**  
Recommendation:  
Recommendation by  

**Reason for Recommendation**

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

See comment 3500

**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**
Suggested Remedy

Grand Management subheader
to
Grant Management subheader

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

Change

Grand Management subheader
to
Grant Management 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
Table 5a—Generic MAC header fields is not a new table but refers to the existing Table 5

Suggested Remedy
Replace "Table 5a" with "Table 5"

Proposed Resolution Recommendation: Replace "Table 5a" with "Table 5"

Resolution 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
There is no mention in the working document of a problem with MESH mode. The document needs to clarify the following problem, expressed in terms of P802.16-REVd/D5 and 802.16-2004.

In Mesh mode, 802.16 requires the REG-REQ to contain the SS MAC Address, but does not provide a TLV: see section 11.7, D5 p672. You cannot use the value from RNG-REQ (11.5) because the type value there clashes with that in 11.7.2: SS management support.

Alternatively, you need to remove the requirement on MESH, or make a common numbering scheme between RNG-REQ and REG-RSP.

**Suggested Remedy**

Include the following instructions at page 14, line 5:

Page 52, Line 25, alter the line:

In Mesh Mode, the REG-REQ shall contain the following TLVs:

- SS MAC Address (11.7.9)
- MAC Version (11.1.3)

and include following instructions at page 131, line 31:

After 11.7.8.8, add new section 11.7.9:

**11.7.9 SS MAC Address**

This field specifies the MAC address of the SS, used in MESH modes.

<table>
<thead>
<tr>
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<th>Length</th>
<th>Value</th>
<th>Scope</th>
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</thead>
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<tr>
<td>18</td>
<td>6</td>
<td>The MAC address of the SS.</td>
<td>MESH: REG-REQ, REG-RSP</td>
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**Proposed Resolution**

**Recommendation: Withdrawn**

**Reason for Recommendation**

**Resolution of Group**

**Decision of Group: Withdrawn**
### Group's Notes

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<tr>
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### Editor's Questions and Concerns

### Editor's Action Items
The Bandwidth Request PDU shall consist of bandwidth request header alone and shall not contain a payload. The bandwidth request header is illustrated in Figure 20, Figure 20a, and Figure 20b. An SS receiving a bandwidth request header on the downlink shall discard the PDU.

The fields of the bandwidth request header are defined in Table 7 for types “000”, “001”, and “111”, Table 7a for type “011”, and Table 7b for “100”. Every header is encoded, starting with the HT and EC fields. The coding of these fields is such that the first byte of a MAC header shall never have the value of 0xFF. This prevents false detection of the stuff byte.

The allowed types for bandwidth requests are “000” for incremental and “001” for aggregate Bandwidth Request (BR), “011” for Bandwidth and UL Tx power report header, “100” for Bandwidth and DBPC request header, and “111” for CQICH channel allocation request.

d) The allowed types for bandwidth requests are “000” for incremental, “001” for aggregate, and “011” for an aggregate request with UL Tx transmit power report.

d) The type for Bandwidth request with UL Tx transmit power report bandwidth requests is “011”. or even better, delete d) altogether

Table 7a—Description of fields of the PHY channel report header -> Table 7a -- Description of fileds of Bandwidth and UL Tx power report header
Proposed Resolution: Superceded

Recommendation by

Reason for Recommendation
See 3070

Resolution of Group: Superceded

Reason for Group's Decision/Resolution
See 3070

Group's Notes

Group's Action Items

Editor's Actions

I) none needed

Editor's Notes

Editor's Questions and Concerns

Editor's Action Items
Section 6.3.2.1.2 describes also CQICH channel allocation request.

Suggested Remedy
Change title

6.3.2.1.2 Bandwidth request header to

6.3.2.1.2 Bandwidth request header and CQICH channel allocation request.

Proposed Resolution Recommendation: Superceded Recommendation by

See comment 3045

Reason for Recommendation

Resolution of Group Decision of Group: Superceded

See comment 3045

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
Suggested Remedy
Replace figure 19 and all similar figures with one like Figure 20a..

Proposed Resolution
Recommendation: Accepted-Modified
Recommendation by
Replace figure 19 with one like Figure 20a..

Reason for Recommendation

Resolution of Group
Decision of Group: Accepted-Modified
Replace figure 19 with one like Figure 20a..

Note: The Group has reclassified this comment as Editorial.

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes
Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
I object to the text change in D6 on section 6.3.2.1.2 because CQICH channel allocation request is not defined anywhere else in the D6 document.

Suggested Remedy

Line 41-42: remove "This field may be set to zero if Type is set to 111"
Line 48-50: remove "and "111" for CQICH channel allocation request."

Proposed Resolution Recommendation: Accepted-Modified Recommendation by
Adopt C802.16-05/193r2

Reason for Recommendation

Resolution of Group Decision of Group: Accepted-Modified
Adopt C802.16-05/193r2

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
The coding of these fields is such that the first byte of a MAC header shall never have the value of 0xFF.

Same change should be done at p. 25 line 46

### Proposed Resolution

<table>
<thead>
<tr>
<th>Recommendation</th>
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<tbody>
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### Reason for Recommendation

Resolution of Group: **Superceded**

See comment 3070

### Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions

Editor’s Action Items

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<tbody>
<tr>
<td>3046</td>
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</table>

Clarification with reference to 8.4.9.1 Randomization"

"If the amount of data to transmit does not fit exactly the amount of data allocated, padding of 0xFF ("1" only) shall be added to the end of the transmission block, up to the amount of data allocated"

Same padding byte is used for SC and OFDM
The allowed types for bandwidth requests are “000” for incremental, “001” for aggregate, and “011” for an aggregate request with UL Tx transmit power report.

Suggested Remedy
Delete
In the figure 20a, HT=0 is incorrect.

Suggested Remedy
change HT=0 to HT=1.

Proposed Resolution  Recommendation: Superceded  Recommendation by
See 3049

Reason for Recommendation

Resolution of Group  Decision of Group: Superceded
See 3049

Reason for Group's Decision/Resolution

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
Suggested Remedy
Change first field of Figure 20a to: HT = 1 (1)

Proposed Resolution Recommendation: Accepted
Change first field of Figure 20a to: HT = 1 (1)

Reason for Recommendation
Resolution of Group Decision of Group: Accepted
Change first field of Figure 20a to: HT = 1 (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
At Figure 20a Bandwidth request with UL Tx power report header format includes HT = EC = 0 . But same initial pattern may be used in generic MAC Header (HT=0) with EC = 0? Note that all other single headers [with no payload] have HT\(=1\)

**Proposed Resolution**

Change

HT = 0
to
HT \(=1\)

**Reason for Recommendation**

Resolution of Group: **Superceded**

Decision of Group: **Superceded**

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

**Group’s Action Items**

**Editor’s Notes**

Editor’s Actions

i) none needed

**Editor’s Questions and Concerns**

**Editor’s Action Items**

Table 7a and table 7b (p16:L4) have very similar information. Table 7a has 8 bit UL TX power and table 7b has 7 bits UL tx power (it has another name) and one bit DCD change indication. Why can't we always use 7 bit UL TX power and eliminate one table?

Suggested Remedy

in Table 7a, make the following changes:
1. change the length field of "UL Tx Power" from 8 bits to 7 bits;
2. insert another row right after the "UL Tx power", says:
   reserved                       1 bit                set to zero

Proposed Resolution Recommendation: Accepted

in Table 7a, make the following changes:
1. change the length field of "UL Tx Power" from 8 bits to 7 bits;
2. insert another row right after the "UL Tx power", says:
   reserved                       1 bit                set to zero

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

in Table 7a, make the following changes:
1. change the length field of "UL Tx Power" from 8 bits to 7 bits;
2. insert another row right after the "UL Tx power", says:
   reserved                       1 bit                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
what are the units of UL TX Power?

**UL Tx Power**
This parameter indicates the UL Tx power in dB, and it shall be interpreted as a single value from -16.0 dB to 47.5 dB in unit of 0.5 dB.

**Proposed Resolution**
Recommendation: Accepted

**Reason for Recommendation**

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

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

**Group’s Action Items**

**Editor’s Action Items**
k) done
I object to the resolution of Comments #2298 from session #36 because there still remains ambiguities in the text as follows.

A. For the open loop power control, UL Tx power or UL Tx headroom is necessary for the scheduling in BS side. For the PHY channel report header, the definitions of Tx power and UL Tx headroom is not clear.

B. For the open loop power control, SS shall send its current Tx power or headroom to inform BS that its estimated UL path loss changes and BS shall change the old headroom with the newly reported one. In current specifications, there is no description for the transmission condition for the values.

Suggested Remedy
Adopt the suggested text change-1 in C80216e-05_095.

Proposed Resolution Recommendation: Accepted-Modified Recommendation by
Adopt the suggested text change-1 in C80216e-05_095r3.

Note that the contribution number was incremented from r1 to r3 at the end of the session.
This says CID=SS basic CID. I think this should be CID of the connection for which the BW is requested.

Suggested Remedy
Change to CID for which the BW is requested.

Proposed Resolution Recommendation: Accepted
Change to CID for which the BW is requested.

Reason for Recommendation
Resolution of Group: Accepted
Change to CID for which the BW is requested.

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes
Editor's Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
There are errors in the definition of several of the defined Bandwidth Request Headers and Feedback Headers.

**Suggested Remedy**
Adopt the changes defined in contribution C80216e-05_097

**Proposed Resolution**
Adopt C80216e-05_097r2

**Reason for Recommendation**
Adopt C802.16e-05/097r2

**Editor's Notes**
The style of the new material was different than the old material. It added "0b1011" to the last row of the column. The others are simply 1011 1100, etc. I have seen this before, but have never asked what the difference really is or how to change it. Please advise.

**Editor's Action Items**
k) done
the notes for the CINR field seems to be copied from Table 7a, which is not correct.

Suggested Remedy
change the text given in the notes box of CINR in Table 7b to :

This parameter indicates the CINR in dB, and it shall be interpreted as a single value from -16.0 dB to 47.5 dB in unit of 0.5 dB.

Proposed Resolution Recommendation: **Superceded** Recommendation by

See 3542

Reason for Recommendation

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

See 3542

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions  ) none needed

Editor’s Questions and Concerns

Editor’s Action Items
I think this should be the connection for which the BW is requested, not the basic CID.

Proposed Resolution Recommendation: Accepted

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
in the description box of the RSVD field in table 7c, add:
set to zero

Proposed Resolution Recommendation: 

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
I object to the text change on D6 draft associated with the resolution of comment #140 since there needs to be some text clean up and clarification on the Feedback header.

Suggested Remedy

Adopt the proposed text change in IEEE C802.16e-05/119 "Text Clarification and Clean-up for the Feedback Header".

Proposed Resolution Recommendation: **Accepted** Recommendation by
Adopt the proposed text change in IEEE C802.16e-05/119 "Text Clarification and Clean-up for the Feedback Header".

Reason for Recommendation

Resolution of Group Decision of Group: **Accepted**
Adopt the proposed text change in IEEE C802.16e-05/119 "Text Clarification and Clean-up for the Feedback Header".

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes Editor’s Actions k) done
Implemented latest version: IEEE C802.16e-05/119r2

Editor’s Questions and Concerns

Editor’s Action Items
The standard is not supposed to go more than 5 deep in subclauses. Even 5 deep should be avoided. 6 deep is just silly. Reorganize the subclauses so that standard doesn't have ridiculous subclause numbers like 6.3.2.3.9.11.

**Suggested Remedy**
Change as indicated here and throughout the draft

**Proposed Resolution**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Recommendation by</td>
</tr>
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</table>

**Reason for Recommendation**

**Resolution of Group**

| Decision of Group: | Rejected |

**The format of this amendment reflects the format of the base document.**

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

**Group's Notes**

**Group's Action Items**

**Editor's Notes**

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<tbody>
<tr>
<td>l) none needed</td>
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</tbody>
</table>

**Editor's Questions and Concerns**

**Editor's Action Items**
'CII=0' in the figure 20d a) and 'CII=1' in the figure 20d b) are incorrect.

Suggested Remedy
change CII=0 in the figure 20d a) to CII=1.
change CII=1 in the figure 20d b) to CII=0.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Superceded

See comment 3062

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
The following are Type values for several messages as specified in 6.3.2.1.4

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<td>Feedback header with CID field</td>
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<td>MIMO Channel Feedback header with CID field</td>
<td>6.3.2.1.4.3</td>
<td>0</td>
<td>1</td>
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</table>

"MIMO feedback header" is a particular case of "feedback header" and as CII stands for "CID Inclusion Indication", seems reasonable to make a change.

<table>
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<tr>
<th>Message</th>
<th>Section</th>
<th>N/M</th>
<th>CII</th>
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<tr>
<td>MIMO Channel Feedback header without CID field</td>
<td>6.3.2.1.4.3</td>
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</tr>
<tr>
<td>Feedback header with CID field</td>
<td>6.3.2.1.4.1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>MIMO Channel Feedback header with CID field</td>
<td>6.3.2.1.4.3</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Suggested Remedy
- In Fig. 20d, a) change to CII = 1
- In Fig. 20d, b) change to CII = 0

Proposed Resolution: Accepted

Decision of Group: Accepted

In Fig. 20d, a) change to CII = 1
In Fig. 20d, b) change to CII = 0

Group's Notes

Group's Action Items

Editor's Notes:
- k) done
Wrong bit number

Suggested Remedy
Change 0b01000 to 0b1000
Change 0b01001 to 0b1001

Proposed Resolution  Recommendation:  Recommendation by

Reason for Recommendation

Resolution of Group  Decision of Group: Accepted
Change 0b01000 to 0b1000
Change 0b01001 to 0b1001

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes  Editor's Actions  Editor's Questions and Concerns

Column is designated as binary, so '0b' is not necessary. Checked and confirmed the lengths.

Editor's Action Items
In the table 7d, feedback type 0b01000 is duplicated.

Suggested Remedy
change the feedback type for 'Combined CQI of Active BSs(5bits)' from 0b01000 to 0b01010.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Superceded

See comment 3361

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
The figure shall not be split across pages.

Suggested Remedy
Rework the figure so it stays on one page. Use Figure 20a as an example.

Proposed Resolution Recommendation: Accepted Recommendation by
Rework the figure so it stays on one page. Use Figure 20a as an example.

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Rework the figure so it stays on one page. Use Figure 20a as an example.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
I object to the resolution of Comments 2020 from session #35 because extended sub headers functionalities definition is still needed.

**Mini-Feedback Header to extended sub headers**

The Mini-Feedback Header (6.3.2.1.4.2) has been defined in order to allow piggybacking of feedbacks to payload PDUs. As a standalone PDU it breaks backwards compatibility by creating a smaller than normal GMH (3 bytes instead of 6 bytes). Since the smallest allocations in 802.16 are 6 bytes anyway, this is not a real bandwidth saving feature.

The ESF mechanism is better suited to piggyback feedbacks. Moving the Mini-Feedback to an ESF removes the backwards compatibility problem without creating any overhead.

**Suggested Remedy**

**[Change in section 6.3.2.1.4.1]**

Figure 20d

a. N/M Flag = 0(1) Reserved (1)

b. N/M Flag = 0(1) Reserved (1)

e) The N/M field shall be set to 0 to indicate that this is a normal size Feedback header.

**[Delete section 6.3.2.1.4.2] : Mini-feedback (moved to section 6.3.2.2.7.4)**

**[Delete entire section]**

**[Change in section 6.3.2.2.7]**

Table 13c - Description of Extended Subheaders (UL)

<table>
<thead>
<tr>
<th>ESF Bit</th>
<th>Name</th>
<th>Length (Octets)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bit #1</td>
<td>Mini-Feedback Extended Subheader</td>
<td>2</td>
<td>See 6.3.2.2.7.4</td>
</tr>
</tbody>
</table>

**[Insert new section 6.3.2.2.7.4]**

6.3.2.2.7.4 Mini-Feedback Extended Subheader

The format of the mini-feedback extended subheader is shown in table 13h:

Table 13h - Mini-feedback Extended Subheader Format (UL)

<table>
<thead>
<tr>
<th>Name</th>
<th>Length (bits)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feedback Type</td>
<td>4</td>
<td>Type of feedback; see table 7b (Section 6.3.2.1.4.1)</td>
</tr>
<tr>
<td>Feedback Content</td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>
Change "[Insert new section 6.3.2.2.7.4]" to "[Insert new section 6.3.2.2.7.5]"

Reason for Recommendation

Resolution of Group: Accepted-Modified

Change "[Insert new section 6.3.2.2.7.4]" to "[Insert new section 6.3.2.2.7.5]"

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

I started to make this change, but then I realize that another comment moved 6.3.2.7.1 to 6.3.2.8, etc. Where should I move this subclause?

Editor’s Action Items
**Missing an "i" in "Mini"**

Figures 21 a/b look weird with text columns.

**Suggested Remedy**
For the Mini feedback header, the feedback type of 0b1111 shall not be used.

Change text direction in Table 21a for fields HT, EC, N/M, CII, BPLI
Change text direction in Table 21b for fields HT, EC, N/M, CII, CT

**Proposed Resolution**

<table>
<thead>
<tr>
<th>Comment #</th>
<th>Type</th>
<th>Starting Page #</th>
<th>Starting Line #</th>
<th>Fig/Table#</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>3067</td>
<td>Editorial</td>
<td>21</td>
<td>39</td>
<td></td>
<td>6.3.2.1.4.2</td>
</tr>
</tbody>
</table>

**Reason for Recommendation**

For the Mini feedback header, the feedback type of 0b1111 shall not be used.

Change text direction in Table 21a for fields HT, EC, N/M, CII, BPLI
Change text direction in Table 21b for fields HT, EC, N/M, CII, CT

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

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

I actually made this change to Figures 20g and 20h, but you might want someone to redraw these in the future.
Table 7e: The header needs to be repeated on the continuation pages.

Suggested Remedy

"Fix the table so that the header is repeated on the pages where it is continued and add "(continued)" to the title."

Proposed Resolution Recommendation: Accepted

"Fix the table so that the header is repeated on the pages where it is continued and add "(continued)" to the title."

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

"Fix the table so that the header is repeated on the pages where it is continued and add "(continued)" to the title."

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
I object to the text change in D6 on Section 6.3.2.1.4.3 because the description in row 5 in Table 7e is not clear.

Suggested Remedy
Change to 'The CII field (Full CID Inclusion Indication) shall be set to 1 for the header with full-CID field and set to 0 for the header without truncated CID field.'

Proposed Resolution
Recommended: Accepted

Resolution of Group
Decision of Group: Accepted

Change to 'The CII field (Full CID Inclusion Indication) shall be set to 1 for the header with full-CID field and set to 0 for the header without truncated CID field.'

Editor's Notes
k) done
Description of "Bandwidth request and uplink sleep control header" with HT=1, EC=0 and Type='000' is identical to "Incremental Bandwidth Request header" - how does an SS distinguish those ???

The table for MOB_SLP-ULC_Message_Format() does not have a title or number, should the name not be something like BR_SLP-ULC_Message_Format()?

Also, wouldn’t it be logic to add this section as subsection to 6.3.2.1.2 Bandwidth request header?

Suggested Remedy
p.24 l.31 add
Table 7ea - Bandwidth request and uplink sleep control header format
p.24, l.40
Replace Type with "010"

Proposed Resolution Recommendation: Accepted-Modified
Adopt contribution C802.16-05/192r4

Reason for Recommendation
Resolution of Group Decision of Group: Accepted-Modified
Adopt contribution C802.16-05/192r4

Reason for Group’s Decision/Resolution

Editor’s Notes
k) done
The pagination really changed in this clause. Check cross-references. I have be setting cross-refs as I see them, but I am worried about the ones I did not mark.

Editor’s Action Items
Bandwidth request is incremental not aggregate as per type (see line 40). Thus should say, "The message also indicates incremental [not total] transmission demand."

Suggested Remedy

Change to say: "The message also indicates incremental transmission demand."

Proposed Resolution Recommendation: Accepted

Change to say: "The message also indicates incremental transmission demand."

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

Change to say: "The message also indicates incremental transmission demand."

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes Editor’s Actions  k) done

Editor’s Questions and Concerns

Editor’s Action Items
I object to the implementation in the draft of Comment #636 because "Type" of Bandwidth Request Header for Uplink Sleep Control Header overlaps with BR Header for "BR for incremental." (000: BR for Incremental, 001: BR for aggregate, 010: PHY channel report header, 011: UL Tx power report header, 100: DBPC request header, 110: SN report header, 111: CQI Channal Allocation) Only 101 is available for Type value of BR header.

Suggested Remedy
Replace "Encoded as 000b" with "Encoded as "Encoded as 101b".

Proposed Resolution  Recommendation: Superceded  Recommendation by
See comment 3070

Reason for Recommendation
Resolution of Group  Decision of Group: Superceded
See comment 3070

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
I object to the text change in D6 on Section 6.3.2.1.5 because Type = 000b is used for Bandwidth request header.

Suggested Remedy
Change Type from '0b000' to '0b101'

Proposed Resolution Recommendation: Superceded Recommendation by
See comment 3070

Reason for Recommendation

Resolution of Group Decision of Group: Superceded
See comment 3070

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
The type field needs to be different than types already defined in 802.16d. Type 000b is used to indicate incremental BW in 802.16d. If the type 0b000 is reused here, then this new header in 6.3.2.1.5 breaks backward compatibility with 802.16d.

**Suggested Remedy**

We should consider the following options:

**Option 1:** use another type value - preferably one that is not already used in 802.16d ;)

**Option 2:** with only a three bit field for the type, we are on danger of running out. Perhaps we should allow deviation from backward compatibility with 802.16d in this case. In other words, allow using type 0b000 in this case but add comments to 802.16d corrigendum that is consistent with 802.16e

**Proposed Resolution**

Recommendation: Superceded

Reason for Recommendation

Resolution of Group: Superceded

Reason for Group’s Decision/Resolution

Editor’s Notes

Editor’s Actions

Editor’s Questions and Concerns

Editor’s Action Items

l) none needed
Comment # 3075
Comment submitted by: Yair Bourlas

Comment Type: Editorial
Starting Page #: 24
Starting Line #: 43

Change TD to BR?

Suggested Remedy
Change TD to BR

Proposed Resolution
Recommendation: Accepted

Reason for Recommendation
Resolution 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
The way the table reads now the CID field comes before power saving field, which is different from other header types, e.g., figure 20b and table 7a. It would be desirable to have them aligned.

Also, the table in section 6.3.2.1.5 needs a table number

Suggested Remedy

1. page 24, line 30, add the table number: Table 7g Bandwidth Request and Uplink Sleep Control Header
2. move the row of "Basic CID" to right before the row of "HCS"

Proposed Resolution Recommendation by
1. page 24, line 30, add the table number: Table 7g Bandwidth Request and Uplink Sleep Control Header
2. move the row of "Basic CID" to right before the row of "HCS"

Resolution of Group Decision of Group: Accepted
1. page 24, line 30, add the table number: Table 7g Bandwidth Request and Uplink Sleep Control Header
2. move the row of "Basic CID" to right before the row of "HCS"

The way the table reads now the CID field comes before power saving field, which is different from other header types, e.g., figure 20b and table 7a. It would be desirable to have them aligned.

Also, the table in section 6.3.2.1.5 needs a table number

Suggested Remedy

1. page 24, line 30, add the table number: Table 7g Bandwidth Request and Uplink Sleep Control Header
2. move the row of "Basic CID" to right before the row of "HCS"

Proposed Resolution Recommendation by
1. page 24, line 30, add the table number: Table 7g Bandwidth Request and Uplink Sleep Control Header
2. move the row of "Basic CID" to right before the row of "HCS"

Resolution of Group Decision of Group: Accepted
1. page 24, line 30, add the table number: Table 7g Bandwidth Request and Uplink Sleep Control Header
2. move the row of "Basic CID" to right before the row of "HCS"

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
1. page 24, line 30, add the table number: Table 7g Bandwidth Request and Uplink Sleep Control Header
2. move the row of "Basic CID" to right before the row of "HCS"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
I object to the text change in D6 related to the SN Report header, because some typo needs to be fixed.

Suggested Remedy
Page 25, Line 39: Change "At most 3 three SNs …" to "At most three SNs …"

Page 25, Line 43: Change "is the last subheader,…" to "is the last SN report header."

Page 26, Line 10: Change the text in row 2 in Table 7f: "The order of reporting the sequence numbers, SNs, for the connections is as described in 6.3.20.6.2-3."

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Page 25, Line 39: Change "At most 3 three SNs …" to "At most three SNs …"
Page 25, Line 43: Change "is the last subheader,…" to "is the last SN report header."
Page 26, Line 10: Change the text in row 2 in Table 7f: "The order of reporting the sequence numbers, SNs, for the connections is as described in 6.3.20.6.2-3."

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
Why limit max 2 SN report headers? MS may have more than 6 connections with ARQ enabled. Then we need more than 2 SN report headers.

Suggested Remedy

we suggest to remove the limitation of max 2 SN report headers by making the following changes:

1. line 43 page 25, remove "thus accommodating up to 6 active connections."
2. line 33 page 26, change "Set to 0 to indicate that this is not the last of the maximum of two consecutive SN report headers. If there are multiple SN report headers, all the SN report headers shall be consecutive."

Proposed Resolution Recommendation: Accepted-Modified

Adopt C80216-05/196r2

Reason for Recommendation

Resolution of Group Decision of Group: Rejected

Reason for Group’s Decision/Resolution

Vote: 4-6

This change would include some new type of message from the point of view of hardware implementation and this is not sufficiently justified by new functions employed by this message.

Editor's Notes

Editor's Actions

1) none needed
The RqstID field may be used to indicate whether the SN Report header is the last subheader.

**Proposed Resolution**

**Recommendation:** Accepted

**Reason for Recommendation**

**Resolution of Group**

**Decision of Group:** Accepted
Inappropriate editorial instruction

Suggested Remedy
Change "Replace" to "Change"

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Change "Replace" to "Change"

Reason for Group's Decision/Resolution

Group’s Notes

Group's Action Items

Editor's Notes Editor's Actions

There are no underlines or strikethroughs in this paragraph, and upon comparing the two paragraphs, I think it is changed substantially enough to use replace.

Editor's Questions and Concerns
I do not agree with the change to the Contention resolution process at page 26, line 23-34. The change requires that the time be measured in units of UL-MAPs received. This is a very strange unit of time. What if a frame did not contain a UL-MAP? What if the SS failed to receive the UL-MAP? Far better to count in terms of frames, or even in terms of a specific timer (T16) whose value can be adjusted to match, a number of frames. The standard was not broken and now is.

Suggested Remedy
Delete page 26, lines 24-35.

Proposed Resolution Recommendation: Withdrawn Recommendation by David Castelow

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 1) none needed
Editor’s Questions and Concerns
Editor’s Action Items
New text should be underlined. The text "while in the uplink the Mode Selection ….as the last per-PDU sub header." is new and should be underlined.

Proposed Resolution:

Recommendation:  

Reason for Recommendation:

Resolution of Group: Superceded

See 3144

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:
I object to the resolution of comment 2084 from Session 35 (Contribution C802.16e-04_522r3) because many things were left out of the standard or have been written unclearly.

**Extended rtPS refinements (Editorial changes)**

**Suggested Remedy**
Incorporate changes documented in IEEE C802.16e-05/x149

**Proposed Resolution**
Incorporate changes documented in IEEE C802.16e-05/x149

**Reason for Recommendation**

**Resolution of Group**

**Decision of Group:** Accepted
Incorporate changes documented in IEEE C802.16e-05/x149

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

**Group's Notes**

**Group's Action Items**

**Editor's Notes**

**Editor's Actions**

k) done

I could not find "x149" but found "149." Implemented 149.

**Editor's Questions and Concerns**

**Editor's Action Items**
The Corrigendum document does not contain the accepted resolution of comment 80216maint-04/010#614, dealing with Initial Ranging.

**Suggested Remedy**

Accept and adopt the latest revision of contribution C80216maint-05/009.

**Proposed Resolution**

Recommendation: **Withdrawn**

**Reason for Recommendation**

Resolution 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**
I object to the implementation in the draft of Comment #163 because it makes Table 9 not byte-aligned. Also, Grant Management subheader cannot be 2 bytes as specified in 2004 document because a few fields were added from the resolution of Comment #163.

**Suggested Remedy**

Either modify Table 9 to be 2 bytes in every case or

[Change 6.3.2.2.1 Grant Management subheader as follows:]

6.3.2.2.1 Grant Management subheader

"The Grant Management subheader is three bytes in length and is used by the SS to convey bandwidth management needs to the BS."

[Change line 20, page 27, as follows:]

Reserved 14 bits

[Add new row below line 28, as follows:]

FL 4 bits

Reserved 3 bits

[Add new row below line 31, as follows:]

Piggyback Request 16 bits

Reserved 8 bits

**Proposed Resolution**

**Recommendation: Accepted**

Either modify Table 9 to be 2 bytes in every case or

[Change 6.3.2.2.1 Grant Management subheader as follows:]

6.3.2.2.1 Grant Management subheader

"The Grant Management subheader is three bytes in length and is used by the SS to convey bandwidth management needs to the BS."

[Change line 20, page 27, as follows:]

Reserved 14 bits

[Add new row below line 28, as follows:]

FL 4 bits

Reserved 3 bits

[Add new row below line 28, as follows:]

Piggyback Request 16 bits

Reserved 8 bits
Either modify Table 9 to be 2 bytes in every case or

"The Grant Management subheader is three bytes in length and is used by the SS to convey bandwidth management needs to the BS."

Reserved 4417 bits

FL 4 bits

Reserved 3 bits
The Corrigendum document does not include a solution to the following problem:
The timer T4 reset in 802.16-2004, page 204 should only be done in the event that the grant is filled (ie. send of RNG-REQ).

Suggested Remedy
At page 27, line 13, include section 6.3.10.2 to include Figure 84, altering it to move the box "Restart T4" below the split, i.e. after receipt of RNG-REQ (left hand branch).

Proposed Resolution Recommendation: Withdrawn Recommendation by David Castelow

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 1) none needed

Editor's Questions and Concerns

Editor's Action Items
In grant management subheader, Extended rtPS can be decoded at the case of scheduling service type is set to extended rtPS. But, extended rtPS does not included in scheduling service type.

Suggested Remedy

Add section 11.13.11 at page 514, line 28 as following:

11.13.11 Service flow scheduling type

<table>
<thead>
<tr>
<th>Type</th>
<th>Length</th>
<th>Value</th>
<th>Scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td>reserved</td>
<td>DSA-REQ</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>for Undefined (BS</td>
<td>DSA-RSP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>implementation-dependent)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>for BE(default)</td>
<td>DSA-ACK</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>for nrtPS</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>for rtPS</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>Reserved for Extended rtPS</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>for UGS</td>
<td></td>
</tr>
<tr>
<td>7-255</td>
<td></td>
<td>Reserved</td>
<td></td>
</tr>
</tbody>
</table>
Reason for Recommendation

Resolution of Group  Decision of Group: Accepted

Add section 11.13.11 at page 514, line 28 as following:

11.13.11 Service flow scheduling type

<table>
<thead>
<tr>
<th>Type</th>
<th>Length</th>
<th>Value</th>
<th>Scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>reserved</td>
<td>0: reserved</td>
<td>DSA-REQ</td>
</tr>
<tr>
<td>1</td>
<td>for Undefined (BS implementation-dependent)</td>
<td>1: for Undefined (BS implementation-dependent)</td>
<td>DSA-RSP</td>
</tr>
<tr>
<td>2</td>
<td>for BE(default)</td>
<td>2: for BE(default)</td>
<td>DSA-RSP</td>
</tr>
<tr>
<td>3</td>
<td>for nrtPS</td>
<td>3: for nrtPS</td>
<td>DSA-ACK</td>
</tr>
<tr>
<td>4</td>
<td>for rtPS</td>
<td>4: for rtPS</td>
<td>DSA-ACK</td>
</tr>
<tr>
<td>5</td>
<td>Reserved for Extended rtPS</td>
<td>5: Reserved for Extended rtPS</td>
<td>DSA-ACK</td>
</tr>
<tr>
<td>6</td>
<td>for UGS</td>
<td>6: for UGS</td>
<td>DSA-ACK</td>
</tr>
<tr>
<td>7-255</td>
<td>Reserved</td>
<td>7-255: Reserved</td>
<td>DSA-ACK</td>
</tr>
</tbody>
</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
The 'note' for 'Matrix indicator' should be simplified.

Suggested Remedy

Correct note for 'Matrix indicator' field as follows:

**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 == 0b01 or STC == 0b10 and Ant23 == 0)
{
  00 = Matrix A
  01 = Matrix B
  10 = Matrix C
  11 = Reserved
}

else if (STCTransmit_diversity == 0b11)
{
  00 = Matrix A
  01 = Matrix B
  10-11 = Reserved
}

elseif (STCTransmit_diversity == 0b0101 and Ant23 == 1) or (STC == 0b10)
{
  00 = Matrix A
  01 = Matrix B
  10 = Matrix C
  11 = Reserved
}

else if(STCTransmit_diversity == 0b1010 and Ant23 == 0)
{
  00 = Matrix A
  01 = Matrix B
  10 = Matrix C
  00-11 = Reserved
}

Proposed Resolution Recommendation: **Accepted**

Correct note for 'Matrix indicator' field as follows:
STC matrix (see 8.4.8.1.4)

\[
\text{STC} = \text{STC mode indicated in the latest STC Zone IE().}
\]

\[
\text{Ant23 = '2/3 antennas select' as indicated in the latest STC Zone IE().}
\]

if (STC == 0b01 or STC == 0b10 and Ant23 == 0)
{ 00 = Matrix A
01 = Matrix B
10 = Matrix C
11 = Reserved
}

else if (STCTransmit_diversity == 0b11)
{ 00 = Matrix A
01 = Matrix B
10-11 = Reserved
}

elseif (STCTransmit_diversity == 0b0101 and Ant23 == 1) or (STC == 0b10) { 00 = Matrix A
01 = Matrix B
10 = Matrix C
11 = Reserved
}

else { 00 = Matrix A
01 = Matrix B
10 = Matrix C
00-11 = Reserved
}

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Correct note for 'Matrix indicator' field as follows:

STC matrix (see 8.4.8.1.4)

\[
\text{STC} = \text{STC mode indicated in the latest STC Zone IE().}
\]

\[
\text{Ant23 = '2/3 antennas select' as indicated in the latest STC Zone IE().}
\]

if (STC == 0b01 or STC == 0b10 and Ant23 == 0)
{ 00 = Matrix A
01 = Matrix B
}

IEEE 802.16-05/012r4
if (STCTransmit_diversity == 0b11) {
    00 = Matrix A
    01 = Matrix B
    10-11 = Reserved
} elseif (STCTransmit_diversity == 0b0101 and Ant23 == 1) or (STC == 0b10) {
    00 = Matrix A
    01 = Matrix B
    10 = Matrix C
    11 = Reserved
} else if (STC == 10) {
    00 = Matrix A
    01 = Matrix B
    10 = Matrix C
    00-11 = Reserved
}
When subheaders or special payloads are present, the CRC shall be included in the MAC PDU, i.e., the CI field in the MAC header must be set to 1.

Proposed Resolution Recommendation: Accepted-Modified

Adopt IEEE 802.16e-05/197r3
Comment # 3090  
Comment submitted by: Vladimir Yanover  
Member  
Type Technical, Non-binding  
Starting Page # 28  
Starting Line # 41  
Fig/Table# 13b  
Wrong references

Suggested Remedy
ESF bit Name                             Length (bytes) Description
Bit #0 (LSB) SDU_SN                                      1        See 6.3.2.2.8.7.3
Bit #1 Generic downlink sleep header DL Sleep control extended subheader 3  See 6.3.2.2.7.3.2
Bit #2 Feedback request extended subheader 2  See 6.3.2.2.7.4
Bits #2-10 Reserved

Proposed Resolution Recommendation: Accepted-Modified Recommendation by
Change Bit #0 (LSB) SDU_SN to Bit #0 SDU_SN extended subheader  
also SDU_SN Extended subheader is a kind of Extended subheader  
Section number should be changed from 6.3.2.2.8 to 6.3.2.2.7.5

Reason for Recommendation
Resolution of Group  Decision of Group: Accepted-Modified
Change Bit #0 (LSB) SDU_SN to Bit #0 SDU_SN extended subheader  
also SDU_SN Extended subheader is a kind of Extended subheader  
Section number should be changed from 6.3.2.2.8 to 6.3.2.2.7.5

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
I object to the resolution of Comments #2298 from session #36 because there still remains ambiguities in the text as follows.

Extended Subheader for Open loop power control
A. For the open loop power control, the current UL Tx power or headroom is necessary for scheduling in BS. Currently, Bandwidth request and downlink burst profile change request header (6.3.2.1.2.2) or PHY channel report header (6.3.2.1.3) are provided for that purpose.
B. However, the UL tx power report will occur very frequently, the report overhead should be minimized as small as possible.
C. Using the extended subheader, we can reduce the report overhead to 24 bits while the header formats above requires 48bits. The difference mainly comes from CID in the header format. Further, the Tx power reported indicates the Tx power of the burst that carries Tx power report, the subheader is right place for that purpose.

Suggested Remedy
Adopt the suggested text change-2 in C80216e-05_095.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted-Modified
Adopt the suggested text change-2 in C802.16e-05/095r3.

Reason for Group's Decision/Resolution

Group's Notes
Note that the contribution number was incremented from r1 to r3 at the end of the session.

Group’s Action Items

Editor’s Notes Editor’s Actions  k) done

Editor’s Questions and Concerns

Editor’s Action Items
I object to the implementation of comment #2025 because the Fast UL feedback subheader in the current draft is no way to indicate existence and Mode selection feedback subheader is inconsistent with MIMO mode feedback defined in the standard. So, we suggest UL MIMO mode feedback subheader associated with merging above two subheaders.

Proposed Resolution
Recommendation: Accepted-Modified

Resolution of Group
Decision of Group: Accepted-Modified

This material was already changed by other comments. Please revisit to see if these changes still apply.
For each MSS, if a Mode Selection Feedback Extended subheader is present, it shall only appear in the first unicast PDU addressed to that SS in that frame.

Proposed Resolution: Superceded

Resolution of Group: Superceded

Reason for Recommendation
See comment 3092

Reason for Group’s Decision/Resolution
See comment 3092

Editor’s Notes
Editor’s Actions: 1) none needed

Editor’s Questions and Concerns
I object to the text change in D6 with regard to Section 6.3.2.2.7.1, because there needs to be some clarification text to describe Mode Selection Feedback Extended subheader operation.

Suggested Remedy
Modify "... An MSS uses the Mode Selection Feedback Extended Subheader to provide its feedback in terms of mode selection, when there is an UL MAC PDU payload to be transmitted at the same time."

Proposed Resolution Recommendation: Accepted
Modify "... An MSS uses the Mode Selection Feedback Extended Subheader to provide its feedback in terms of mode selection, when there is an UL MAC PDU payload to be transmitted at the same time."

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Modify "... An MSS uses the Mode Selection Feedback Extended Subheader to provide its feedback in terms of mode selection, when there is an UL MAC PDU payload to be transmitted at the same time."

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes Editor’s Actions k) done
Change made in 6.3.2.2.8

Editor’s Questions and Concerns

Editor’s Action Items
I object to the text change in D6 related to the Mode selection Feedback extended Subheader in section 6.3.2.7.1, since the reference to the wrong capability exchange messages.

**Suggested Remedy**

Modify "...exchange dialog (SBC-REQ/RSP) (REG-REQ/RSP, see 11.7.17)."

**Proposed Resolution**

Accept Recommendation by

Modify "...exchange dialog (SBC-REQ/RSP) (REG-REQ/RSP, see 11.7.17)."

**Reason for Recommendation**

Resolution of Group: Accepted

Decision of Group: Accepted

Modify "...exchange dialog (SBC-REQ/RSP) (REG-REQ/RSP, see 11.7.17)."

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

Group's Notes

**Group's Action Items**

- k) done

**Editor's Notes and Concerns**

**Editor's Action Items**
In respect to the direction of the Fast UL Feedback subheader, the sentence in line 59 page 29 contradicts with the sentence in line 17 page 30.

In what direction (UL or DL) the UL fast feedback sub-header may be present? If it is only in the UL direction, than the sentence should say: "appear only in the first unicast PDU transmitted by the SS."

Suggested Remedy
Change as shown.

Proposed Resolution Recommendation: Superceded Recommendation by See 3092

Reason for Recommendation
Resolution of Group Decision of Group: Superceded See 3092

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
For each MSSS, if a Fast UL Feedback subheader is present, it shall only appear only in the first unicast PDU addressed to that SS in that frame.
Table 13h describes the format of the Feedback request extended subheader and should be referenced to from section 6.3.2.2.74. Instead it is referenced from section 6.3.2.2.8.

Suggested Remedy

p.31 l.7: add
The format of the Feedback request extended subheader is as described in Table 13h.

p.31 l.18 change Table 13h to Table 13i

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

p.31 l.7: add
The format of the Feedback request extended subheader is as described in Table 13h.

p.31 l.18 change Table 13h to Table 13i

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
Suggested Remedy

Feedback Request Extended subheader shall be only sent by BS to allocate dedicated UL resource for obtaining the feedback value from an MSS. For each PDU in the DL, the BS shall indicate presence or absence of such subheader in the extended subheader bit (ESF). This field subheader shall only be used if the MSS has successfully negotiated the support of Feedback request Extended Subheader with the BS through the capabilities exchange dialog (SBC-REQ/RSP).

Reason for Recommendation

Resolution of Group: Accepted-Modified

Reason for Group’s Decision/Resolution

Feedback Request Extended subheader shall be only sent by BS to allocate dedicated UL resource for obtaining the feedback value from an MSS. For each PDU in the DL, the BS shall indicate presence or absence of such subheader in the extended subheader bit (ESF). This field subheader shall only be used if the MSS has successfully negotiated the support of Feedback request Extended Subheader with the BS through the capabilities exchange dialog (SBC-REQ/RSP).

Editor’s Notes

k) done
Sentence seems to be incomplete: "For each PDU in the DL, the BS shall indicate in the Extended subheader (ESF"

Proposed Resolution: Superceded

Reason for Recommendation

Resolution 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
I object to the implementation in the draft of Comment #2024 because the fields for allocating UL resource are unclear so the related fields should be changed as written below.

Suggested Remedy

[Modify Table 13b- Description of extended subheaders(DL)]

<table>
<thead>
<tr>
<th>ESF bit</th>
<th>Name</th>
<th>Length(bytes)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bit #0(LSB)</td>
<td>SDU_SN</td>
<td>1</td>
<td>See 6.3.2.2.7.3</td>
</tr>
<tr>
<td>Bit #1</td>
<td>Generic downlink sleep header</td>
<td>3</td>
<td>See 6.3.2.2.7.2</td>
</tr>
<tr>
<td>Bit #2</td>
<td>Feedback request subheader</td>
<td>2</td>
<td>See 6.3.2.2.7.4</td>
</tr>
<tr>
<td>Bit #2-3-10</td>
<td>Reserved</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[modify the section 6.3.2.2.7.4 as the following]

6.3.2.2.7.4 Feedback request extended subheader

Feedback Request Extended subheader shall be only sent by BS to allocated UL resource for obtaining the feedback value through Feedback header from an MSS. For each PDU in the DL, the BS shall indicate in the extended subheader(ESF). This field shall only be used if the MS has successfully negotiated the support of Feedback request Extended subheader with the BS through the capabilities exchange dialog (SBC-REQ/RSP).

The format of the Feedback request extended subheader is as described in Table 13h

<table>
<thead>
<tr>
<th>Name</th>
<th>Length (bits)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>UIUC</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Feedback type</td>
<td>4</td>
<td>Shall be set according to Table 7b</td>
</tr>
<tr>
<td>Allocation offset</td>
<td>6</td>
<td>Define the offset, in units of slots, beginning from the ending slot which</td>
</tr>
<tr>
<td></td>
<td></td>
<td>occupies the highest numbered subchannel in the highest numbered OFDMA symbol of the UL sub-frame.</td>
</tr>
</tbody>
</table>
OFDMA Symbol offset | 6 | The offset is relevant to the Allocation Start Time field given in the UL-MAP message.
---|---|---
Subchannel offset | 6 | The lowest index subchannel used for carrying the burst, starting from Subchannel 0.
---|---|---
No,slots | 4 | Number of slot that is given 2*(No.slot+1)
---|---|---
Frame offset(F) | 1 | The number of slots allocated for the burst
---|---|---

------------------------------------------

<table>
<thead>
<tr>
<th>OFDMA Symbol offset</th>
<th>6</th>
<th>The offset is relevant to the Allocation Start Time field given in the UL-MAP message.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subchannel offset</td>
<td>6</td>
<td>The lowest index subchannel used for carrying the burst, starting from Subchannel 0.</td>
</tr>
<tr>
<td>No,slots</td>
<td>4</td>
<td>Number of slot that is given 2*(No.slot+1)</td>
</tr>
<tr>
<td>Frame offset(F)</td>
<td>1</td>
<td>The number of slots allocated for the burst</td>
</tr>
</tbody>
</table>

------------------------------------------

**Proposed Resolution**

**Recommendation: Accepted**

**Recommendation by**

[Modify Table 13b - Description of extended subheaders (DL)]

<table>
<thead>
<tr>
<th>ESF bit</th>
<th>Name</th>
<th>Length(bytes)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bit #0(LSB)</td>
<td>SDU_SN</td>
<td>1</td>
<td>See 6.3.2.2.7.3</td>
</tr>
<tr>
<td>Bit #1</td>
<td>Generic downlink sleep header</td>
<td>3</td>
<td>See 6.3.2.2.7.2</td>
</tr>
<tr>
<td>Bit #2</td>
<td>Feedback request subheader</td>
<td>2</td>
<td>See 6.3.2.2.7.4</td>
</tr>
<tr>
<td>Bit #2-3</td>
<td>Reserved</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[Modify the section 6.3.2.2.7.4 as the following]

--- Start of text change ------------------------------------------

6.3.2.2.7.4 Feedback request extended subheader

Feedback Request Extended subheader shall be only sent by BS to allocated UL resource for obtaining the feedback value through Feedback header from an MSS. For each PDU in the DL, the BS shall indicate in the extended subheader (ESF). This field shall only be used if the MS has successfully negotiated the support of Feedback request Extended subheader with the BS through the capabilities exchange dialog (SBC-REQ/RSP). The format of the Feedback request extended subheader is as described in Table 13h

<table>
<thead>
<tr>
<th>Name</th>
<th>Length (bits)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Feedback type | 4 | Shall be set according to Table 7b

Allocation offset | 6 | Define the offset, in units of slots, beginning from the ending slot which occupies the highest numbered subchannel in the highest numbered OFDMA symbol of the UL sub-frame.

OFDMA Symbol offset | 6 | The offset is relevant to the Allocation Start Time field given in the UL-MAP message.

Subchannel offset | 6 | The lowest index subchannel used for carrying the burst, starting from Subchannel 0.

No, slots | -3 | Number of slot that is given \(2^\text{(No, slots + 1)}\)

Frame offset(F) | 1 | Indicate to start reporting at the frame. If \(F = 0\), the allocation applies to the UL subframe two frames ahead of the current frame. If \(F = 1\), four frames ahead of the current frame.

--- End of text change ---

Reason for Recommendation

Resolution of Group | Decision of Group: Accepted

[Modify Table 13b - Description of extended subheaders (DL)]

<table>
<thead>
<tr>
<th>ESF bit</th>
<th>Name</th>
<th>Length(bytes)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
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<td>1</td>
<td>See 6.3.2.2.7.3</td>
</tr>
<tr>
<td>Bit #1</td>
<td>Generic downlink sleep header</td>
<td>3</td>
<td>See 6.3.2.2.7.2</td>
</tr>
<tr>
<td>Bit #2</td>
<td>Feedback request subheader</td>
<td>2 3</td>
<td>See 6.3.2.2.7.4</td>
</tr>
<tr>
<td>Bit #2-3</td>
<td>Reserved</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[modify the section 6.3.2.2.7.4 as the following]

6.3.2.2.7.4 Feedback request extended subheader
Feedback Request Extended subheader shall be only sent by BS to allocated UL resource for obtaining the feedback value through Feedback header from an MSS. For each PDU in the DL, the BS shall indicate in the extended subheader(ESF). This field shall only be used if the MS has successfully negotiated the support of Feedback request Extended subheader with the BS through the capabilities exchange dialog (SBC-REQ/RSP). The format of the Feedback request extended subheader is as described in Table 13h.

<table>
<thead>
<tr>
<th>Name</th>
<th>Length (bits)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>UIUC</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Feedback type</td>
<td>4</td>
<td>Shall be set according to Table 7b</td>
</tr>
<tr>
<td>Allocation offset</td>
<td>6</td>
<td>Define the offset, in units of slots, beginning from the ending slot which</td>
</tr>
<tr>
<td></td>
<td></td>
<td>occupies the highest numbered subchannel in the highest numbered OFDMA symbol of the UL sub-frame.</td>
</tr>
<tr>
<td>OFDMA Symbol offset</td>
<td>6</td>
<td>The offset is relevant to the Allocation Start Time field given in the UL-MAP message.</td>
</tr>
<tr>
<td>Subchannel offset</td>
<td>6</td>
<td>The lowest index subchannel used for carrying the burst, starting from Subchannel 0.</td>
</tr>
</tbody>
</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
Suggested Remedy

Change Table 13h to Table 13i

Proposed Resolution: Change Table 13h to Table 13i

Resolution of Group: Accepted

Decision of Group: Accepted

Change Table 13h to Table 13i

k) done
Clarify what is meant by optional: Is the message optional or the use of the message on the broadcast CID is optional?

From reading the explanation on page 36 line 28, it would appear that message may also be carried on the broadcast channel, but it is mandatory to support the capability of carrying and receiving this message on either channels.

Suggested Remedy
In Row 10 column connection, remove the words (optional)

Proposed Resolution Recommendation: Accepted-Modified Recommendation by
In Table 14 line 32 (page 32)
Replace: "Primary Management or Broadcast (optional)"
with:
"Primary Management or Broadcast!" <-- add footnote (1) as follows:
"1. For subscribers and base stations that support PKMv2, PKM-RSP is sometimes transmitted on the broadcast connection."

Reason for Recommendation
Resolution of Group Decision of Group: Accepted-Modified
In Table 14 line 32 (page 32)
Replace: "Primary Management or Broadcast (optional)"
with:
"Primary Management or Broadcast!" <-- add footnote (1) as follows:
"1. For subscribers and base stations that support PKMv2, PKM-RSP is sometimes transmitted on the broadcast connection."

Reason for Group’s Decision/Resolution
Vote: 10-1

Group’s Notes
Group’s Action Items

Editor’s Notes Editor’s Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
Resolved Comment #183 in session #34 results in ambiguous operation in P802.16e/D6.

In P802.16e/D6, it is written "TLV elements in RNG-REQ shall only be included in RNG-REQ message of adequate UL bandwidth and, if required TLV elements cannot be accommodated in the UL bandwidth, 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."

However, which CID is used for UL BW request? If MS has no unique CID such as basic CID, MS could not make UL BW request.

RNG-REQ message in section 6.3.2.3.5 needs clarification.

Suggested Remedy

6.3.2.3.5 Ranging Request (RNG_REQ) message

[Modify the text in 6.3.2.3.5]

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. 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 through basic connection to conduct additional RNG-REQ including message elements, at the first available opportunity. When BS receives a ranging code and sends an invited ranging request to the MSS, BS shall allocate adequate UL bandwidth for all possible TLV elements.

Proposed Resolution Recommendation: Accepted

6.3.2.3.5 Ranging Request (RNG_REQ) message

[Modify the text in 6.3.2.3.5]

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. 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 through basic connection to conduct additional RNG-REQ including message elements, at the first available opportunity. When BS receives a ranging code and sends an invited ranging request to the MSS, BS shall allocate adequate UL bandwidth for all possible TLV elements.

Reason for Recommendation

Resolution of Group Decision of Group: Rejected
If a BS allocates UL BW for MS to send RNG-REQ message including all possible TLV items after receiving ranging code, it causes waste of UL BW. It is required for a BS to allocate adequate UL BW for each ranging purpose.

Group's Notes

Reason for Group's Decision/Resolution

Vote: 4-9

Group's Action Items

Editor's Notes

Editor's Questions and Concerns

Editor's Action Items

1) none needed
Section 6.3.2.3.5 has been changed due to comment #0187 in the sponsor ballot, and descriptive paragraphs have been added under HO-ID. According to the descriptive paragraphs, the MS MAC Address and HO-ID may simultaneously exist in the message RNG-REQ, which is redundant. Contribution C80216e-05/014r3 will clarify the usage of MS MAC Address in the message RNG-REQ.

Suggested Remedy

The proposed resolution is found in paper C80216e-05/014r3.

Proposed Resolution: Accepted

Recommendation by

Accept the resolution found in C80216e-05/014r3.

Reason for Recommendation

Resolution of Group: Rejected

Reason for Group's Decision/Resolution

Vote: 25-12
MAC address is required in the RNG-REQ message for identifying the HO MS.

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
If bit #1 of Ranging Purpose Indication is set to 1, it indicates MS action of Idle Mode Location Update Process, which is the same indication as the presence of Location Update Request TLV.

Proposed Resolution

Resolution of Group: Accepted

Reason for Recommendation

Decision of Group: Accepted

Reason for Group’s Decision/Resolution

Group’s Action Items

Editor’s Notes

Editor’s Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
I object the text change in D6 related to the HO_ID definition, since some further clarification text is needed to ensure consistency.

Suggested Remedy
Add section references for HO_ID usage description as follows:

Page 35, line 53: Modify the text: "Optional ID assigned for use in initial ranging to the target BS during HO once the BS is selected as the target BS (see Section 6.3.20.5)"

Page 37, line 61: Modify the text "Optional ID assigned for use in initial ranging to the target BS during HO once the BS is selected as the target BS (see Section 6.3.20.5)"

Page 103, line 50: Modify the text "ID assigned for use in initial ranging to the target BS during HO once the BS is selected as the target BS (see Section 6.3.20.5)"

Page 111, line 20: Modify the text "ID assigned for use in initial ranging to the target BS during HO once the BS is selected as the target BS (see Section 6.3.20.5)"

Page 479, Table 364a, line 17: Replace the text "The identifier assigned to a MS during HO by a target BS" with "ID assigned for use in initial ranging to the target BS during HO once the BS is selected as the target BS (see Section 6.3.20.5)"

Page 481, Table 367a, line 31: Replace the text "The identifier assigned to a MS during HO by a target BS" with "ID assigned for use in initial ranging to the target BS during HO once the BS is selected as the target BS (see Section 6.3.20.5)"

Proposed Resolution Recommendation: Accepted-Modified Recommendation by
Add section references for HO_ID usage description as follows:

Page 35, line 53: Modify the text: "Optional ID assigned for use in initial ranging to the target BS during HO once the BS is selected as the target BS (see Section 6.3.20.5)"

Page 37, line 61: Modify the text "Optional ID assigned for use in initial ranging to the target BS during HO once the BS is selected as the target BS (see Section 6.3.20.5)"

Page 103, line 50: Modify the text "ID assigned for use in initial ranging to the target BS during HO once the BS is selected as the target BS (see Section 6.3.20.5)"

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Add section references for HO_ID usage description as follows:

Page 35, line 53: Modify the text: "Optional ID assigned for use in initial ranging to the target BS during HO once the BS is selected as the target BS (see Section 6.3.20.5)"

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Page 111, line 20: Modify the text "ID assigned for use in initial ranging to the target BS during HO once the BS is selected as the target BS (see Section 6.3.20.5)"

Resolution of Group: Accepted-Modified

Reason for Recommendation:

k) done

Editor's Actions Editor's Notes

k) done
Editor's Questions and Concerns

Editor's Action Items
I object to the implementation in the draft of Comment #583 because the operation of ASC-AGING-TIMER is not clear. ASC-AGING-TIMER specifies the interval that association parameters are valid and maintained between the MS and the associated BS. ASC-AGING-TIMER shall be set to the same value between MS and associated BS, but negotiation procedure of ASC-AGING-TIMER value is not defined in D6.

Suggested Remedy

[Add the following text in 6.3.2.3.5 Ranging Request (RNG-REQ) message, page 35, line 55, as follows :]
The following TLV parameter may be included in RNG-REQ message when a MS is performing initial ranging for association with the BS:

ASC-AGING-TIMER
Nominal time for aging of MS associations

[Add the following text in 6.3.2.3.6 Ranging Response (RNG-RSP) message, page 38, line 1, as follows :]
The following TLV parameter shall be included in RNG-RSP message when the BS receiving RNG-REQ message for association sends RNG-RSP message including Service Level Prediction set to 2.

ASC-AGING-TIMER
Nominal time for aging of MS associations

[Add the following text in 11.5 RNG-REQ message encodings, page 479, line 31, as follows :]

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Length</th>
<th>Value (Variable-length)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASC-AGING-TIMER</td>
<td>2</td>
<td></td>
<td>Nominal time for aging of MS associations</td>
</tr>
</tbody>
</table>

[Add the following text in 11.6 RNG-RSP message encodings, page 482, line 4, as follows :]

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Length</th>
<th>Value (Variable-length)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASC-AGING-TIMER</td>
<td>2</td>
<td></td>
<td>Nominal time for aging of MS associations</td>
</tr>
</tbody>
</table>

Proposed Resolution Recommendation: Accepted

[Add the following text in 6.3.2.3.5 Ranging Request (RNG-REQ) message, page 35, line 55, as follows :]
The following TLV parameter may be included in RNG-REQ message when a MS is performing initial ranging for association with the BS:

ASC-AGING-TIMER
Nominal time for aging of MS associations
ASC-AGING-TIMER  
Nominal time for aging of MS associations

[Add the following text in 6.3.2.3.6 Ranging Response (RNG-RSP) message, page 38, line 1, as follows :]
The following TLV parameter shall be included in RNG-RSP message when the BS receiving RNG-REQ message for association sends RNG-RSP message including Service Level Prediction set to 2.

ASC-AGING-TIMER  
Nominal time for aging of MS associations

[Add the following text in 11.5 RNG-REQ message encodings, page 479, line 31, as follows :]

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Length</th>
<th>Value (Variable-length)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASC-AGING-TIMER</td>
<td>2</td>
<td></td>
<td>Nominal time for aging of MS associations</td>
</tr>
</tbody>
</table>

[Add the following text in 11.6 RNG-RSP message encodings, page 482, line 4, as follows :]

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Length</th>
<th>Value (Variable-length)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASC-AGING-TIMER</td>
<td>2</td>
<td></td>
<td>Nominal time for aging of MS associations</td>
</tr>
</tbody>
</table>

Resolution of Group: Rejected

Reason for Recommendation

Resolution of Group: Rejected

Reason for Group’s Decision/Resolution

Vote: 13-11
Aging timer is not a negotiated value. It is an operator defined value dictated by the BS.

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
The standard allows two message authentication codes to be used in management messages. However, each device uses only one of these methods while connected to the Network. The method to use is negotiated during basic-capabilities. In the standard today some messages are described using HMAC and others using OMAC while actually each one of them can use either but it is not clear in the standard.

**Proposed solution**

Update every MAC management message which described as uses OMAC or HMAC to using OMAC/HMAC.

**Suggested Remedy**

In all MAC management messages containing HMAC tuple or OMAC-tuple replace:

**HMAC/OMAC tuple**

The HMAC tuple or OMAC tuple shell be the last attribute in this message, as negotiated during SBC.

In all MAC management messages containing HMAC digest or OMAC-digest replace:

**HMAC/OMAC digest**

The HMAC digest or OMAC digest shell be the last attribute in this message, as negotiated during SBC.

**Proposed Resolution**

See resolution of 3150
Also.. See resolution of 3222

**Reason for Recommendation**

HMAC/OMAC tuple contains a digest. It is not directly a digest. However the instances of HMAC and OMAC do need updating to HMAC/OMAC/ShortHMAC
See resolution of 3150

Also,

See resolution of 3222

Reason for Group's Decision/Resolution

HMAC/OMAC tuple contains a digest. It is not directly a digest. However the instances of HMAC and OMAC do need updating to HMAC/OMAC/ShortHMAC

Group's Notes

Editor's Notes

Editor's Questions and Concerns

Editor's Action Items
I object to the resolution of Comment #876 because Idle Mode operation needs more clarifications. When the MS in Idle Mode performs location update, MS service and operational information maintained by Paging Controller needs to be updated.

Suggested Remedy

[Add the following text in 6.3.2.3.6 Ranging Response (RNG-RSP) message, page 37, line 17 :

Idle Mode Retain Information

Idle Mode Retain Information provided as part of this message is indicative only. Network Re-entry from Idle Mode process requirements may change at time of actual re-entry. For each bit location, a value of '0' indicates the information for the associated re-entry management messages shall not be retained and managed, a value of '1' indicates the information for the associated re-entry management message shall be retained and managed.

Bit #0: Retain MS service and operational information associated with SBC-REQ/RSP MAC management messages
Bit #1: Retain MS service and operational information associated with PKM-REQ/RSP MAC management messages
Bit #2: Retain MS service and operational information associated with REG-REQ/RSP MAC management messages
Bit #3: Retain MS service and operational information associated with Network Address
Bit #4: Retain MS service and operational information associated with Time of Day
Bit #5: Retain MS service and operational information associated with TFTP MAC management messages
Bit #6: Retain MS service and operational information associated with Full service (MAC state machines, CS classifier information, etc...)]

Proposed Resolution Recommendation: Accepted

[Add the following text in 6.3.2.3.6 Ranging Response (RNG-RSP) message, page 37, line 17 :

Idle Mode Retain Information

Idle Mode Retain Information provided as part of this message is indicative only. Network Re-entry from Idle Mode process requirements may change at time of actual re-entry. For each bit location, a value of '0' indicates the information for the associated re-entry management messages shall not be retained and managed, a value of '1' indicates the information for the associated re-entry management message shall be retained and managed.

Bit #0: Retain MS service and operational information associated with SBC-REQ/RSP MAC management messages
Bit #1: Retain MS service and operational information associated with PKM-REQ/RSP MAC management messages
Bit #2: Retain MS service and operational information associated with REG-REQ/RSP MAC management messages
Bit #3: Retain MS service and operational information associated with Network Address
Bit #4: Retain MS service and operational information associated with Time of Day
Bit #5: Retain MS service and operational information associated with TFTP MAC management messages
Bit #6: Retain MS service and operational information associated with Full service (MAC state machines, CS classifier information, etc...)]

Reason for Recommendation
Resolution of Group: Rejected

Reason for Group’s Decision/Resolution
Vote: 10-9
HO optimization flags can be used for Idle reentry.

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
There is no need for the standard to specify how the information used in the optimized HO process has become available at the BS. Services and operational context may be made available by other means - not necessarily the backbone. The choice of how to make this information available is a network architecture issue not a MAC protocol.

Suggested Remedy
make the following changes:

Identifies re-entry process management messages that may be omitted during the current HO attempt due to the availability of MS service and operational context information obtained by other means that are beyond the scope of this standard over the backbone network, and the MS service and operational status post-HO completion.

Proposed Resolution Recommendation: Accepted-Modified Recommendation by
make the following changes:

Identifies re-entry process management messages that may be omitted during the current HO attempt due to the availability of MS service and operational context information obtained by other means that are beyond the scope of this standard over the backbone network, and the MS service and operational status post-HO completion.

Reason for Recommendation
Resolution of Group Decision of Group: Accepted-Modified
make the following changes:

Identifies re-entry process management messages that may be omitted during the current HO attempt due to the availability of MS service and operational context information obtained by other means that are beyond the scope of this standard over the backbone network, and the MS service and operational status post-HO completion.

Reason for Group’s Decision/Resolution
Group’s Notes
Group’s Action Items
Editor’s Notes Editor’s Actions k) done
Editor’s Questions and Concerns
Editor’s Action Items
The sentence reads to me like FUD (Fear Uncertainty and Doubt). The standard cannot just say that security shall not be compromised. We must first demonstrate that the HO process optimization compromises the security or integrity compared to the Normal Operation and then work to close that hole. If we are unable to demonstrate any security compromises we should remove the sentence. This cautionary note is not put upon the implementation to be compliant with the standard, but rather it is put on the standard not to compromise the security. In other words, an implementation that fully complies with the procedures prescribed by the HO process optimized must be considered complaint with the standard regardless of whether it compromises the security or integrity provided by the Normal Operation procedures.

Suggested Remedy
Remove the sentence

Proposed Resolution Recommendation: Accepted
Remove the following sentence: "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."

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Remove the following sentence: "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."

Reason for Group’s Decision/Resolution

Group’s Notes
Group’s Action Items

Editor’s Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
There is no mention in the working document of the problem of ordering of DL bursts in the OFDM PHY. The document needs to clarify the following problem, expressed in terms of P802.16-REVd/D5 and 802.16-2004.

1) Figures 207 and 208 are both entitled "Example ...".
Can I ask if text in an example is mandatory?

2) If the frame contains AAS or STC, the requirement on decreasing robustness cannot hold.
Also, who specifies the ordering of robustness, given possible mix of RSCC/CTC/BTC transmissions: robustness depends on channel conditions as well as noise level (ie coding gains of CTC/BTC can be greater in multipath than in AWGN), thus altering notions of robustness.
The statement needs removing.
Alternatively, very complex text explaining ordering within each type of sub-frame will be required. This is not worth the trouble.
Note that the introduction of DL subchannelization in .16e means that ordering *Cannot* be insisted on there.

DAC27

Suggested Remedy
At page 39, line 4, insert the following text:

*In Figure 207, make the following change:*
One or multiple DL bursts, each with different modulation/coding, transmitted in order of decreasing robustness.

*In Figure 208, make the following change:*
One or multiple DL bursts, each with different modulation/coding, transmitted in order of decreasing robustness.

Proposed Resolution

Recommendation: Withdrawn

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

1) none needed

Editor’s Questions and Concerns

Editor’s Action Items
<table>
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<tr>
<th>Comment #</th>
<th>3114</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comment submitted by</td>
<td>David Castelow</td>
</tr>
<tr>
<td>Document under Review</td>
<td>P802.16e/D6</td>
</tr>
<tr>
<td>Ballot Number</td>
<td>0001010</td>
</tr>
<tr>
<td>Comment Type</td>
<td>Technical, Binding</td>
</tr>
<tr>
<td>Starting Page #</td>
<td>38</td>
</tr>
<tr>
<td>Starting Line #</td>
<td>50</td>
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<tr>
<td>Section</td>
<td>8.3.5.1</td>
</tr>
</tbody>
</table>

**Inclusion of Best Effort Traffic**

**Suggested Remedy**

**Proposed Resolution**

**Recommendation:** Withdrawn

**Proposed Resolution**

**Resolution of Group:** Withdrawn

**Reason for Recommendation**

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

**Group’s Notes**

**Group’s Action Items**

**Editor’s Notes**

**Editor’s Questions and Concerns**

**Editor’s Action Items**

i) none needed
The "Rate_ID" at page 39, line 27 needs tying to Table 224:

Suggested Remedy
Add at page 39, line 27, Notes column:
Encoded according to Table 224.
Reinstate some of the text at page 39, line 37, so that Notes relate DIUC to burst profiles:
e.g. Insert page 39, line 37, Notes column
The DIUC defines the burst profile of the corresponding burst.

Proposed Resolution
Recommendation: Withdrawn
Recommendation by David Castelow

Reason for Recommendation
Resolution of Group: Withdrawn
Decision of Group: Withdrawn

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions

Editor's Questions and Concerns

Editor's Action Items
The existing PKMv2 is somewhat in disorder and provides unorganized and insecure security framework. Therefore, a resolution for those problems should be provided.

Suggested Remedy
Adopt the contribution C802.16e-05/166.

Proposed Resolution Recommendation: Adopt the contribution C802.16e-05/166r3.

Reason for Recommendation
Resolution of Group: Rejected

Reason for Group’s Decision/Resolution
Vote: 22-12
The security properties of the solution are not well understood.
Change SS to MS globally.

Suggested Remedy
Change SS to MS globally.

Proposed Resolution: Change all SS to MS globally in the 802.16e draft for new text or modified text; do not change SS in unmodified/duplicated instances. Delete the definition of FS

Resolution of Group: Accepted-Modified

Reason for Recommendation
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

Group's Action Items:
1) none needed

duplicate

Editor's Action Items
I object to the resolution of Comments 2136 from session #35 - some security refinements are still needed

Pre authentication extension

Pre authentication is a useful feature in many network architecture models. The standard already includes optional pre-authentication messages. However these messages are based on EAP framework draft and cannot be used in legacy EAP architecture. This proposal proposes an alternative (optional) pre authentication framework which can be used with legacy EAP architecture.

Suggested Remedy

Incorporate changes documented in IEEE C802.16e-05/144

Proposed Resolution Recommendation: 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 1) none needed

Editor’s Questions and Concerns

Editor’s Action Items
The midamble repetition interval is ambiguous:

does "every 4" mean every 4th symbol (3 data, 1 preamble), or after 4 data symbols (4 data, 1 preamble)?
The problem occurs because the name is "midamble repetition interval" implying (3+1) but the description states "after every", implying (4+1).

There is the associated ambiguity in interpreting the following: do the examples show an upper limit for no postamble, or the lower limit for including a postamble, that is >2 or >= 2:

(Page 42, line 41)
When the last section of symbol after the last midamble is higher than half the midamble repetition interval (i.e., 2, 4, 8 for 0b01, 0b010, 0b11) a postamble shall be added at the end of the allocation.

Given the need for STC to transmit even numbers of symbols, I suggest the 4+1 interpretation is easier.
I have also selected the > interpretation rather than the >= case.

Suggested Remedy
Page 41, Line 43
Midamble repetition interval  2 bits
| 0b00: Preamble only  
| 0b01: Interval 5: Midamble after every 4 data symbols  
| 0b10: Interval 9: Midamble after every 8 data symbols  
| 0b11: Interval 17: Midamble after every 16 data symbols

Page 42, Line 30
Midamble repetition interval  2 bits
| 0b00: Preamble only  
| 0b01: Interval 5: Midamble after every 4 data symbols  
| 0b10: Interval 9: Midamble after every 8 data symbols  
| 0b11: Interval 17: Midamble after every 16 data symbols

(Page 42, line 41)
When the last section of symbol after the last midamble is higher than half the midamble repetition interval (i.e., more than 2, 4, 8 for 0b01, 0b010, 0b11) a postamble shall be added at the end of the allocation.

Proposed Resolution  Recommendation: Withdrawn  Recommendation by  David Castelow
Resolution of Group: Withdrawn

Reason for Group's Decision/Resolution

Group's Action Items

Editor's Notes

Editor's Action Items

i) none needed
There are 91 references in the standard relating to the phrase "data grant", including 43 to "data grant burst type". In OFDM and OFDMA, the relationship between uplink burst profiles and a data grant is never made explicit. I know some of these have been removed (e.g. page 25, line 7), but doubt this is universal. This needs addressing, and can be done very straightforwardly.

Suggested Remedy
Page 41, Line 52, include the following text:
In Table 230, replace "Burst Profiles" with "Burst Profiles (Data Grant Burst Type) ".

Page 42, Line 44, include the following text:
8.6.3.1 UIUC Allocations
In Table 246, replace "Burst Profiles" with "Burst Profiles (Data Grant Burst Type) ".

Page 75, Line 42, modify as shown:
| 1-10 | Different burst profiles (Data Grant Burst Type) |

Proposed Resolution  Recommendation: Withdrawn  Recommendation by  David Castelow

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  1) none needed

Editor’s Questions and Concerns

Editor’s Action Items
PKM v2 is defined in the mobile amendment but is mobility support a necessary requirement for using it. From the current text it is not clear as MS and SS seem to be used inconsistently.

Suggested Remedy
Change "MS" to "SS" on p41 l. 57 and on any other applicable instances.

Change "SS" to "MS" p.42 l. 51 and in all other applicable instances.

Proposed Resolution
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

Resolution of Group
Decision of Group: Accepted-Modified
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

Editor's Actions
1) none needed
Suggested Remedy
Page 42, line 2, replace "a an" with "an"

Page 42, line 4, replace of the burst including preamble (if present). with of the burst, including (if present) any preamble.

Proposed Resolution Recommendation: Withdrawn

Resolution of Group Decision of Group: Withdrawn

Reason for Recommendation

Review of 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
Change RFC2284bis to RFC3748

Proposed Resolution Recommendation: Accepted Recommendation by
Change RFC2284bis to RFC3748

Reason for Recommendation
RFC2284bis is obsolete. RFC3748 is correct RFC.

Resolution of Group Decision of Group: Accepted
Change RFC2284bis to RFC3748

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
The EAP Payload field carries data in the format described in section 4 of RFC2284bis.

Suggested Remedy
replace with reference to RFC3748

Proposed Resolution Recommendation: Accepted-Modified Recommendation by
See resolution of comment 3123

Reason for Recommendation
Resolution of Group Decision of Group: Superceded
See comment 3123

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
Code [18] specified for Pre-Auth-Request message is not the same as in Table 26 [14]

Suggested Remedy
Remove specification of codes from sections 6.3.2.9.11-18

Proposed Resolution Recommendation: Accepted-Modified

Resolution of Group Decision of Group: Accepted-Modified

See resolution of 3258

Reason for Recommendation

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Questions and Concerns

Editor’s Action Items

1) none needed
There is no mention in the current document of a problem relating to possible ambiguity in the interpretation of the phrase "most robust mandatory burst profile". In 8.3.7.2 Ranging (802.16-2004, page 477), 8.3.7.3 Bandwidth requesting (802.16-2004, page 479, 480), 8.3.7.3.2 Full contention transmission (802.16-2004, page 483, paragraph 2) the following phrase is used:
"... using the most robust mandatory burst profile."
and in 8.3.7.2.1 (802.16-2004, page 478, line 5)
"... shall use the most robust mandatory rate."
In all cases, it is ambiguous as to whether this is the most robust mandatory burst profile defined in the standard or the most robust mandatory burst profile defined in the current UCD. Logically these cases are associated with UIUCs that are not burst profiles, so do not have UCD entries either, and therefore I conclude that the intent was to mean coded "using the most robust mandatory coding method" as means of specifying BPSK R1/2 without saying so.
If the intent were to be the most robust currently supported in the UCD, then this needs to be stated clearly at each of the above places. An alternative and more logical approach would be to allow burst profile descriptions for each of the UIUCs, and then all these phrases can be deleted as the UCD would then specify the coding explicit.

Suggested Remedy
At page Add editorial instructions so that at D5, page 475, line 25; D5, page 482, line 2; D5, page 485, line 2) the phrase "using the most robust mandatory burst profile."
is replaced by
"using the most robust mandatory coding method (BPSK R1/2)."
and at D5, page 480, line 5
"shall use the most robust mandatory rate."
is replaced by
"shall use the most robust mandatory coding method (BPSK R1/2)."

Proposed Resolution
Recommendation: 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

i) none needed
Why does the standard specify the methods for averaging RSSI measurements and computing standard deviations, but does not require the underlying metric be specified?

Suggested Remedy

Proposed Resolution Recommendation: Withdrawn Recommendation by David Castelow

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 i) none needed

Editor’s Questions and Concerns

Editor’s Action Items
The requirement that the SS searches "continuously" is unnecessary. Delete "to continuously".

Suggested Remedy
Page 26, line 45
Delete "to continuously".

Proposed Resolution   Recommendation: Withdrawn

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  I) none needed

Editor’s Questions and Concerns

Editor’s Action Items
Rx sensitivity tests do not need to include the higher system components, and so should not include packet CS headers. Superficially, the change may simplify test procedures, but as written the specification is ambiguous: section 5.2 defines multiple CS. The original specification is not broken.

Remove the changes.

Suggested Remedy
Delete page 43, line 47 to page 43, line 53.

Proposed Resolution Recommendation: Withdrawn
Proposed Resolution Recommendation by David Castelow

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 i) none needed

Editor's Questions and Concerns

Editor's Action Items
Suggested Remedy
"Change "identifies the AK to the BS" to "identifies the AK"

Proposed Resolution Recommendation: Accepted
"Change "identifies the AK to the BS" to "identifies the AK"

Reason for Recommendation
Resolution of Group Decision of Group: Accepted
"Change "identifies the AK to the BS" to "identifies the 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
The second row of this table is wrong. It should be NonceBS.

Suggested Remedy
Change 2nd row to:

"NonceBS, A number chosen by the BS (once per protocol run). It can be counter or a random number. This is returned by BS to MS."

Proposed Resolution Recommendation: Rejected

Reason for Recommendation
It is intended that the NonceSS is reflected back to the SS from the BS.

Resolution of Group Decision of Group: Rejected

Reason for Group’s Decision/Resolution
It is intended that the NonceSS is reflected back to the SS from the BS.

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
Page 47, Table 26a and innumerous following clauses - The EAP-Establish Key messages are not EAP messages. They are 802.16 messages which are used to derive temporal keys from the keys established using EAP.

Suggested Remedy
Suggest removing "EAP" from these message names.

Proposed Resolution Recommendation: Accepted-Modified Recommendation by
Nothing needs to be done. This text has been deleted

Reason for Recommendation

Resolution of Group Decision of Group: Accepted-Modified
Nothing needs to be done. This text has been deleted

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
Comment 958

Suggested Remedy

"Change ""possession of the AK"" to ""possession of the AK to the BS""

Proposed Resolution  Recommendation: Accepted  Recommendation by

"Change ""possession of the AK"" to ""possession of the AK to the BS""

Reason for Recommendation

Resolution of Group  Decision of Group: Accepted

"Change ""possession of the AK"" to ""possession of the AK to the BS""

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes  Editor's Actions  k) done

Editor's Questions and Concerns

Editor's Action Items
Suggested Remedy
"Change "second step" to "final step""

Proposed Resolution Recommendation: Accepted
"Change "second step" to "final step"

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
"Change "second step" to "final step"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
Suggested Remedy
Should be RFC3748

Proposed Resolution Recommendation: Accepted-Modified Recommendation by
See resolution of comment 3123

Reason for Recommendation

Resolution of Group Decision of Group: Accepted-Modified
See resolution of comment 3123

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes Editor’s Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
Current Authorization Policy Support field has some problem that MAC (Message Authentication Code) mode is negotiated by this field. However, Authorization Policy and MAC mode is in different level. Therefore, it should be considered that the MAC mode is negotiated by different field from the Authorization Policy Support.

Suggested Remedy
Adopt the contribution C802.16e-05/164.

Proposed Resolution
Adopt the contribution C802.16e-05/164r3.

Reason for Recommendation
Adopt the contribution C802.16e-05/164r3.

Reason for Group's Decision/Resolution
Vote: 32-2

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions

Editor's Questions and Concerns

Editor's Action Items
The change from SS to MS in the five first instances (0x00-0x04) breaks backwards compatibility.

Suggested Remedy
Change from MS to SS in Action columns for codes 0x00-0x04.

Proposed Resolution Recommendation: Recommendation by
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

Reason for Recommendation

Resolution of Group Decision of Group: Accepted-Modified
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

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items
Page 49 - MKID is not defined in the list of acronyms.

Suggested Remedy
Page 49 - suggest renaming MKID to PMKID, as in table 133. Also makes the naming consistent with 802.11.

Proposed Resolution Recommendation: Superceded Recommendation by
See resolution of comment # 3243

Reason for Recommendation
Referenced text was deleted.

Resolution of Group Decision of Group: Superceded
See resolution of comment # 3243

Reason for Group's Decision/Resolution
Referenced text was deleted.

Group's Notes

Editor's Notes
Editor's Questions and Concerns

Editor's Action Items
"MS shall immediately terminate service with the BS and attempt network entry at another base station."

This statement makes it prohibited for the MS to attempt network entry with this base station, even though it might be the only base station the MS sees. We should soften the requirements to recommend that the MS attempt reentry with another base station, but not prohibit it.

Suggested Remedy

Change the sentence to read:

"MS shall immediately terminate service with the BS and SHOULD attempt network entry at another base station."

Proposed Resolution Recommendation: Accepted

Change the sentence to read:

"MS shall immediately terminate service with the BS and should attempt network entry at another base station."

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

Change the sentence to read:

"MS shall immediately terminate service with the BS and should attempt network entry at another base station."

Reason for Group’s Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
I object to the implementation in the draft of Comment #876 (follow-up comment #2126) because MAC Hash Skip Threshold TLV and corresponding text need to be clarified.

Suggested Remedy
Adopt the contribution C80216e-05_170 "Clarification of MAC Hash Skip Threshold"

Proposed Resolution Recommendation: Accepted
Adopt the contribution C80216e-05_170 "Clarification of MAC Hash Skip Threshold"

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Adopt the contribution C802.16e-05/170 "Clarification of MAC Hash Skip Threshold"

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
I object to the resolution of session #35 because accepted comment 2020 from DB 80216-05_001r2 was not applied correctly to D6.

comment 2020 in 80216-05_001r2 was submitted and accepted-modified. Resolution was to adopt C802.16e-05/28r2 with the following change:

Change table 13b "Generic Downlink Sleep Header Subheader "

However some of the changes were not applied:

1. strike paragraph in 6.3.3.2 Mac subheaders and special payloads "while in the uplink the Mode Selection Feedback subheader shall always appear as the last per PDU subheader. The Mode Selection Feedback subheader, if indicated in UL Generic MAC header, shall always appear as the last per PDU subheader in UL MAC PDU" was not stricken out in D6.

Sentence at the end of section 6.3.2.2. (appears as 6.3.2.2.1) was not added "The ESF bit in the GMH indicates that the Extended Subheader Field is present. Using this field, a number of additional subheaders can be used within a PDU. The ESF field shall always appear immediately after the GMH, and before all other subheaders. The ESF field and all extended subheaders related to it are not encrypted. (See section 6.3.2.2.7)"

2. Table 13b bit #2 is defined twice. I suggest to define Bits#3-10 only as reserved and leave Bit #2 in current definition

Suggested Remedy

1. strike paragraph in 6.3.3.2 Mac subheaders and special payloads "while in the uplink the Mode Selection Feedback subheader shall always appear as the last per PDU subheader. The Mode Selection Feedback subheader, if indicated in UL Generic MAC header, shall always appear as the last per PDU subheader in UL MAC PDU".

Add Sentence at the end of section 6.3.2.2. "The ESF bit in the GMH indicates that the Extended Subheader Field is present. Using this field, a number of additional subheaders can be used within a PDU. The ESF field shall always appear immediately after the GMH, and before all other subheaders. The ESF field and all extended subheaders related to it are not encrypted. (See section 6.3.2.2.7)"

2. In 6.3.2.2.7 Table 13b define Bits#3-10 only as reserved and leave Bit #2 in current definition

Proposed Resolution Recommendation: Accepted-Modified

1. strike paragraph in 6.3.3.2 Mac subheaders and special payloads "while in the uplink the Mode Selection Feedback subheader shall always appear as the last per PDU subheader. The Mode Selection Feedback subheader, if indicated in UL Generic MAC header, shall always appear as the last per PDU subheader in UL MAC PDU".

Add Sentence at the end of section 6.3.2.2. "The ESF bit in the GMH Generic MAC Header indicates that the Extended Subheader Field is present. Using this field, a number of additional subheaders can be used within a PDU. The ESF field shall always appear immediately after the GMH, and before all other subheaders. The ESF field and all extended subheaders related to it are not encrypted. (See section 6.3.2.2.7)"

2. In 6.3.2.2.7 Table 13b define Bits#3-10 only as reserved and leave Bit #2 in current definition
Resolution of Group Decision of Group: Accepted-Modified

1. strike paragraph in 6.3.3.2 Mac subheaders and special payloads "while in the uplink the Mode Selection Feedback subheader shall always appear as the last per PDU subheader. The Mode Selection Feedback subheader, if indicated in UL Generic MAC header, shall always appear as the last per PDU subheader in UL MAC PDU."

Add Sentence at the end of section 6.3.2.2. "The ESF bit in the GMH Generic MAC Header indicates that the Extended Subheader Field is present. Using this field, a number of additional subheaders can be used within a PDU. The ESF field shall always appear immediately after the GMH, and before all other subheaders. The ESF field and all extended subheaders related to it are not encrypted. (See section 6.3.2.2.7)

2. In 6.3.2.2.7 Table 13b define Bits#3-10 only as reserved and leave Bit #2 in current definition

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes
Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
De-Reg code 0x00 is de-reg from the BS and the network. I understand what is meant by de-reg from the BS, but what is de-reg from the network?

Suggested Remedy
Remove "and network"

Proposed Resolution Recommendation: Remove "and network"

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Remove "and network"

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
I object to the resolution of session #35 because accepted comment 0163 from DB 80216-04_69r4 was not applied correctly to D6. Comment 0163 in 80216-04_69r4 was submitted and approved. However the value in table 9 for reserved field was set to 14 and not to 8 bit as suggested. Refer to original contribution file C80216e-04_504r6.doc

Suggested Remedy

change value of reserved bits in table 9 from 14 to 8.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

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

See comment 3083

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
I object to the implementation in the draft of Comment #2020 because the changes were reflected at wrong place.

Suggested Remedy
The paragraph in line 46 to 52 in page 13 should be moved to line 46 in the page 26 and old paragraph in line 46 to line 56 in the page 26 should be removed.

Proposed Resolution Recommendation: Accepted Recommendation by
The paragraph in line 46 to 52 in page 13 should be moved to line 46 in the page 26 and old paragraph in line 46 to line 56 in the page 26 should be removed.

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
The paragraph in line 46 to 52 in page 13 should be moved to line 46 in the page 26 and old paragraph in line 46 to line 56 in the page 26 should be removed.

Reason for Group’s Decision/Resolution

Group’s Notes
Group’s Action Items

Editor’s Notes Editor’s Actions k) done

Editor's Questions and Concerns

Editor's Action Items
Incomplete sentence "…DL/UL burst, is present in ."  Present in in what?

Suggested Remedy
"…DL/UL burst, is present in the MAC frame."

Proposed Resolution
Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group  Decision of Group: Accepted
"…DL/UL burst, is present in the MAC frame."

Reason for Group’s Decision/Resolution

Group’s Notes
Group’s Action Items

Editor’s Notes
Editor’s Actions  k) done

Editor’s Questions and Concerns

Editor’s Action Items
"6 deep for subclause numbering was silly, but 7 deep is so ridiculous that it defies description. The editor needs to exercise control and reduce all subclause numbering to less than 5, preferably 4 or less."

Suggested Remedy

Change as indicated here and throughout the draft. The depth of numbering used for subclauses is completely unnecessary.

We agree that the number of subclauses on subclauses is excessive. However, P802.16e will be an amendment to a standard, 802.16-2004. Therefore, it is highly restricted in where it can restructure. It must live with the structure that exists in the base standard.

1) none needed
The GTEKs and GKEKs are encrypted with KEK because they are transmitted as a unicast here.

The GTEKs are encrypted with GKEK and GKEKs are encrypted with KEK.
I object to the resolution of session #35 because accepted comment 471 from DB 80216-04_38r4 was not applied correctly to D6.

The following problems appear in the application of the changes:

1. Changes to 6.3.2.3.7 Registration Request were not applied.
2. Changes to 12.1.x were not applied.
3. In 11.7.6 Number of CID supported.

Suggested Remedy

Change paragraph 6.3.2.3.7 Registration request (REG-REQ) message as follows:

For PMP operation, the REG-REQ shall contain the following TLVs:

- CID Support (11.7.6)
- SS management support (11.7.2)
- IP management mode (11.7.3)

Change paragraph 12.1.1.4.7 REG-REQ:
- Vendor ID Encoding (optional)
- Uplink CID Support

Change paragraph 12.1.1.4.7 REG-RSP:
- Vendor ID Encoding (optional)
- Uplink CID Support
Change paragraph 12.1.1.4.7 REG-RSP:
- Vendor ID Encoding (optional)
- Uplink CID Support

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Change paragraph 6.3.2.3.7 Registration request (REG-REQ) message as follows:

For PMP operation, the REG-REQ shall contain the following TLVs:
- Uplink CID Support (11.7.6)
- SS management support (11.7.2)
- IP management mode (11.7.3)

Change paragraph 12.1.1.4.7 REG-REQ:
- Vendor ID Encoding (optional)
- Uplink CID Support

Change paragraph 12.1.1.4.7 REG-RSP:
- Vendor ID Encoding (optional)
- Uplink CID 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
The same bit combination of 101 was used for two subsequent entries under the Feedback Type heading.

The same situation also occurs on p. 335, lines 55-57, section 8.4.5.4.15.

Also, the feedback types defined in IEEE C802.16e-05/038r1 under Table 306l need to be updated to match the feedback types that were adopted at the last meeting. (note that 38r1 was approved at the last meeting, but the editors failed to include it in the D6 document. We have submitted a separate comment on that.)

Suggested Remedy

Change the bit pattern for "Per stream power control" from 101 to 110 in the two places described above, and also changed the "reserved" to be only 111 instead of 110-111.

Then, after 38r1 is incorporated, change the feedback type bit field descriptions under the table mentioned above to match the corrected definitions on p. 335, lines 46-57, section 8.4.5.4.15, namely:

000 = Fast DL measurement/Default Feedback with antenna grouping
001 = Fast DL measurement/Default Feedback with antenna selection
010 = Fast DL measurement/Default Feedback with reduced code book
011 = Quantized precoding weight feedback
100 = Index to precoding matrix in codebook
101 = Per stream power control
110 = Reserved
111 = Reserved
There are some problems in using HMAC tuple as a fixed parameter in mobility management messages. The problem and solutions are described in contribution IEEE C802.16e-05/110.

Suggested Remedy
Adopt the text proposed in contribution IEEE C802.16e-05/110

Proposed Resolution Recommendation: Accepted
Adopt the text proposed in contribution IEEE C802.16e-05/110

Reason for Recommendation
Document 110 proposes the correct solution.

Resolution of Group Decision of Group: Accepted
Adopt the text proposed in contribution IEEE C802.16e-05/110

Reason for Group’s Decision/Resolution
Document 110 proposes the correct solution.

Editor’s Notes
b) awaiting missing input
I found "110r2," but not just "110"
I object to the implementation in the draft of Comment #636 because besides Power Saving Class of types 1 and 2, Power Saving Class of type 3 may be defined and activated/deactivated by MOB_SLP-REQ/RSP transaction.

Suggested Remedy

"...certain Power Saving Classes of types 1, 2, and 3."

Proposed Resolution

Resolution of Group: Accepted

Reason for Recommendation

Resolution of Group: Accepted

Reason for Group's Decision/Resolution

Group's Action Items

k) done

Editor's Action Items
Discuss and adopt the contribution C80216e-05/113

Suggested Remedy
Adopt the contribution C80216e-05/113

Proposed Resolution
Recommendation: Accepted-Modified
Recommendation by

Adopt the contribution C80216e-05/113.
Delete Table 108d from the contribution (make no changes to Table 108d in the document).

Reason for Recommendation
Resolution of Group Decision of Group: Rejected

Reason for Group's Decision/Resolution
Vote: 28-10
Vote: 29-10
Adds unnecessary overhead.

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
Suggested Remedy
[Delete Reserved field in Table 108f]

Proposed Resolution Recommendation: Accepted
Recommendation by
Delete Reserved field in Table 108f

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Delete Reserved field in Table 108f

Reason for Group’s Decision/Resolution

Group’s Notes
Group’s Action Items

Editor’s Notes
Editor’s Actions k) done
Editor’s Questions and Concerns

Editor’s Action Items
Suggested Remedy
change "Table 340a" to "Table 342a"

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
change "Table 340a" to "Table 342a"

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
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. Table 108f is one example of this problem.

Change as indicated here and throughout the draft

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Change as indicated here and throughout the draft

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions

k) done

Editor's Questions and Concerns

Editor's Action Items
Suggested Remedy
change "Table 106e" to "Table 108g".

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
change "Table 106e" to "Table 108g".

Reason for Group’s Decision/Resolution

Group’s Notes
Group’s Action Items

Editor’s Notes Editor’s Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
The table of PHY profile ID definition also applies to OFDM PHY.

Suggested Remedy
change the phase "For systems using OFDMA," to "For systems using OFDM or OFDMA,"

Proposed Resolution Recommendation: Accepted Recommendation by change the phase "For systems using OFDMA," to "For systems using OFDM or OFDMA,"

Reason for Recommendation

Resolution of Group Decision of Group: Accepted change the phase "For systems using OFDMA," to "For systems using OFDM or OFDMA,"

Reason for Group’s Decision/Resolution

Group’s Notes
Group’s Action Items

Editor’s Notes Editor’s Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
Table 108h on page 92 is the same as Table 384a on page 526. It should be deleted.

Also, Table 108i on page 92 shall be relocated to section 11.19.

In addition, the references to those tables shall be updated too.

Suggested Remedy
1. delete line 1 to lin 35 on page 92
2. Move Table 108i to line 60 on page 526
3. change "Table108i" to "Table 384b"
4. page 526, line 18, Change Table 106f to Table 384a
5. page 526, line 18, change Table 106g to Table 384b

Proposed Resolution

Recommended: Accepted

1. delete line 1 to lin 35 on page 92
2. Move Table 108i to line 60 on page 526
3. change "Table108i" to "Table 384b"
4. page 526, line 18, Change Table 106f to Table 384a
5. page 526, line 18, change Table 106g to Table 384b

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

1. delete line 1 to lin 35 on page 92
2. Move Table 108i to line 60 on page 526
3. change "Table108i" to "Table 384b"
4. page 526, line 18, Change Table 106f to Table 384a
5. page 526, line 18, change Table 106g to Table 384b

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
The parameter, N_Recommended_BS_scanning, is missing in Table 108j. It is a bad idea to derive it when the corresponding "For .." loop is not at the end of this message.

Suggested Remedy

1. insert a row in Table 108j, right after "scan iteration"
   
   N_Recommended_BS_scanning                     3 bits               number of BSs which the MS plans to scan.

2. remove the row of "reserved ....", i.e., line 30, page 93

3. change the word "setting" to "scanning" in line 22, page 94

Proposed Resolution

Resolution of Group: Accepted

Reason for Recommendation

Resolution of Group: Accepted

Reason for Group's Decision/Resolution

Group's Notes

Editor's Questions and Concerns

Editor's Action Items

k) done
The changes to Equation (111) appear to have been implemented badly. There is a new parameter, Nsubcarriers, but this is not used in the equation.

Suggested Remedy
Fix equation or delete page 93, line 51.

Proposed Resolution
Recommendation: Withdrawn
Recommendation by David Castelow

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: I) none needed

Editor’s Questions and Concerns

Editor’s Action Items
The message MOB_SCN-REQ is always sent by MS, so BS won't set up any value in this message. Therefore, the "if statement ..." in the scan duration parameter description is extra.

Also, there is not reason for an MS to send out a MOB_SCN-REQ message with 0 scan duration. So, the "if (scan duration == 0)" in Table 108j is extra.

Suggested Remedy
1. remove the sentence "If the BS sets this field ...." in line 7 page 94
2. page 93, Table 108j, remove line 21 to line 26;
3. page 93, Table 108j, remove line 53

Proposed Resolution Recommendation: Accepted
1. remove the sentence "If the BS sets this field ...." in line 7 page 94
2. page 93, Table 108j, remove line 21 to line 26;
3. page 93, Table 108j, remove line 53

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
1. remove the sentence "If the BS sets this field ...." in line 7 page 94
2. page 93, Table 108j, remove line 21 to line 26;
3. page 93, Table 108j, remove line 53

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
BS does not "request" in the MOB_SCN-RSP message. It is a "response" message.

Suggested Remedy
change "request" to "allocate"

Proposed Resolution Recommendation: Accepted
change "request" to "allocate"

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
change "request" to "allocate"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
<table>
<thead>
<tr>
<th>Comment #</th>
<th>Type</th>
<th>Comment submitted by</th>
<th>Starting Page #</th>
<th>Starting Line #</th>
<th>Fig/Table#</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>3163</td>
<td>Editorial</td>
<td>Lei Wang Member</td>
<td>95</td>
<td>20</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Suggested Remedy**

change "String" to "scanning"

**Proposed Resolution**

<table>
<thead>
<tr>
<th>Recommendation:</th>
<th>Recommendation by</th>
</tr>
</thead>
</table>

**Reason for Recommendation**

**Resolution of Group**

<table>
<thead>
<tr>
<th>Decision of Group: Accepted</th>
</tr>
</thead>
</table>

change "String" to "scanning"

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

**Group's Notes**

**Group's Action Items**

**Editor's Notes**

<table>
<thead>
<tr>
<th>Editor's Actions</th>
<th>k) done</th>
</tr>
</thead>
</table>

**Editor's Questions and Concerns**

**Editor's Action Items**

| Editor's Action Items | |
|-----------------------| |
Replace "Rendevouz_time" with "Rendezvous time" (for consistency with the term in the next page).

Reason for Group’s Decision/Resolution

Replace "Rendevouz_time" with "Rendezvous time" (for consistency with the term in the next page).

Group’s Action Items

Editor’s Notes

k) done
It does not make sense to measure Rendezvous time in frame duration of servicing BS, because it is the expected time for the corresponding recommended BS to provide non-contention based ranging opportunity and that BS may have different frame duration than the servicing BS.

Suggested Remedy
change "in units of frame duration (of servicing BS)" to "in units of 100us".

Proposed Resolution Recommendation: Accepted-Modified Recommendation by
change "in units of frame duration (of servicing BS)" to "in units of 500us".

Reason for Recommendation
Resolution of Group Decision of Group: Accepted-Modified
change "in units of frame duration (of servicing BS)" to "in units of 500us".

Reason for Group’s Decision/Resolution
Vote: 6-12

Group’s Notes
Group’s Action Items

Editor’s Notes Editor’s Actions k) done
Editor’s Questions and Concerns

Editor’s Action Items
The Rendezvous time shall be an offset from the frame where the MOB_SCN-RSP message, not the MOB_SCN-REQ message, is transmitted.

Suggested Remedy
change "MOB_SCN-REQ" to "MOB_SCN-RSP"

Proposed Resolution Recommendation: Accepted
change "MOB_SCN-REQ" to "MOB_SCN-RSP"

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
change "MOB_SCN-REQ" to "MOB_SCN-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
Suggested Remedy
change "most" to "most recently"

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
change "most" to "most recently"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
In IEEE 802.16e/D5, MOB_SCAN-REPORT message includes Relative Delay and Relative Delay does not present in MOB_SCN-REPORT message in IEEE 802.16e/D6. But I cannot find any comment proposed such a deletion.

In my thought, it might be deleted by accident.

Suggested Remedy

Add following description at the end of parameter description of MOB_SCAN-REPORT message at page 98, line 26

Relative delay
This parameter indicates the delay of neighbor DL signals relative to the serving BS, as measured by the MSS for the particular BS. The value shall be interpreted as an signed fraction in units of samples.
Add following description at the end of parameter description of MOB_SCAN-REPORT message at page 98, line 26

**Relative delay**

This parameter indicates the delay of neighbor DL signals relative to the serving BS, as measured by the MSS for the particular BS. The value shall be interpreted as an signed integer in units of samples.

Reason for Recommendation

**Resolution of Group**

Decision of Group: **Accepted-Modified**

At table 108l-MOB_SCAN-REPORT message format in line 43, Page 97 (6.3.2.3.50), after BS RSSI mean, include Relative Delay as following:

<table>
<thead>
<tr>
<th>BS RSSI mean</th>
<th>8 bits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relative delay</td>
<td>8 bits</td>
</tr>
</tbody>
</table>

Add following description at the end of parameter description of MOB_SCAN-REPORT message at page 98, line 26

**Relative delay**

This parameter indicates the delay of neighbor DL signals relative to the serving BS, as measured by the MSS for the particular BS. The value shall be interpreted as an signed integer in units of samples.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
The parameter, BS RSSI mean, is for each reported neighbor BS. Its description is not in a right place in the current doc.

Suggested Remedy
move line 53 to line 60 on page 97 to line 26 on page 98.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
move line 53 to line 60 on page 97 to line 26 on page 98.

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
Add the following after 'Service level prediction' field at line 8 page 99.

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>HO process optimization</td>
<td>8 bit</td>
<td></td>
</tr>
</tbody>
</table>

Add the following after 'Action time' field at line 15 page 102.

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource Remain Type</td>
<td>1 bit</td>
<td>0: MS resource release</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1: MS resource retain</td>
</tr>
</tbody>
</table>

Add the following after 'padding' field at line 17 page 102.

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLV encoded information</td>
<td>Variable</td>
<td>TLV specific</td>
</tr>
</tbody>
</table>

'HO process optimization' field, 'Resource Remain Type' field and 'TLV encoded information' field are dropped from Table 108m.

Proposed Resolution

Add the following after 'Service level prediction' field at line 8 page 99.

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>HO process optimization</td>
<td>8 bit</td>
<td></td>
</tr>
</tbody>
</table>

Add the following after 'Action time' field at line 15 page 102.

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource Retain Type</td>
<td>1 bit</td>
<td>0: MS resource release</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1: MS resource retain</td>
</tr>
</tbody>
</table>

Add the following after 'padding' field at line 17 page 102.

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLV encoded information</td>
<td>Variable</td>
<td>TLV specific</td>
</tr>
</tbody>
</table>

Change all other instances of "Resource Remain Type" to "Resource Retain Type"
Resolution of Group: Accepted-Modified

Reason for Recommendation

Add the following after 'Service level prediction' field at line 8 page 99.

<table>
<thead>
<tr>
<th>HO process optimization</th>
<th>8bit</th>
</tr>
</thead>
</table>

Add the following after 'Action time' field at line 15 page 102.

<table>
<thead>
<tr>
<th>Resource Retain Type</th>
<th>1bit</th>
</tr>
</thead>
<tbody>
<tr>
<td>0: MS resource release</td>
<td></td>
</tr>
<tr>
<td>1: MS resource retain</td>
<td></td>
</tr>
</tbody>
</table>

Add the following after 'padding' field at line 17 page 102.

<table>
<thead>
<tr>
<th>TLV encoded information</th>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLV specific</td>
<td></td>
</tr>
</tbody>
</table>

Change all other instances of "Resource Remain Type" to "Resource Retain Type"

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes
Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
Similar to CID, SAID can be reallocated through HO MAC management message in SHO/FBSS operation. Therefore SAID update also need to be included in MOB_BSHO-REQ/RSP.

Suggested Remedy
Discuss and Adopt C802.16e-05_140

Proposed Resolution Recommendation: Accepted Recommendation by
Discuss and Adopt C802.16e-05_140

Reason for Recommendation
Resolution of Group Decision of Group: Accepted

Adopt C802.16e-05/140

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions   k) done

Editor’s Questions and Concerns

Editor’s Action Items
Comment submitted by: Lei Wang

Comment Type: Editorial

Starting Page #: 98
Starting Line #: 48

Comment #3172

HHO is not defined.

Suggested Remedy

globally replace HHO by HO

Proposed Resolution

Recommendation:

Reason for Recommendation

Resolution of Group

Decision of Group: Superceded

See comment 3173

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
Acronym HHO has no definition [Hard HandOver?], but looks like it is associated with "regular" handover procedure i.e. not SHO/FBSS. Both SHO and FBSS do not fit definition of "basic HO" in 6.3.20.2 ["The section defines the HO process in which an MSS migrates from the air-interface provided by one BS to the air-interface provided by another BS"], so seems reasonable to call HHO simply "HO" while keeping SHO & FBSS acronyms.

**Suggested Remedy**
replace all occurrences HHO with HO

**Proposed Resolution**

<table>
<thead>
<tr>
<th>Recommendation by</th>
<th>Recommended: replace all occurrences HHO with HO</th>
</tr>
</thead>
</table>

**Reason for Recommendation**

<table>
<thead>
<tr>
<th>Resolution of Group</th>
<th>Decision of Group: Accepted</th>
</tr>
</thead>
<tbody>
<tr>
<td>replace all occurrences HHO with HO</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Group's Notes</th>
<th>Group's Action Items</th>
</tr>
</thead>
</table>

**Editor's Notes**

<table>
<thead>
<tr>
<th>Editor's Actions</th>
<th>Editor's Action Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>k) done</td>
<td></td>
</tr>
</tbody>
</table>

I made this change in Clause 6 only.

**Editor's Questions and Concerns**

**Editor's Action Items**
In C80216maint-04/09r4, comment 504 was marked as superceded. I think that the diagrams are worse than previously.

(a) No definition of GRD: do you mean Guard?
(b) shading of the 3rd and 7th grey boxes in figure 240 should be altered from diagonal top left/bottom right to diagonal top right/bottom left to match shading of destination areas (4th and 8th).

Suggested Remedy

(a) ?????

Page 100, line 12
(b) Shading of the 3rd and 7th grey boxes in figure 240 should be altered from diagonal top left/bottom right to diagonal top right/bottom left to match shading of destination areas (4th and 8th).

Proposed Resolution Recommendation: Withdrawn

Reason for Recommendation

Resolution of Group Decision of Group: Withdrawn

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

Editor's Questions and Concerns

Editor's Action Items
<table>
<thead>
<tr>
<th>Comment #</th>
<th>3175</th>
<th>Comment submitted by:</th>
<th>Changhoi Koo</th>
<th>Other</th>
<th>2005/03/09</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comment Type</td>
<td>Technical, Non-binding</td>
<td>Starting Page #</td>
<td>101</td>
<td>Starting Line #</td>
<td>22</td>
</tr>
</tbody>
</table>

'Service level prediction' field is necessary for only HHO request.

Suggested Remedy

Remove 'Service level prediction' field at line 22 page 101 and line 27 page 108.

Proposed Resolution Recommendation: **Accepted**

Remove 'Service level prediction' field at line 22 page 101 and line 27 page 108.

Reason for Recommendation

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

Remove 'Service level prediction' field at line 22 page 101 and line 27 page 108.

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor's Actions  k) done

Editor’s Questions and Concerns

Editor's Action Items
There are discrepancies between Table 108m and the explanatory description of the included parameter fields below the table.

* MOB_BSHO-REQ lists Resource Retain Type as one of the fields in that message. However, it is not included in Table 108m.
* The parameter description lists Resource Retain Time as a possible TLV of the REQ, but the REQ does not have a field for including TLVs.

Suggested Remedy

Add following fields to Table 108m (immediately above Action Time Field):

<table>
<thead>
<tr>
<th>Resource Retain Type</th>
<th>1 bit</th>
<th>0: MS resource release</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1: MS resource retain</td>
</tr>
<tr>
<td>TLV encoded information</td>
<td>Variable</td>
<td>TLV specific</td>
</tr>
</tbody>
</table>

Proposed Resolution Recommendation: **Accepted**

Add following fields to Table 108m (immediately above Action Time Field):

<table>
<thead>
<tr>
<th>Resource Retain Type</th>
<th>1 bit</th>
<th>0: MS resource release</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1: MS resource retain</td>
</tr>
<tr>
<td>TLV encoded information</td>
<td>Variable</td>
<td>TLV specific</td>
</tr>
</tbody>
</table>

Reason for Recommendation

Resolution of Group **Accepted**

Add following fields to Table 108m (immediately above Action Time Field):

<table>
<thead>
<tr>
<th>Resource Retain Type</th>
<th>1 bit</th>
<th>0: MS resource release</th>
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<tr>
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<tr>
<td>TLV encoded information</td>
<td>Variable</td>
<td>TLV specific</td>
</tr>
<tr>
<td>Resource Retain Type</td>
<td>1 bit</td>
<td>0: MS resource release</td>
</tr>
<tr>
<td>----------------------</td>
<td>-------</td>
<td>------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1: MS resource retain</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TLV encoded information</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Variable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TLV specific</td>
</tr>
</tbody>
</table>

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions

Editor's Action Items:

k) done

Editor's Questions and Concerns
The Resource Retain Type is missing in Table 108m.

Suggested Remedy

1. insert the following row in Table 108m before "Action time", i.e., line 15 page 102:
   Resource Retain Type | 1 bit | =1, the serving BS will retain the MS's connections during the time in Resource Retain Time.
   =0, the serving BS will discard the MS's connections

2. change the length of "Action time" from 8 bits to 7 bits.

Proposed Resolution

1. insert the following row in Table 108m before "Action time", i.e., line 15 page 102:
   Resource Retain Type | 1 bit | =1, the serving BS will retain the MS's connections during the time in Resource Retain Time.
   =0, the serving BS will discard the MS's connections

2. change the length of "Action time" from 8 bits to 7 bits.

Reason for Recommendation

Resolution of Group: Accepted

Reason for Group's Decision/Resolution

Group's Notes

Editor's Notes

Editor's Actions: k) done
Editor’s Action Items
The two parameters, Preamble index/Subchannel Index and HO process optimization, are missing in Table 108m, while their descriptions are present on page 103.

### Proposed Resolution

**Recommendation:** Accepted

<table>
<thead>
<tr>
<th>Proposed Resolution</th>
<th>Recommendation by</th>
</tr>
</thead>
<tbody>
<tr>
<td>insert the following two rows in Table 108m before line 10 page 99:</td>
<td></td>
</tr>
<tr>
<td>preamble index / Subchannel Index</td>
<td>8 bits</td>
</tr>
<tr>
<td>HO process optimization</td>
<td>8 bits</td>
</tr>
</tbody>
</table>

### Reason for Recommendation

**Resolution of Group:** Accepted

<table>
<thead>
<tr>
<th>Resolution of Group</th>
<th>Decision of Group: Accepted</th>
</tr>
</thead>
<tbody>
<tr>
<td>insert the following two rows in Table 108m before line 10 page 99:</td>
<td></td>
</tr>
<tr>
<td>preamble index / Subchannel Index</td>
<td>8 bits</td>
</tr>
<tr>
<td>HO process optimization</td>
<td>8 bits</td>
</tr>
</tbody>
</table>

**Editor's Notes**

- **Editor's Actions:**  
  - k) done

**Editor's Questions and Concerns**

**Editor's Action Items**

**Group's Notes**

**Group's Action Items**
The parameter, SHO/FBSS support indication, is not defined. Also, what's "Temp BS-ID BSID"? Something different from "Temp BS-ID"?

The parameter, BS CINR mean, is already included as per recommended BS parameter in line 41 page 104. So, the line 64 on page 104 is duplicated.

Suggested Remedy
remove line 58 to line 64 on page 104

Proposed Resolution  Recommendation: Accepted-Modified  Recommendation by
Adopt C802.16-05/191

Reason for Recommendation

Resolution of Group  Decision of Group: Accepted-Modified
Adopt C802.16-05/191

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes  Editor's Actions  k) done

Editor's Questions and Concerns

Editor's Action Items
Not clear why MS HO Request message must contain HMAC while other messages contain OMAC or may optionally use HMAC

Suggested Remedy
Either clarify or change to OMAC [preferred]

Proposed Resolution
Recommendation: Accepted-Modified
Recommendation by
See resolution of 3150
Also.
See resolution of 3222

Reason for Recommendation

Resolution of Group
Decision of Group: Accepted-Modified
See resolution of 3150
Also.
See resolution of 3222

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
The Service Level prediction in the MOB_BSHO-REQ and MOB_MSSHO-REQ messages differ in definition. The MOB_BSHO-REQ management definition the Service Level prediction starts with 0 ends with 3. This definition is also used in RNG-RSP. The MOB_MSSHO-REQ management definition the Service Level prediction starts with 1 ends with 4.

Suggested Remedy

Change 6.3.2.3.52, page 105, line 62 as follows:

"Service level prediction

The service level prediction value indicates the level of service the MS can expect from this BS. The following encodings apply:

10 = No service possible for this MS
21 = Some service is available for one or several service flows authorized for the MS.
32 = For each authorized service flow, a MAC connection can be established with QoS specified by the AuthorizedQoSParamSet.
43 = No service level prediction available."

Proposed Resolution Recommendation: Accepted

Change 6.3.2.3.52, page 105, line 62 as follows:

"Service level prediction

The service level prediction value indicates the level of service the MS can expect from this BS. The following encodings apply:

10 = No service possible for this MS
21 = Some service is available for one or several service flows authorized for the MS.
32 = For each authorized service flow, a MAC connection can be established with QoS specified by the AuthorizedQoSParamSet.
43 = No service level prediction available."

Reason for Recommendation

Resolution of Group: Accepted

Change 6.3.2.3.52, page 105, line 62 as follows:

"Service level prediction

The service level prediction value indicates the level of service the MS can expect from this BS. The following encodings apply:

10 = No service possible for this MS
21 = Some service is available for one or several service flows authorized for the MS.
32 = For each authorized service flow, a MAC connection can be established with QoS specified by the AuthorizedQoSParamSet.
43 = No service level prediction available."

Reason for Group's Decision/Resolution
Arrival time difference in MOB_MSHO-REQ, is not clearly defined:
* It is unclear what a negative value is: arrival of signal before or after that of Serving BS.
* Also, using 4 bits one of which is used for the sign, does not allow for the indicated range (+/- 1 CP), at least not if the example is correct. Instead the correct range is +3/4 of a CP to -1 CP.

**Suggested Remedy**

Change 6.3.2.3.52, page 106, line 7 as follows:

"Arrival Time Difference
The Arrival Time Difference parameter indicates the delay of downlink signal relative to the serving BS, as measured by the MS for the neighbor BS. For SCa PHY mode, this value shall be interpreted as a signed byte with the resolution of PS. For OFDM and OFDMA PHY mode, this value shall be interpreted as a signed fraction with a range of +7/8 to -1 cyclic prefix time of the serving BS. A positive value indicates that the signal of the neighbour BS arrived after that of the serving BS (for example, the value of 0x02 indicates that the neighbour signal is interpreted as delayed by 25% of the CP).

**Proposed Resolution**

Change 6.3.2.3.52, page 106, line 7 as follows:

"Arrival Time Difference
The Arrival Time Difference parameter indicates the delay of downlink signal relative to the serving BS, as measured by the MS for the neighbor BS. For SCa PHY mode, this value shall be interpreted as a signed byte with the resolution of PS. For OFDM and OFDMA PHY mode, this value shall be interpreted as a signed fraction with a range of +7/8 to -1 cyclic prefix time of the serving BS. A positive value indicates that the signal of the neighbour BS arrived after that of the serving BS (for example, the value of 0x02 indicates that the neighbour signal is interpreted as delayed by 25% +/- 6.25% of the CP).

**Reason for Recommendation**

Resolution of Group: Accepted-Modified

Change 6.3.2.3.52, page 106, line 7 as follows:

"Arrival Time Difference
The Arrival Time Difference parameter indicates the delay of downlink signal relative to the serving BS, as measured by the MS for the neighbor BS. For SCa PHY mode, this value shall be interpreted as a signed byte with the resolution of PS. For OFDM and OFDMA PHY mode, this value shall be interpreted as a signed fraction with a range of +7/8 to -1 cyclic prefix time of the serving BS. A positive value indicates that the signal of the neighbour BS arrived after that of the serving BS (for example, the value of 0x02 indicates that the neighbour signal is interpreted as delayed by 25% +/- 6.25% of the CP).

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

Resolved by Group: Accepted-Modified
Group's Notes
Group's Action Items

Editor's Notes
Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
RE: #397
The possibility to signal traffic indication using the CID, which is in many cases more efficient than using SLPID, has been removed in session #34.
For example: 512 UT per sector, 200 frames per second, sleep period of about 1 second, uniformly distributed. It turns out that about 3 UTs are going to wake up every frame. Signalling with CID would be much more efficient (and simple) in this case.

Suggested Remedy
Undo the changes of comment #397.
This can easily be done by undeleting lines 50 to 57 in the marked-up-changes version of P802.16e/D6, on page 109.
Discuss and Adopt C802.16e-05_111

Suggested Remedy
Discuss and Adopt C802.16e-05_111

Proposed Resolution Recommendation: Accepted
Discuss and Adopt C802.16e-05_111

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Adopt C802.16e-05/111

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes Editor’s Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
In order to ensure consistency, the description of the 'boosting' field in all of its occurrences should refer to the DL-MAP_IE instead of copying the same description over and over again.

Suggested Remedy

Replace the 'Notes' section of the 'boosting' field in tables 108t, 281, 285a, 285b, 285c, 285d, 285g, 285m, ... with the following text:

**refer to table 273.**

Proposed Resolution

**k) done**

Editor's Actions

While I was making this change, I noticed that nothing is bolded in the syntax column of Table 285b. For consistency, I would think some would be bolded. (Same with Table 285r)
'SUB-DL-UL-MAP message shall be used only with compressed DL and appended UL MAP structure.' However, Figure 23b depicts both DL-MAP and UL-MAP separately.

Suggested Remedy

1. Remove UL-MAP from the figure and let DL burst #3 occupy that region.
2. Replace 'DL-MAP' by 'Compressed DL-MAP and Compressed UL-MAP'.

Proposed Resolution

Recommendation: Accepted

1. Remove UL-MAP from the figure and let DL burst #3 occupy that region.
2. Replace 'DL-MAP' by 'Compressed DL-MAP and Compressed UL-MAP'.

Reason for Recommendation

Resolution of Group: Accepted

1. Remove UL-MAP from the figure and let DL burst #3 occupy that region.
2. Replace 'DL-MAP' by 'Compressed DL-MAP and Compressed UL-MAP'.

Editor's Questions and Concerns

k) done
Suggested Remedy

Modify as below in Table 108z:
Compressed map indicator's size: 3 bits -> 2 bits
Compressed map indicator's Notes: Set to binary 111 -> 11

<table>
<thead>
<tr>
<th>Proposed Resolution</th>
<th>Recommendation:</th>
<th>Recommendation by</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Reason for Recommendation

Resolution of Group: Superceded

See comment 3333

Reason for Group's Decision/Resolution

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
All fields in Table 342 should have, at very least, default values. All (Min, Default and Max) would be a good thing. "Best" example is T19, with no recommended values.

Suggested Remedy
Include all of Table 342 from 802.16-2004 and complete for all missing values. Comment 80216maint-04/04r9#552 is incomplete, but a start.

Proposed Resolution Recommendation: Withdrawn

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 1) none needed

Editor's Questions and Concerns

Editor's Action Items
I object to the implementation of Comment #2194 because it need more correction or clarification in the SUB-DL-UL-MAP message. DL H-ARQ ACK for downlink burst is located in the ACKCH Region and UL H-ARQ ACK for uplink burst uses the ACK bit index in the DL H-ARQ ACK IE so some words should be changed as written below.

Suggested Remedy

[Modify line 3, page 123 as following]

In 6.3.2.3.59 Sub downlink/uplink map (SUB-DL-UL-MAP) message,

H-ARQ ACK offset indicator
This field indicates the inclusion of H-ARQ offsets. If this field is '01', then the ACK offsets shall be follow the last allocation made by previous maps. An SS which failed to decode any of the previous maps shall disregard all H-ARQ allocations made by this map, if H-ARQ ACK offset indicator is '0'.

[Modify line 8, page 123 as following]

UL H-ARQ ACK offset
Indicates the ACK channel in the ACKCH Region that corresponds to the first H-ARQ enabled uplink burst specified in this map message.

DL H-ARQ ACK offset
Indicates the ACK bit index in the DL H-ARQ ACK IE that corresponds to the first H-ARQ enabled uplink burst specified in this map message.

Proposed Resolution Recommendation: Accepted

[Modify line 3, page 123 as following]

In 6.3.2.3.59 Sub downlink/uplink map (SUB-DL-UL-MAP) message,

H-ARQ ACK offset indicator
This field indicates the inclusion of H-ARQ offsets. If this field is '01', then the ACK offsets shall be follow the last allocation made by previous maps. An SS which failed to decode any of the previous maps shall disregard all H-ARQ allocations made by this map, if H-ARQ ACK offset indicator is '0'.

[Modify line 8, page 123 as following]

DL H-ARQ ACK offset
Indicates the ACK channel in the ACKCH Region that corresponds to the first H-ARQ enabled uplink burst specified in this map message.
Indicates the ACK channel in the ACKCH Region that corresponds to the first H-ARQ enabled downlink uplink burst specified in this map message.

**UL H-ARQ ACK offset**

Indicates the ACK bit index in the DL H-ARQ ACK IE that corresponds to the first H-ARQ enabled downlink uplink burst specified in this map message.

**Reason for Recommendation**

**Resolution of Group**

**Decision of Group: Accepted**

[Modify line3, page 123 as following]

In 6.3.2.3.59 Sub downlink/uplink map (SUB-DL-UL-MAP) message,

H-ARQ ACK offset indicator

This field toggles indicates the inclusion of H-ARQ offsets. If this field is '01', then the ACK offsets shall be follow the last allocation made by previous maps. An SS which failed to decode any of the previous maps shall disregard all H-ARQ allocations made by this map, if H-ARQ ACK offset indicator is '0'.

[Modify line 8, page 123 as following]

**DL H-ARQ ACK offset**

Indicates the ACK channel in the ACKCH Region that corresponds to the first H-ARQ enabled uplink downlink burst specified in this map message.

**UL H-ARQ ACK offset**

Indicates the ACK bit index in the DL H-ARQ ACK IE that corresponds to the first H-ARQ enabled downlink uplink burst specified in this map message.

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

**Group's Notes**

**Group’s Action Items**

**Editor’s Notes**

**Editor's Actions** k) done

**Editor’s Questions and Concerns**

**Editor's Action Items**
The description for the 'RCID_TYPE' field is incorrect.

Suggested Remedy
replace line 22 with the following:

"The RCID type used for RCID_IEs specified in DL-MAP_IEs that are described in this SUB-DL-UL-MAP."

Proposed Resolution Recommendation: Accepted
replace line 22 with the following:

"The RCID type used for RCID_IEs specified in DL-MAP_IEs that are described in this SUB-DL-UL-MAP."

Reason for Recommendation
Resolution of Group: Accepted
replace line 22 with the following:

"The RCID type used for RCID_IEs specified in DL-MAP_IEs that are described in this SUB-DL-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
In correct editorial change language. The text reads:

"6.3.9.5 Initial ranging and automatic adjustments
[Insert the following text at the end of 6.3.9.5:]

In the case that the EIRxPIR,max and/or BS_EIRP are/is not known, the MS shall start from the minimum transmit power level defined by the BS.

For MS that are employing the optional Association procedure, and to which the MS and BS are currently Associated, the MS may use its un-expired, previously obtained and retained associated Ranging transmit parameters to set initial ranging values including PTX_IR_MAX power levels.

However, the first paragraph is already in 6.3.9.5.1 of 802.16-2004, and should not be inserted.

Suggested Remedy
On page 125, line 63, change

"6.3.9.5 Initial ranging and automatic adjustments
[Insert the following text at the end of 6.3.9.5:]

In the case that the EIRxPIR,max and/or BS_EIRP are/is not known, the SS shall start from the minimum transmit power level defined by the BS.

For MS that are employing the optional Association procedure, and to which the MS and BS are currently Associated, the MS may use its un-expired, previously obtained and retained associated Ranging transmit parameters to set initial ranging values including PTX_IR_MAX power levels.

to:

"6.3.9.5 Initial ranging and automatic adjustments

6.3.9.5.1 Contention based Initial ranging and automatic adjustments

[Change text as indicated:]

In the case that the EIRxPIR,max and/or BS_EIRP are/is not known, the SS shall start from the minimum transmit power level defined by the BS.

For MS that are employing the optional Association procedure, and to which the MS and BS are currently Associated, the MS may use its un-expired, previously obtained and retained associated Ranging transmit parameters to set initial ranging values including PTX_IR_MAX power levels."
On page 125, line 63, change

"6.3.9.5 Initial ranging and automatic adjustments

[Insert the following text at the end of 6.3.9.5]

In the case that the EIRxPIR,max and/or BS_EIRP are/is not known, the MS shall start from the minimum transmit power level defined by the BS.

For MS that are employing the optional Association procedure, and to which the MS and BS are currently Associated, the MS may use its un-expired, previously obtained and retained associated Ranging transmit parameters to set initial ranging values including PTX_IR_MAX power levels."

to:

"6.3.9.5 Initial ranging and automatic adjustments

6.3.9.5.1 Contention based Initial ranging and automatic adjustments

[Change text as indicated:

In the case that the EIRxPIR,max and/or BS_EIRP are/is not known, the SS shall start from the minimum transmit power level defined by the BS.

For MS that are employing the optional Association procedure, and to which the MS and BS are currently Associated, the MS may use its un-expired, previously obtained and retained associated Ranging transmit parameters to set initial ranging values including PTX_IR_MAX power levels."

Reason for Recommendation

Resolution of Group: Accepted

Decision of Group: Accepted

On page 125, line 63, change

"6.3.9.5 Initial ranging and automatic adjustments

[Insert the following text at the end of 6.3.9.5]

In the case that the EIRxPIR,max and/or BS_EIRP are/is not known, the MS shall start from the minimum transmit power level defined by the BS.

For MS that are employing the optional Association procedure, and to which the MS and BS are currently Associated, the MS may use its un-expired, previously obtained and retained associated Ranging transmit parameters to set initial ranging values including PTX_IR_MAX power levels."
6.3.9.5 Initial ranging and automatic adjustments

6.3.9.5.1 Contention based Initial ranging and automatic adjustments

[Change text as indicated:]

In the case that the EIRxPIR,max and/or BS_EIRP are/is not known, the SS shall start from the minimum transmit power level defined by the BS.

For MS that are employing the optional Association procedure, and to which the MS and BS are currently Associated, the MS may use its un-expired, previously obtained and retained associated Ranging transmit parameters to set initial ranging values including PTX_IR_MAX power levels.

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes  Editor’s Actions  k) done

Editor’s Questions and Concerns

Editor’s Action Items
Section 6.3.13 contains unexplained terms and uses 802.16 MAC terms in different senses, sometimes in multiple senses. This makes the text unclear and in some cases misleading. For example, the term "connection" is undefined when a MS receives data from multiple BSs:

In contrast to Single-BS MBS connections, Multi-BS-MBS does not require that the MS be registered to the BS from which it receives the transmission, or to any other BS. To provide seamless multicast and broadcast service over multiple BSs, a Multi-BS-MBS connection shall use the same CID, and transport the same data in a synchronized manner.

Suggested Remedy

According to contribution IEEE C802.16e-05/102 "Clarification of Multicast and broadcast services section" by Vladimir Yanover et al.

Proposed Resolution: Accepted

Adopt IEEE C802.16e-05/102r1

Reason for Recommendation

Resolution of Group: Accepted

Adopt IEEE C802.16e-05/102r1

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor's Actions: k) done

Editor’s Questions and Concerns

Editor’s Action Items
I object to the implementation in the draft of Comment #583 because there is a method to change downlink burst profile for MBS MAP message and MBS data but no mechanism to estimate and validate the MBS users’ channel condition and MBS data reception status. In Single-BS MBS, the adaptive change of MBS DIUC is necessary for a BS to use radio resource more efficiently.

Suggested Remedy
Discuss and adopt the contribution C80216e-05_171 (MBS Clarification).

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Rejected

Reason for Group’s Decision/Resolution
Contributor requested rejection as being out of scope of the recirc.

Group’s Notes

Group’s Action Items

Editor’s Notes Editor’s Actions

Editor’s Questions and Concerns

Editor’s Action Items
There is no mention in the current working document of a problem relating to the description of the Bandwidth request opportunity size. The problem is that the description does not reflect the fact that for OFDM the size in PS depends on the type of bandwidth request being carried out. In sub-channelised case it could be 10 symbols worth, while for the full-bandwidth case it is 2 symbols worth. There is not a single number that is applicable. The size for the full bandwidth case is fixed (see 8.3.7.2), and for subchannelised cases can be deduced from the Subchannelization REQ Region-Full Parameters TLV. Therefore I suggest that this parameter be moved to PHY specific sections for SC, SCA, OFDMA. Alternatively, the table needs a note adding to state that this is quantity is not applicable to the OFDM PHY.

Suggested Remedy

At page 127, line 33, replace "Tabl" with "Table".
At page 127, Line 35, alter editorial instruction: replace:
Insert the following entry to tables 350, 351 and 352:
with
Insert the following entry to tables 350 and 351:

Proposed Resolution
Recommendation: Withdrawn

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 1) none needed

Editor's Questions and Concerns

Editor's Action Items
There is no mention in the document of a problem relating to the use of fields in different PHY specifications. Include section 11.8.3.4.

Suggested Remedy

There is no mention in the working document of a problem relating to the use of fields in different PHY specifications. The document needs to clarify the following problem, expressed in terms of 802.16-2004.

A number of statements are made in section 11 that do not seem to be correct: e.g. "This field is not used for other PHY specifications." used at (802.16-2004)

s11.8.3.4.1, p672, l43, for type 150.
s11.8.3.4.2, p673, l3, for type 151.
s11.8.3.4.3, p673, l21, for type 152.
s11.8.3.4.4, p673, l38, for type 153.
s11.8.3.6.2, p679, l5, for type 151.
s11.8.3.6.3, p679, l24, for type 152.
s11.8.3.7.2, p680, l37, for type 151.
s11.8.3.7.3, p681, l5, for type 152.

Insert instructions to strike out this text.

DAC23

Proposed Resolution Recommendation: Withdawn

Reason for Recommendation

Resolution of Group Decision of Group: Withdawn

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
Section 6.3.20.2.1 Cell Selection actually describes Association activity

Suggested Remedy
Delete 6.3.20.2.1; remove Figure 130b to 6.3.20.1.3; change figure's caption to "Example of Association procedure"

Proposed Resolution  Recommendation: Accepted-Modified  Recommendation by
Change title as follows: Example of Cell Selection Procedure with Ranging

Reason for Recommendation
Resolution of Group  Decision of Group: Accepted-Modified
Change title as follows: Example Cell Selection Procedure with Ranging

Reason for Group's Decision/Resolution
Accept-modified (remove upper ranging arrows) Vote: 8-8 Fails
Accept-modified with title change passed unanimously

Group's Notes
Group's Action Items

Editor's Notes
Editor's Actions  k) done

Editor's Questions and Concerns

Editor's Action Items
At page 132, line 50 there are bad editorial instructions, because 11.8.3.7.3 ought to have been split into 2 sections: 11.8.3.7.3 and 11.8.3.7.4: One section per TLV. This has follow-on consequences on new sections. There is a similar problem with p133, line 17.

Suggested Remedy

Delete page 132, lines 45-52 and then include at page 132, line 52 add the following editorial instructions:

[Insert new section after 11.8.3.7.3:

11.8.3.7.4 OFDMA H-ARQ ACK Channel support

This field indicates the number of H-ARQ ACK Channels that a WirelessMAN-OFDMA PHY SS modulator can support for uplink transmissions.

<table>
<thead>
<tr>
<th>Type</th>
<th>Length</th>
<th>Value</th>
<th>Scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>153</td>
<td>1</td>
<td>The number of H-ARQ ACK Channels</td>
<td>SBC-REQ (see 6.3.2.3.23)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SBC-RSP (see 6.3.2.3.24)</td>
</tr>
</tbody>
</table>

Page 132, Line 53, replace "11.8.3.7.4" with "11.8.3.7.5"

Delete Page 133, Line 17-19

Page 133, Line 26, Insert:

Add new section 11.8.3.7.6

11.8.3.7.6 OFDMA SS Number of Supported ACIDs.

This field indicates the number of ACID attacks an SS can support.

<table>
<thead>
<tr>
<th>Type</th>
<th>Length</th>
<th>Value</th>
<th>Scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>153</td>
<td>1</td>
<td>The number of ACIDs that an SS can support</td>
<td>SBC-REQ (see 6.3.2.3.23)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SBC-RSP (see 6.3.2.3.24)</td>
</tr>
</tbody>
</table>

Page 133, lines 26, 29, replace 11.8.3.7.5 with 11.8.3.7.7

Page 133, line 52 and Page 134, line 1, replace 11.8.3.7.6 with 11.8.3.7.8

Page 134, Line 19 and 21, replace 11.8.3.7.7 with 11.8.3.7.9

Page 134, line 64 and Page 135, line 1, replace 11.8.3.7.8 with 11.8.3.7.10

Proposed Resolution Recommendation: Withdrawn

Recommendation by David Castelow

Reason for Recommendation

Resolution of Group Decision of Group: Withdrawn
<table>
<thead>
<tr>
<th>Editor's Notes</th>
<th>Editor's Actions</th>
<th>Group's Action Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>l) none needed</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
I object to the addition of section 6.3.17.5 to the D6 text, because this section is wrongly placed.

Suggested Remedy
Move section 6.3.17.5 to a new section 6.3.18.

Proposed Resolution Recommendation: Accepted
Move section 6.3.17.5 to a new section 6.3.18.

Reason for Recommendation
Resolution of Group Decision of Group: Accepted
Move section 6.3.17.5 to a new section 6.3.18.

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
Grammar: appear->appears once the may goes.

Suggested Remedy
Page 136, line 18
The value may appears

Proposed Resolution Recommendation: Withdrawn Recommendation by David Castelow

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
I object to the resolution of Comment 2191 of commentary resolution 80216-05_001r1a.USR, which was previously rejected, for the following reasons:

While we believe that a system level simulation can provide a better understanding of the gains of this and other proposed scheme, such simulations will require considerable development and efforts in adopting the consistent sets of assumption. Alternatively one can use some theoretical and analytical reasoning to justify our claims.

1- No performance loss compared with TRF_IND: Although no simulation is available to measure the gain associated with either of TRF_IND or the proposed UDLM_IE, in relative terms one can argue that for sleep mode users UDLM provides similar performance gain as that offered by TRF_IND message using smaller overhead. Meanwhile the revised proposal also allows support for TRF_IND message if considered more viable. In this case skip traffic indication is set to "1" and the IE can be used using fewer bits mainly for idle mode users. Meanwhile sleep users can still benefit from other elements of UDLM IE as they relate to broadcast message pointers.

2- Significant power saving for Idle mode users, not otherwise provided by other messages. After the adoption of Telescopic harmonized MAP in the last meeting, this proposed IE presents even more significant power-saving and efficiency for both idle and sleep mode users. As the message appears right after the broadcast portion of DL-MAP, i.e. the main MAP, it is captured by all the mobiles as early as possible to minimize unnecessary power consumption and delay.

a. To have a heuristic measure, considering a 5MHz channel and 512 FFT size system, having repetition coding, and for a fully loaded cell, DL-MAP and UL-MAP could easily extend for 5 OFDM symbols, plus 2 look-ahead symbols, and therefore 7 symbols should be processed by the mobile in idle mode for each frame within the paging listening interval. Since this message appears as the first message after the broadcast portion, assuming Telescopic MPA we do not need to do RF-Processing, and PHY processing of the whole 7 symbols, but we need 4 symbols RF processing (including 2 look-ahead symbols), and possible two fl to symbols PHY and MAC processing (considering repetition coding of order 2). This is about 50% less standby power consumption compared to the existing approach which is very important for power efficiency and increased standby time for handset devices. This gain is more observable, if we assume PDA type terminals using VOIP/PTT applications, in which case the majority of mobiles are in a dormant mode (Idle/Sleep) 95 percent of the time.

3- The broadcast message pointers in this IE also provide additional power saving and lower latency by pointing MSS’s directly to the frame in which new updated DCD/UCD or other critical system broadcast message would appear. This is a significant gain over the existing scheme in which the mobile have to stay on and read all frames following a DCD/UCD change count detection. This feature can also be used to optimize the handover timing to lower handover latency.

4- This IE is just a power saving optimization tool and it does not affect existing messaging
   - This IE does not remove paging advertising message
   - The changes related to Sleep mode is not mandatory, and therefore if a developer wants to use the existing signaling for sleep mode traffic indications it still can use TRF-IND message.

5- The proposed IE provides a unified, consistent and extendable approach for Sleep/Idle/Broadcast notification and therefore reduces the complexity and overhead. The size of this IE compared to TRF-IND is significantly shorter and the message appears earlier in the frame resulting in lower overhead for the system and better power saving for MSS's. The size of UDLM_IE is variable and its transmission in any frame is optional even if it is supported by the system.
Please review and accept contribution C80216-05_99r3.doc

Proposed Resolution Recommendation: Accepted-Modified

Reason for Recommendation

Resolution of Group: Accepted

Reason for Group’s Decision/Resolution

Accept contribution C802.16e-05/099r3.

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions

h) defer to next round

Editor’s Questions and Concerns

Editor’s Action Items

Table 285 has had previous changes from other comments. Please revisit Table 285. The other changes of this contribution have been made.
Suggested Remedy
Replace Figure NNN with Figure 130a.

Proposed Resolution Recommendation: 

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

Replace Figure NNN with Figure 130a.

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes Editor’s Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
Suggested Remedy

change NNN to 130a

Proposed Resolution

Resolution of Group
change NNN to 130a

Suggested Remedy

change NNN to 130a

Proposed Resolution

Resolution of Group
change NNN to 130a

Proposed Resolution

Resolution of Group
change NNN to 130a

Proposed Resolution

Resolution of Group
change NNN to 130a

Proposed Resolution

Resolution of Group
change NNN to 130a

Proposed Resolution

Resolution of Group
change NNN to 130a

Proposed Resolution

Resolution of Group
change NNN to 130a
The paragraph of line 5 on page 142 is a duplicated copy of paragraph of line 62 on page 142.

Suggested Remedy
delete line 5 to line 9 on page 142.

Proposed Resolution Recommendation: Accepted
delete line 5 to line 9 on page 142.

Reason for Recommendation
Resolution of Group Decision of Group: Accepted
delete line 5 to line 9 on page 142.

Reason for Group’s Decision/Resolution

Group’s Notes
Group’s Action Items

Editor’s Notes Editor’s Actions k) done
Editor’s Questions and Concerns
Editor’s Action Items
Suggested Remedy
on both line 28 and line 31, change "SLPREQ" to "SLP-REQ"

Proposed Resolution  Recommendation:  Recommendation by

Reason for Recommendation

Resolution of Group  Decision of Group: Accepted
on both line 28 and line 31, change "SLPREQ" to "SLP-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
Spelling of "neighboring"

Suggested Remedy
Change to "neighboring"

Proposed Resolution
Recommendation: Change to "neighboring"

Reason for Recommendation

Resolution of Group: Accepted

Change to "neighboring"

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
Coordinated Association During scanning

We propose a comprehensive association mechanism, comprised of 4 different association levels:

- Level 0 - No association (i.e. scan without association)
- Level 1 - Association without coordination
- Level 2 - Association with coordination
- Level 3 - Network assisted association reporting

During the basic capabilities negotiation phase the MS and BS exchange info on the supported association levels. The level to actually be used by the MS and BS will be negotiated during the SCN-REQ/RSP exchange session.

Suggested Remedy
Incorporate changes documented in IEEE C802.16e-05/143

Proposed Resolution
Recommendation: Accepted-Modified
Incorporate changes documented in IEEE C802.16e-05/143r5.

Reason for Recommendation

Resolution of Group
Decision of Group: Accepted-Modified
Incorporate changes documented in IEEE C802.16e-05/143r5.

Editor's Notes

I began to make these changes, but noticed that some subclauses that this contribution changes have been deleted entirely from the document by another comment. Please revisit this contribution.
First paragraph in Section 6.3.20.1.3 "Association Procedure" needs clarification

Suggested Remedy

Change

6.3.20.1.3 Association Procedure
Association is an optional initial ranging parameter negotiation occurring during Initial Ranging of a BS Scanning. The function of Association is to enable the MSS to acquire and record successful scanning and ranging attempts parameters and service availability information for the purpose of expediting a potential future hand-over of the MS's active service flows to a target BS. An MS may store successful Recorded ranging parameters information of an Associated BS may be further used for the purpose of setting initial ranging values in future ranging events during actual handover.

Proposed Resolution Recommendation: Accepted Recommendation by

Change

6.3.20.1.3 Association Procedure
Association is an optional initial ranging parameter negotiation occurring during Initial Ranging of a BS Scanning. The function of Association is to enable the MSS to acquire and record successful scanning and ranging attempts parameters and service availability information for the purpose of expediting a potential future hand-over of the MS's active service flows to a target BS. An MS may store successful Recorded ranging parameters information of an Associated BS may be further used for the purpose of setting initial ranging values in future ranging events during actual handover.

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

Change

6.3.20.1.3 Association Procedure
Association is an optional initial ranging parameter negotiation occurring during Initial Ranging of a BS Scanning. The function of Association is to enable the MSS to acquire and record successful scanning and ranging attempts parameters and service availability information for the purpose of expediting a potential future hand-over of the MS's active service flows to a target BS. An MS may store successful Recorded ranging parameters information of an Associated BS may be further used for the purpose of setting initial ranging values in future ranging events during actual handover.
Aging timeout is useless as there is no mechanism to communicate it over air interface, so this is for MSS internal usage only. Similar parameters, like MSS idle timeout for entering Sleep Mode, are not specified in the standard.

**Suggested Remedy**

Delete text

Upon completion of a successful MSS initial-ranging of a BS, if the RNG-RSP message contains a Service Level Prediction parameter set to 2, the MSS may mark the BS as Associated in its MSS local Association table of identities, recording elements of the RNG-RSP to the MSS local Association table, and setting an appropriate aging timer (See Table 269a—Parameters and Constants, ASC-AGING-TIMER). Association state in the MSS local Association table shall be aged-out after ASC-AGING-TIMER timeout and the Association entry removed.

While Association is valid (aging timer has not expired), MSS may use recorded Associated Ranging values set Initial Ranging values in a new initial Ranging event to the same Associated BS. An MSS may have several Associated BS in its local Association table concurrently and shall use the respective stored Associated Ranging values only with the related Associated BS.

delete ASC-AGING-TIMER entry in Table 340a

**Proposed Resolution**

**Recommendation**

**Resolution of Group**

**Decision of Group: Rejected**

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

**Vote: 2-2**

ASC-AGING-TIMER is needed not only for MS but also for BS. BS can know whether Association parameters are valid or not through ASC-AGING-TIMER.
Last paragraph in Section 6.3.20.1.3 "Association Procedure" duplicates preceding information in same section:

--------- 1st paragraph
Association is an optional initial ranging parameter negotiation occurring during Initial Ranging of a BS. The function of Association is to enable the MS to record successful scanning and ranging attempts for the purpose of expediting a potential future hand-over of the MS's active service flows to a target BS. An MS may store successful ranging information of an Associated BS for the purpose of setting initial ranging values in future ranging events.

--------- last paragraph
While Association is valid (aging timer has not expired), MS may use recorded Associated Ranging values to set Initial Ranging values in a new initial Ranging event to the same Associated BS. An MS may have several Associated BS in its local Association table concurrently and shall use the respective stored Associated Ranging values only with the related Associated BS.

Suggested Remedy
Delete the last paragraph

Proposed Resolution Recommendation: Accepted
Delete the last paragraph

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Delete the last paragraph

Reason for Group’s Decision/Resolution

Group’s Notes
Group’s Action Items

Editor’s Notes Editor’s Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
A handover begins with a decision for an MSS to hand-over its air interface, service flow, and network attachment from a serving BS to a target BS. The decision may originate either at the MS, the serving BS, or on the network. The HO Decision may proceed begins with a notification of MS intent to hand-over through either MOB_MSHO-REQ or MOB_BSHO-REQ MAC Management messages. The HO notification is recommended, but not required. The HO notification may originate with either the serving BS or MS. Acknowledgement with MOB_BSHO-RSP of a notification is required.

If an MS that transmitted a MOB_MSSHO-REQ message detects an incoming MOB_BSHO-REQ message, it shall respond with a MOB_MSSHO-REQ or a MOB_HO-IND message and ignore its own previous request. Similarly, a BS that transmitted a MOB_BSHO-REQ message and detected an incoming MOB_MSHO-REQ or MOB_HO-IND message from the same MS shall ignore its own previous request.

**Suggested Remedy**

6.3.20.2.2 HO decision & initiation

In case BS and MSS simultaneously start a HO notification, one of them must override to avoid deadlock [BS suggested].
A handover begins with a decision for an MSS to hand-over its air interface, service flow, and network attachment from a serving BS to a target BS. The decision may originate either at the MS, the serving BS, or on the network. The HO Decision begins with a notification of an MSS's intent to hand-over through either MOB_MSHO-REQ or MOB_BSHO-REQ MAC Management messages. The HO notification is recommended, but not required. The HO notification may originate with either the serving BS or MS. Acknowledgement with MOB_BSHO-RSP of a notification is required.

If an MS that transmitted a MOB_MSSHO-REQ message detects an incoming MOB_BSHO-REQ message, it may respond with a MOB_MSSHO-REQ or MOB_HO-IND message and ignore its own previous request. Similarly, a BS that transmitted a MOB_BSHO-REQ message and detected an incoming MOB_MSHO-REQ or MOB_HO-IND message from the same MS shall ignore received message its own previous request.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Questions and Concerns

Editor's Action Items

k) done
When MOB_MSHO-REQ is sent by an MS, the MS may indicate one or more possible target BS. When MOB_BSHO-REQ is sent by a BS, the BS may indicate one or more possible recommended target BS. MS may evaluate possible target BS through previously performed scanning, ranging, and Association activity.

When MOB_BSHO-REQ is sent by a serving BS, the serving BS may indicate one or more the recommended target BS. Serving BS criteria for recommendation of target BS may include factors such as expected target BS QoS performance to and MS QoS requirements. Serving BS may obtain expected target BS QoS performance indication through the exchange of backbone messaging with Neighbor BS. Serving BS and Neighbor BS backbone transfer of MSS operational information need not be made in conjunction with any specific contemplated HO and may precede any MOB_MSSHO-REQ or MOB_BSHO-REQ MAC Management Message. The MOB_MSHO-REQ message may also include an indication of the estimated time for performing the HO.

Proposed Resolution

When MOB_MSHO-REQ is sent by an MS, the MS may indicate one or more possible target BS. When MOB_BSHO-REQ is sent by a BS, the BS may indicate one or more possible the recommended target BS. MS may evaluate possible target BS through previously performed scanning, ranging, and Association activity.

When MOB_BSHO-REQ is sent by a serving BS, the serving BS may indicate one or more the recommended target BS. Serving BS criteria for recommendation of target BS may include factors such as expected target BS QoS performance to and MS QoS requirements. Serving BS may obtain expected target BS QoS performance indication through the exchange of backbone messaging with Neighbor BS. Serving BS and Neighbor BS backbone transfer of MSS operational information need not be made in conjunction with any specific contemplated HO and may precede any MOB_MSSHO-REQ or MOB_BSHO-REQ MAC Management Message. The MOB_MSHO-REQ message may also include an indication of the estimated time for performing the HO.

Resolution of Group

When MOB_MSHO-REQ is sent by an MS, the MS may indicate one or more possible target BS. When MOB_BSHO-REQ is sent by a BS, the BS may indicate one or more possible the recommended target BS. MS may evaluate possible target BS through previously performed scanning, ranging, and Association activity.
When MOB_BSHO-REQ is sent by a serving BS, the serving BS may indicate one or more the recommended target BS. Serving BS criteria for recommendation of target BS may include factors such as expected target BS QoS performance and MS QoS requirements. Serving BS may obtain expected target BS QoS performance indication through the exchange of backbone messaging with Neighbor BS. Serving BS and Neighbor BS backbone transfer of MSS operational information need not be made in conjunction with any specific contemplated HO and may precede any MOB_MSSHO-REQ or MOB_BSHO-REQ MAC Management Message. The MOB_MSHO-REQ message may also include an indication of the estimated time for performing the HO.
Idea of "Network Assisted HO" feature is that Serving BS sends notification to ALL BSs from certain list, so they all are expected to allocate Fast Ranging opportunities for the MSS. In this case does not matter which BS ID is specified in MOB_HO-IND. Note that there is no such thing as "pre-defined value other than any valid BS identifier"; any 48-bits number is a valid BS ID.

Suggested Remedy
Delete 5th paragraph:

If Network Assisted HO supported flag is set to "1" in MOB_BSHO-REQ message, MSS may perform a hand-over to any BS among the recommended BSs in MOB_BSHO-REQ without notifying the serving BS of a selected target BS. As an acknowledgement to the MOB_BSHO-REQ message, the MSS may send a MOB_HO-IND message with its target BS ID BSID set to a pre-defined value other than any valid BS identifier. The serving BS may send messages to the recommended BSs even before receiving the MOB_HO-IND message in order to make the BSs to reserve Fast_UL_ranging_IE for the MS. This reserved UL resource may be released by a backbone message.

Proposed Resolution

If Network Assisted HO supported flag is set to "1" in MOB_BSHO-REQ message, MSS may perform a hand-over to any BS among the recommended BSs in MOB_BSHO-REQ without notifying the serving BS of a selected target BS. As an acknowledgement to the MOB_BSHO-REQ message, the MSS may send a MOB_HO-IND message with its target BS ID BSID set to "0x00000000", a pre-defined value other than any valid BS identifier. When the serving BS, transmitted MOB_BSHO-REQ with Network Assisted HO supported flag = "1", receive MOB_HO-IND with target BS ID = "0x00000000", it may neglect target BS ID included in MOB_HO-IND message. The serving BS may send messages to the recommended BSs even before receiving the MOB_HO-IND message in order to make the BSs to reserve Fast_UL_ranging_IE for the MS. This reserved UL resource may be released by a backbone message.

Reason for Recommendation
If Network Assisted HO supported flag is set to "1" in MOB_BSHO-REQ message, MSS may perform a hand-over to any BS among the recommended BSs in MOB_BSHO-REQ without notifying the serving BS of a selected target BS. As an acknowledgement to the MOB_BSHO-REQ message, the MSS may send a MOB_HO-IND message with its target BS ID BSID set to "0x00000000" a pre-defined value other than any valid BS identifier. When the serving BS transmitted MOB_BSHO-REQ with Network Assisted HO supported flag = "1", receive MOB_HO-IND with target BS ID = "0x00000000", it may neglect target BS ID included in MOB_HO-IND message. The serving BS may send messages to the recommended BSs even before receiving the MOB_HO-IND message in order to make the BSs to reserve Fast_UL_ranging_IE for the MSS. This reserved UL resource may be released by a backbone message.
<table>
<thead>
<tr>
<th>Comment #</th>
<th>3213</th>
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<tbody>
<tr>
<td>Comment submitted by</td>
<td>Lei Wang</td>
</tr>
<tr>
<td>Type</td>
<td>Technical, Non-binding</td>
</tr>
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<td>Comment Date</td>
<td>2005/03/09</td>
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<td>148</td>
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<td>Starting Line #</td>
<td>48</td>
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<tr>
<td>Fig/Table#</td>
<td></td>
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<tr>
<td>Section</td>
<td></td>
</tr>
</tbody>
</table>

There is only one HO Response message, i.e., MOB_BSHO-RSP.

**Suggested Remedy**

change "MOB_xxxHO-RSP" to "MOB_BSHO-RSP"

**Proposed Resolution**

Proposal Resolution: Accepted

**Proposed Resolution**

change "MOB_xxxHO-RSP" to "MOB_BSHO-RSP"

**Reason for Recommendation**

Resolution of Group: Accepted

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

change "MOB_xxxHO-RSP" to "MOB_BSHO-RSP"

**Group’s Notes**

**Group’s Action Items**

**Editor’s Notes**

**Editor’s Actions**

k) done

**Editor’s Questions and Concerns**

**Editor’s Action Items**
Suggested Remedy

Once MS sends MOB_HO-IND with option HO_IND_type = 00 indicating commitment to HO and intent to release the serving BS, the MS is released from any obligation shall not be expected to monitor serving BS DL traffic, for as long as MSS attachment to serving BS persists, or until such time as after expiration of Resource retain timer. MSS may cancel the pending HO.

Proposed Resolution Recommendation: Accepted

Once MS sends MOB_HO-IND with option HO_IND_type = 00 indicating commitment to HO and intent to release the serving BS, the MS is released from any obligation shall not be expected to monitor serving BS DL traffic, for as long as MSS attachment to serving BS persists, or until such time as after expiration of Resource retain timer. MSS may cancel the pending HO.

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

Once MS sends MOB_HO-IND with option HO_IND_type = 00 indicating commitment to HO and intent to release the serving BS, the MS is released from any obligation shall not be expected to monitor serving BS DL traffic, for as long as MSS attachment to serving BS persists, or until such time as after expiration of Resource retain timer. MSS may cancel the pending 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
The Annex C.1 provides message sequence charts for the examples of HO procedures. However, there is no reference to Annex C.1.

Suggested Remedy
Insert the following sentence in line 63 page 148:

The Annex C.1 provides message sequence charts for the examples of HO procedures.

Proposed Resolution Recommendation: Accepted
Insert the following sentence in line 63 page 148:

The Annex C.1 provides message sequence charts for the examples of HO procedures.

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Insert the following sentence in line 63 page 148:

The Annex C.1 provides message sequence charts for the examples of HO procedures.

Reason for Group’s Decision/Resolution

Group’s Notes
Group’s Action Items

Editor’s Notes Editor’s Actions  k) done
I added this line at the end of 6.3.20.2 as a note.

Editor’s Questions and Concerns

Editor’s Action Items
Title of Section 6.3.20.2.4 "Target BS scanning and synchronization" is misleading as during scanning there is no certain Target BS

Suggested Remedy

Change

6.3.20.2.4 Use of Target BS scanning and synchronization association results

MS shall \textit{may} scan target neighbour BSs and optionally try association for downlink channel & synchronization and uplink channel & synchronization. If MS had previously decoded a MOB_NBR-ADV message including target BSID, Physical Frequency, DCD and UCD, then the scanning and synchronization process may be shortened. If the Target BS had previously received HO notification from Serving BS over the backbone, then target BS may place a non-contention based Fast_UL_ranging_IE() (see 8.2.1.9.3.6, 8.3.6.3.9, and 8.4.5.4.20. Fast ranging Information Element) MS Initial Ranging opportunity in the UL-MAP. MS shall scan target BS for UL-MAP that includes either a contention or non-contention based MS Initial Ranging opportunity.

Proposed Resolution: Accepted

Resolution of Group: Accepted
based Fast UL.ranging_IE() (see 8.2.1.9.3.6, 8.3.6.3.9, and 8.4.5.4.20. Fast ranging Information Element) MS Initial Ranging opportunity in the UL-MAP. MS shall scan target BS for UL-MAP that includes either a contention or non-contention based MS Initial Ranging opportunity.

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

**Group’s Notes**

**Group’s Action Items**

**Editor’s Notes**

**Editor’s Actions** k) done

**Editor’s Questions and Concerns**

**Editor’s Action Items**

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**Document under Review:** P802.16e/D6

**Ballot Number:** 0001010

**Comment #** 3217

**Comment submitted by:** Lei Wang

**Member**

**Comment Date** 2005/03/09

**Comment**

**Type** Editorial

**Starting Page #** 149

**Starting Line #** 25

**Fig/Table#**

**Section**

**Suggested Remedy**

change "8.4.5.4.20" to "8.4.5.4.21"

**Proposed Resolution**

**Recommendation:**

**Recommendation by**

**Reason for Recommendation**

**Resolution of Group**

**Decision of Group:** Accepted

change "8.4.5.4.20" to "8.4.5.4.21"

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

**Group’s Notes**

**Group’s Action Items**

**Editor’s Notes**

**Editor’s Actions** k) done

**Editor’s Questions and Concerns**

**Editor’s Action Items**
6.3.20.2.5 Termination with the Serving BS

After the hand-over request/response handshake has completed, the MS may begin the actual HO. At some stage during the HO process, the MS terminates service with the serving BS. This is accomplished by sending a MOB_HO-IND MAC Management message with the HO_IND_type value indicating serving BS release.

If the HO_IND_type field specifies serving BS release, the BS shall start the Resource retain timer from value Resource_Retain_Time provided by BS in RNG-RSP, BSHO-REQ, or BSHO-RSP messages. If the resource retain type value is set to zero, the serving BS shall close all connections and discard MAC state machines and MAC PDUs associated with the MSS immediately, otherwise the serving BS shall retain the connections, MAC state machine and PDUs associated with the MSS for service continuation until the expiration of Resource retain timer. Regardless of Resource retain timer, the serving BS shall close all connections and discard MAC state machine and MAC PDUs associated with the MSS upon reception of a backbone message from the target BS indicating MSS Network Attachment at target BS.

Proposed Resolution

Recommendation: Accepted-Modified

Change

6.3.20.2.5 Termination with the Serving BS

After the hand-over request/response handshake has completed, the MS may begin the actual HO. At some stage during the HO process, the MS terminates service with the serving BS. This is accomplished by sending a MOB_HO-IND MAC Management message with the HO_IND_type value indicating serving BS release.

If the HO_IND_type field specifies serving BS release, the BS shall start the Resource retain timer from value Resource_Retain_Time provided by BS in RNG-RSP, BSHO-REQ, or BSHO-RSP messages. If the resource retain type value is set to zero, the serving BS shall close all connections and discard MAC state machines and MAC PDUs associated with the MSS immediately, otherwise the serving BS shall retain the connections, MAC state machine and PDUs associated with the MSS for service continuation until the expiration of Resource retain timer. Regardless of Resource retain timer, the serving BS shall close all connections and discard MAC state machine and MAC PDUs associated with the MSS upon reception of a backbone message from the target BS indicating MSS Network Attachment at target BS.
6.3.20.2.5 Termination with the Serving BS

After the hand-over request/response handshake has completed, the MS may begin the actual HO. At some stage during the HO process, the MS terminates service with the serving BS. This is accomplished by sending a MOB_HO-IND MAC Management message with the HO_IND_type value indicating serving BS release.

If the HO_IND_type field specifies serving BS release, the BS shall start the Resource retain timer from value Resource_Retain_Time provided by BS in REG-RSP, BSHO-REQ, or BSHO-RSP messages. If the resource retain type value is set to zero, the serving BS shall close all connections and discard MAC state machines and MAC PDUs associated with the MSS immediately, otherwise the serving BS shall retain the connections, MAC state machine and PDUs associated with the MSS for service continuation until the expiration of Resource retain timer. Regardless of Resource retain timer, the serving BS shall close all connections and discard MAC state machine and MAC PDUs associated with the MSS upon reception of a backbone message from the target BS indicating MSS Network Attachment at target BS.
Current mechanism of IP address allocation for the unmanaged SS have some problems. Therefore, it should be needed some modifications and clarified to the draft specification to support the IP address allocation procedures for the unmanaged SS mode by introducing IP management connection concept.

Suggested Remedy
Adopt the contribution C802.16e-05/152.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Rejected

Reason for Group’s Decision/Resolution
Vote: 10-10
This an upper layer issue. To employ one more new type of management connection, we need justification why this issue cannot be resolved.
I object to the text change in D6 related to section 6.3.20.2.6.3, since there is an error in referencing to another section.

**Suggested Remedy**

Modify "...Report header (6.3.2.1.86)."

**Proposed Resolution**

**Recommendation:** Accepted

**Resolution of Group**

**Decision of Group:** Accepted

Modify "...Report header (6.3.2.1.86)."

**Reason for Recommendation**

**Group's Notes**

**Group's Action Items**

**Editor's Notes**

**Editor's Actions**

k) done

**Editor's Questions and Concerns**

**Editor's Action Items**
I object to the implementation in the D6 of Comment #802, because there is error in incorporating IEEE C802.16e-05/003r3 into the D6 text, so, reorganize the SHO/FBSS sections/text is required. Also, we need to move 6.3.20.2.6.3 to the appropriate reorganized SHO/FBSS section.

Suggested Remedy
Move Page 153, line 16 to Page 154, line 61 to Page 146, line 62.

Remove page 149, line 62, section 6.3.20.2.6 title.
Move section 6.3.20.2.6.1 to a new section 6.3.20.3.4.1 in page 157, after line 65.
Move section 6.3.20.2.6.2 to a new section 6.3.20.3.4.2 in page 157, after the new section 6.3.20.3.4.1.
Move section 6.3.20.2.6.3 to a new section 6.3.20.3.5 in page 157, after end of section 6.3.20.3.4.

Page 152, line 21: modify "For the connections that have SNSN Feedback ..."
Page 152, line 36: modify "At the expiration of the Anchor switch timer or at the Action Time indicated in the MOB_BSHO-REQ/RSP messages, the new Anchor BS ..."

Proposed Resolution Recommendation: Accepted
Move Page 153, line 16 to Page 154, line 61 to Page 146, line 62.

Remove page 149, line 62, section 6.3.20.2.6 title.
Move section 6.3.20.2.6.1 to a new section 6.3.20.3.4.1 in page 157, after line 65.
Move section 6.3.20.2.6.2 to a new section 6.3.20.3.4.2 in page 157, after the new section 6.3.20.3.4.1.
Move section 6.3.20.2.6.3 to a new section 6.3.20.3.5 in page 157, after end of section 6.3.20.3.4.

Page 152, line 21: modify "For the connections that have SNSN Feedback ..."
Page 152, line 36: modify "At the expiration of the Anchor switch timer or at the Action Time indicated in the MOB_BSHO-REQ/RSP messages, the new Anchor BS ..."

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Move Page 153, line 16 to Page 154, line 61 to Page 146, line 62.

Remove page 149, line 62, section 6.3.20.2.6 title.
Move section 6.3.20.2.6.1 to a new section 6.3.20.3.4.1 in page 157, after line 65.
Move section 6.3.20.2.6.2 to a new section 6.3.20.3.4.2 in page 157, after the new section 6.3.20.3.4.1.
Move section 6.3.20.2.6.3 to a new section 6.3.20.3.5 in page 157, after end of section 6.3.20.3.4.

Page 152, line 21: modify "For the connections that have SNSN Feedback ..."
Page 152, line 21: modify "For the connections that have SN Feedback ...

Page 152, line 36: modify "At the expiration of the Anchor switch timer or at the Action Time indicated in the MOB_BSHO-REQ/RSP messages, the new Anchor BS ..."
"Change ""HMAC Tuple"" to ""HMAC/OMAC Tuple"". Do the same thing everywhere that ""HMAC tuple"" occurs."

Proposed Resolution: Accepted-Modified
Recommended by: ""Change ""HMAC Tuple"" to ""HMAC/OMAC tuple"". Do the same thing everywhere that ""HMAC tuple"" or ""OMAC tuple"" occurs."

Reason for Recommendation:
Recommendation is correct, however short HMAC tuple has since been defined and in particular messages and so HMAC/OMAC would be inappropriate, whereas the existing HMAC/OMAC/ShortHMAC text is correct.

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

"Change ""HMAC Tuple"" to ""HMAC/OMAC tuple"". Do the same thing everywhere that ""HMAC tuple"" or ""OMAC tuple"" occurs."

Reason for Group's Decision/Resolution:
Recommendation is correct, however short HMAC tuple has since been defined and in particular messages and so HMAC/OMAC would be inappropriate, whereas the existing HMAC/OMAC/ShortHMAC text is correct.

Editor's Notes
A straight global change cannot be done because of the exceptions noted. Would like more specific implementation instructions.
Either provide a description conformant with ITU-T Z.100 or refrain from referring to the flowcharts as SDL.

Suggested Remedy

In the title delete "SDLs"

On line 12 change "the SDL of" to the "the process of"
Do the same change on lines 54 and on the pages 161 l. 49 and 163 line 49.

Proposed Resolution Recommendation: Accepted

In the title delete "SDLs"

On line 12 change "the SDL of" to the "the process of"
Do the same change on lines 54 and on the pages 161 l. 49 and 163 line 49.

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

In the title delete "SDLs"

On line 12 change "the SDL of" to the "the process of"
Do the same change on lines 54 and on the pages 161 l. 49 and 163 line 49.

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
I object to the implementation in the draft of Comment #876 (follow-up Comment #2046) because there are a few editorial errors to clean-up.

Suggested Remedy

In line 65, page 164,
Change
"the MS shall retransmit the DREG-REQ message as long as retry count has not been exhausted"

to
"the MS shall retransmit the DREG-REQ message as long as retry count DREG Request Retry Count has not been exhausted."

In line 3, page 165,
Change
"If T32 timer expired, the BS shall release connection information with the MS."

to
"If T32 timer Management_Resource_Holding_Timer has been expired, the BS shall ...."

Delete line 5 through line 8, page 165, as
MS immediate De-Registration from serving BS and initiation of MS Idle Mode. The serving BS may also include a REQ-duration TLV with an Action Code = 0x05 in the DREG-CMD, signaling from an MS to initiate an Idle Mode request through a DREG-REQ with Action Code=0x01, request for MS De-Registration from serving BS and initiation of MS Idle Mode, at REQ-duration expiration.

Delete line 11 as
MS immediate De-Registration from serving BS and initiation of MS Idle Mode.

Proposed Resolution

Recommendation: Accepted

In line 65, page 164,
Change
"the MS shall retransmit the DREG-REQ message as long as retry count has not been exhausted"

to
"the MS shall retransmit the DREG-REQ message as long as retry count DREG Request Retry Count has not been exhausted."

In line 3, page 165,
Change
"If T32 timer expired, the BS shall release connection information with the MS."

to
"If T32 timer Management_Resource_Holding_Timer has been expired, the BS shall ...."

Delete line 5 through line 8, page 165, as
MS immediate De-Registration from serving BS and initiation of MS Idle Mode. The serving BS may also include a REQ-duration TLV with an Action Code = 0x05 in the DREG-CMD, signaling from an MS to initiate an Idle Mode request through a DREG-REQ with Action Code=0x01, request for MS De-Registration from serving BS and initiation of MS Idle Mode, at REQ-duration expiration.
Delete line 11 as MS immediate De-Registration from serving BS and initiation of MS Idle Mode.

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

In line 65, page 164,
Change "the MS shall retransmit the DREG-REQ message as long as retry count has not been exhausted" to "the MS shall retransmit the DREG-REQ message as long as retry count DREG Request Retry Count has not been exhausted."

In line 3, page 165,
Change "If T32 timer expired, the BS shall release connection information with the MS." to "If T32 timer Management Resource Holding Timer has been expired, the BS shall ...."

Delete line 5 through line 8, page 165, as
MS immediate De-Registration from serving BS and initiation of MS Idle Mode. The serving BS may also include a REQ-duration TLV with an Action Code = 0x05 in the DREG-CMD, signaling to an MS to initiate an Idle Mode request through a DREG-REQ with Action Code=0x01, request for MS De-Registration from serving BS and initiation of MS Idle Mode, at REQ-duration expiration.

Delete line 11 as MS immediate De-Registration from serving BS and initiation of MS Idle Mode.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

k) done

Editor's Action Items

Editor's Questions and Concerns

Editor's Action Items
According to 802.16e/D6 Draft, BS should transmit paging message during only two frame. That may be burden to BS for scheduling. But, if the duration is set to bigger one, MSS may need to consume more power. If we can set this value as variable, then system may select the proper value according to circumstance.

Suggested Remedy

At page 166, line 61 Change the paragraph as following:

A BS Paging Interval shall occur during the $N_\text{two}$ frames beginning with the frame whose frame number, $N_{\text{frame}}$, meets the condition $N_{\text{frame}} \mod PAGING\_\text{CYCLE} = PAGING\_\text{OFFSET}$ on each BS, where $N$ is Paging Interval Length. BS receives notification of active PAGING\_\text{CYCLE}s through backbone messages. A BS may broadcast one or more BS Broadcast Paging messages during the Transmission Interval. Different BS may, but need not synchronize their Transmission Intervals.

At Page 465, line 14, include following value at the end of table 342a

<table>
<thead>
<tr>
<th>System</th>
<th>Name</th>
<th>time reference</th>
<th>Min</th>
<th>Default</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS, BS</td>
<td>Paging Interval Length</td>
<td>time duration of Paging Interval of the BS</td>
<td>2 frames</td>
<td></td>
<td>5 frames</td>
</tr>
</tbody>
</table>

Proposed Resolution Recommendation: Accepted

At page 166, line 61 Change the paragraph as following:

A BS Paging Interval shall occur during the $N_\text{two}$ frames beginning with the frame whose frame number, $N_{\text{frame}}$, meets the condition $N_{\text{frame}} \mod PAGING\_\text{CYCLE} = PAGING\_\text{OFFSET}$ on each BS, where $N$ is Paging Interval Length. BS receives notification of active PAGING\_\text{CYCLE}s through backbone messages. A BS may broadcast one or more BS Broadcast Paging messages during the Transmission Interval. Different BS may, but need not synchronize their Transmission Intervals.

At Page 465, line 14, include following value at the end of table 342a

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<td>2 frames</td>
<td></td>
<td>5 frames</td>
</tr>
</tbody>
</table>
Resolution of Group
Decision of Group: Accepted

At page 166, line 61 Change the paragraph as following:
A BS Paging Interval shall occur during the \( N \) two frames beginning with the frame whose frame number, \( N_{\text{frame}} \), meets the condition \( N_{\text{frame}} \mod PAGING\_CYCLE == PAGING\_OFFSET \) on each BS, where \( N \) is Paging Interval Length. BS receives notification of active PAGING\_CYCLEs through backbone messages. A BS may broadcast one or more BS Broadcast Paging messages during the Transmission Interval. Different BS may, but need not synchronize their Transmission Intervals.

At Page 465, line 14, include following value at the end of table 342a

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</tr>
</tbody>
</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
There is no consistency between two consecutive paragraph, "If there is no MSS that need paging to corresponding frame, BS may not broadcast BS Broadcast Paging message." and "A paging message shall be transmitted during the Transmission Interval regardless of the number of MSS that need paging."

Early, PAG-ADV has been accepted to play a role to transmit PG_ID periodically for location detection by MSS but currently DCD also can play same role. Therefore, we do not need last paragraph any more and we should update some paragraph consistently.

Replace text at line14, page 167 as following :
"If there is no MSS that need paging to corresponding frame, BS may not broadcast BS Broadcast Paging message. A paging message shall be transmitted during the Transmission Interval regardless of the number of MSS that need paging."

with
"If there is no MSS that need paging to corresponding frame, BS may not broadcast BS Broadcast Paging message. A paging message shall be transmitted during the Transmission Interval if there is any MSS that need paging."

Change text at line15, page 169 as following :
6.3.21.9.1.1 Paging Group Update
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 Interval. If the PG_ID detected does not match the Paging Group to which the MS belongs, or if the MS fails to detect a MOB-PAG-ADV message at the appropriate interval, the MS shall determine that paging group has changed.
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 Interval. If the PG_ID detected does not match the Paging Group to which the MS belongs, or if the MS fails to detect a MOB-PAG-ADV message at the appropriate interval, the MS shall determine that paging group has changed.

Reason for Recommendation

Resolution of Group: Accepted

Reason for Recommendation

Replace text at line 14, page 167 as following:
"If there is no MSS that need paging to corresponding frame, BS may not broadcast BS Broadcast Paging message. A paging message shall be transmitted during the Transmission Interval regardless of the number of MSS that need paging."

with
"If there is no MSS that need paging to corresponding frame, BS may not broadcast BS Broadcast Paging message. A paging message shall be transmitted during the Transmission Interval if there is any MSS that need paging."

Change text at line 15, page 169 as following:
6.3.21.9.1.1 Paging Group Update
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 Interval. If the PG_ID detected does not match the Paging Group to which the MS belongs, or if the MS fails to detect a MOB-PAG-ADV message at the appropriate interval, 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

Editor’s Questions and Concerns

Editor’s Action Items
I object to the text change in D6 in relation to the introduction of Idle Mode Multicast CID, because there needs to be some further text change to clarify that MOB_PAG-ADV should use either the broadcast CID or the Idle Mode Multicast CID.

Suggested Remedy
Modify "Broadcast CID or Idle Mode Multicast CID (defined in Table 345 of Section 10.4) during ….".

Proposed Resolution Recommendation: Accepted Recommendation by
Modify "Broadcast CID or Idle Mode Multicast CID (defined in Table 345 of Section 10.4) during …."

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Modify "Broadcast CID or Idle Mode Multicast CID (defined in Table 345 of Section 10.4) during …."

Reason for Group's Decision/Resolution

Group’s Notes
Group's Action Items

Editor's Notes Editor's Actions k) done
Editor's Questions and Concerns

Editor’s Action Items
I object to the text change in D6 related to the replacing initial ranging by idle mode location update in Section 6.3.21.8.1, because network re-entry and idle mode location update should be supported when a dedicated ranging code is assigned to the MS in MOB_PAGADV.

Proposed Resolution: Accepted

Reason for Recommendation

Resolution of Group: Accepted

Group's Notes

Editor's Notes

Editor's Action Items
The absolute requirement (shall) that a BS sends a backbone message to the Paging Controller in a puzzling one since the Paging controller remains undefined. Also the fact that the backbone message remains undefined does not help.

Suggested Remedy
Change "The BS at which ...." to read "The BS at which the MS re-entered the network shall inform the appropriate element in the network of the re-entry of the MS. The means by which the BS accomplishes this is outside the scope of this specification."

Proposed Resolution Recommendation: Accepted Recommendation by
Change "The BS at which ...." to read "The BS at which the MS re-entered the network shall inform the appropriate element in the network of the re-entry of the MS. The means by which the BS accomplishes this is outside the scope of this specification."

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Change "The BS at which ...." to read "The BS at which the MS re-entered the network shall inform the appropriate element in the network of the re-entry of the MS. The means by which the BS accomplishes this is outside the scope of this specification."

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
The main part of the section concerns functionality outside the scope of the standard.

Suggested Remedy
Delete remainder of paragraph starting line 29 " This mechanism enables ..."

Proposed Resolution Recommendation: Accepted Recommendation by
Delete remainder of paragraph starting line 29 " This mechanism enables ..."

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Delete remainder of paragraph starting line 29 " This mechanism enables ..."

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
Most of the paragraph is irrelevant to the air interface.

Suggested Remedy
Change the subsection to read:
"The MS shall attempt to complete a Location Update once as part of its orderly power down procedure."

Add in section 3 a definition for
"Orderly power down procedure: The procedure which the MS performs when powering down as directed by e.g. user input or prompted by an automatic power down mechanism."

Proposed Resolution Recommendation: Accepted-Modified
Change the subsection first sentence in the subsection to read:
"The MS shall attempt to complete a Location Update once as part of its orderly power down procedure."

Add in section 3 a definition for
"Orderly power down procedure: The procedure which the MS performs when powering down as directed by e.g. user input or prompted by an automatic power down mechanism."

Reason for Recommendation
Resolution of Group Decision of Group: Accepted-Modified
Change the subsection first sentence in the subsection to read:
"The MS shall attempt to complete a Location Update once as part of its orderly power down procedure."

Add in section 3 a definition for
"Orderly power down procedure: The procedure which the MS performs when powering down as directed by e.g. user input or prompted by an automatic power down mechanism."

Reason for Group’s Decision/Resolution
Group’s Notes
Group’s Action Items

Editor’s Notes
Editor's Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
I object to the resolution of comment #878 because the current idle mode does not support short data burst which is necessary to enable short messaging type of services.

Suggested Remedy

Adopt the proposed text in IEEE C802.16e-04/538r4 "Support of Short Data Burst Transmission to/from an MSS in Idle Mode".

Proposed Resolution

Recommendation: Withdrawn

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: 1) none needed

Editor's Questions and Concerns

Editor's Action Items
I object to the resolution of comment 1945 in IEEE 802.16-05/010. This comment is about how the term MSS (now MS) has replaced SS in text pulled from the base document. The Decision of the Group was to supercede that comment by comment #71, and the reason for the Group's Decision was that "This comment has been superseded by comment #71 which changes the usage of MSS and SS." However, I cannot find comment #71 listed in IEEE 802.16-05/010 or IEEE 802.16-04/011. Going back to IEEE 802.16-04/69r4, I find comment #71 (which is also technically binding) , and the resolution of the group for that comment was "DJ, possibly David Castelow, possibly others to supply a specific list of changes to be made."

If this action item was done, I do not find that all the necessary fixes were made. The title of this amendment is "Part 16: Air Interface for Fixed and Mobile Broadband Wireless Access Systems, Amendment for Physical and Medium Access Control Layers for Combined Fixed and Mobile Operation in Licensed Bands" I think many sections of this document lose sight of the fact that fixed systems must also be able operate.

My Suggested Remedy is an attempt to fix the SS/FS/MS language in section 7. Privacy sublayer.

Suggested Remedy

1) On page 173, line 6, change "connections between MS and BS." to "connections between SS and BS."
2) On page 173, line 12, change "keying material to client MS." to "keying material to client SS."
3) On page 173, line 13, change "digital-certificate-based MS device-authentication" to "digital-certificate-based SS device-authentication".
4) On page 175, starting on line 23, change all instances of MS to SS in Section 7.1 (including subsections).
5) I believe sections 7.2, 7.5, and 7.7 should have all instances of MS be change to SS as well.

Proposed Resolution

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

Resolution of Group

Decision of Group: Accepted-Modified

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
duplicate

Editor's Action Items

1) none needed
The editorial instructions in this section should conform to the guidelines provided by IEEE-SA. These guidelines can be found at http://standards.ieee.org/guides/style/2005Style.pdf. Not only is the instruction non-conforming but also very confusing. Despite the problem being mostly editorial it has technical impact as the result of implementing the editorial instructions determines the technical content.

Suggested Remedy

Provide a section with text that conforms to the editorial guidelines.

Proposed Resolution

Recommendation: Accepted

Recommendation by

Provide a section with text that conforms to the editorial guidelines.

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Provide a section with text that conforms to the editorial guidelines.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions

h) defer to next round

This change requires not only re-arrangement of text currently in the 802.16e document, but also inclusion and re-arrangement of text currently in 802.16-2004. This is too much work and too much risk to drop in with the "regular" editorial work, so I recommend either we leave the mark-up as it is now, or we appoint a clause editor team to tackle the task. Essentially, we'd be replacing Clause 7 in 802.16-2004 with the contents of Clause 7 in 802.16e.

Editor's Questions and Concerns

Editor's Action Items
Suggested Remedy
Add subclause numbering.

Proposed Resolution Recommendation: Accepted
Add subclause numbering.

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Add subclause numbering.

Reason for Group’s Decision/Resolution

Group’s Notes

Group's Action Items

Editor’s Notes

Editor’s Actions k) done

Editor's Questions and Concerns

Editor’s Action Items
"It would be better to say something like "The PKM allows for both unilateral authentication (i.e., BS authenticates MSS, but not vice versa) and mutual authentication (i.e., BS and MSS authenticate each other).""

Suggested Remedy

"The PKM facilitates mutual authentication ...": This wording raises the false impression that PKM would always provide mutual authentication."

Proposed Resolution: Accepted-Modified

Replace with "The PKM allows for both mutual authentication and unilateral authentication (E.G. where the BS authenticates MS, but not vice versa)."

Reason for Recommendation

Resolution of Group: Accepted-Modified

Replace with "The PKM allows for both mutual authentication and unilateral authentication (E.G. where the BS authenticates MS, but not vice versa)."

Reason for Group’s Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
Proposed Resolution

Replace "the BS establishes an authenticated identity" with "the BS determines the authenticated identity".
Suggested Remedy
"the MSS (a PKM ""client,"")"

Proosed Resolution Recommendation: Accepted-Modified Recommendation by
Delete the trailing comma in "the MS (a PKM ""client,"")" to make "the MS (a PKM ""client"")"

Reason for Recommendation
Resolution of Group Decision of Group: Accepted-Modified
Delete the trailing comma in "the MS (a PKM ""client,"")" to make "the MS (a PKM ""client"")"

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
Suggested Remedy
Add an indication of whether EAP is mandatory or optional to this line (just as in case of the line before).

Proposed Resolution Recommendation: Accepted-Modified Recommendation by
Add an indication of that EAP is optional (unless it is mandatory) to this line (just as in case of the line before).

Reason for Recommendation

Resolution of Group Decision of Group: Accepted-Modified
Add an indication of that EAP is optional (unless it is mandatory) to this line (just as in case of the line before).

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
that bind public RSA encryption keys to MAC addresses of MSSs

Insert "that binds public RSA encryption keys to MAC addresses of MSs" to the end of the sentence on page 177 line 9

Reason for Recommendation

Resolution of Group: Accepted-Modified

Reason for Group’s Decision/Resolution

Group’s Notes

Editor’s Notes

k) done

Editor’s Questions and Concerns
The inconsistent use of "MSS" and "SS" in this paragraph is rather confusing.

Suggested Remedy

Clean up the usage of SS and MS

Proposed Resolution Recommendation: 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

Reason for Recommendation

Resolution of Group Decision of Group: Accepted-Modified

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

duplicate

Editor's Questions and Concerns

Editor's Action Items
Subscriber Information Module

Suggested Remedy
Subscriber Identity Module

Proposed Resolution Recommendation: Accepted

Replace "Subscriber Information Module" with "Subscriber Identity Module"

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

Replace "Subscriber Information Module" with "Subscriber Identity Module"

Reason for Group’s Decision/Resolution

Group’s Notes
Group’s Action Items

Editor’s Notes Editor’s Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
According to Authorization Policy bit (11.8.4), there is no support for PKMv1 EAP

Suggested Remedy

Remove EAP from PKMv1 by cut and past "7.3.0.2.2 Authorization via PKM Extensible Authentication Protocol [EAP]" to under 7.3.2.2 EAP authentication

Proposed Resolution  Recommendation: Accepted-Modified  Recommendation by

Retain explanatory material from page 180, line 57 through 181 line 23
Retain lines 25-29 of page 182
Then
Delete all other text in section 7.2.1.3.2
Then move all the retained text under appropriate part of 7.2.2

Reason for Recommendation

7.3 does not exist. Specified text is in 7.2.1.3.2

Decision of Group: Accepted-Modified

Resolution of Group

Retain explanatory material from page 180, line 57 through 181 line 23
Retain lines 25-29 of page 182
Then
Delete all other text in section 7.2.1.3.2
Then move all the retained text under appropriate part of 7.2.2

Reason for Group’s Decision/Resolution

7.3 does not exist. Specified text is in 7.2.1.3.2

k) done
The document contains multiple appearances of "EAP-x" where xxx is a name of specific message, for example EAP-Request, EAP-Response etc. Recent draft replaced all such messages with single EAP-Response message.

Suggested Remedy
Change all EAP-x to "EAP-Transfer"

Proposed Resolution
First apply resolution of comment 3243.
Change "EAP-Request" to "EAP-Request using an 802.16 EAP-Transfer message" on page 181 lines 1.. On line 6 of page 181, change "EAP-Response" to "EAP-Response using an 802.16 EAP-Transfer message"

Reason for Recommendation
The offending instances of EAP-Request have been deleted. However existing use of EAP-Request in discussion text refers to EAP-Request in RFC3748 and so is correct. The proposed resolution of the group clarifies this distinction.

Resolution of Group
First apply resolution of comment 3243.
Change "EAP-Request" to "EAP-Request using an 802.16 EAP-Transfer message" on page 181 lines 1.. On line 6 of page 181, change "EAP-Response" to "EAP-Response using an 802.16 EAP-Transfer message"

Reason for Group's Decision/Resolution
The offending instances of EAP-Request have been deleted. However existing use of EAP-Request in discussion text refers to EAP-Request in RFC3748 and so is correct. The proposed resolution of the group clarifies this distinction.

Group's Action Items
k) done
The specification should be clear with respect to which MAC management messages to use.

**Suggested Remedy**

Change "The message is encapsulated in a MAC Management PDU and transmitted." to read "The message shall be encapsulated in a PKM-REQ MAC Management message with Code = 13 (EAP Transfer)."

Do the corresponding change on line 17.

---

**Proposed Resolution**

Recommendation: Accepted

Change "The message is encapsulated in a MAC Management PDU and transmitted." to read "The message shall be encapsulated in a PKM-REQ MAC Management message with Code = 13 (EAP Transfer)."

Do the corresponding change on line 17.

---

**Reason for Recommendation**

**Resolution of Group**

Decision of Group: Accepted

Change "The message is encapsulated in a MAC Management PDU and transmitted." to read "The message shall be encapsulated in a PKM-REQ MAC Management message with Code = 13 (EAP Transfer)."

Do the corresponding change on line 17.

---

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

---

**Group’s Notes**

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**Group’s Action Items**

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**Editor’s Action Items**

k) done

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**Editor’s Questions and Concerns**

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**Editor’s Notes**

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**Comment #** 3246  
**Comment submitted by:** Maximilian Riegel

**Comment**  
"What is the meaning of "I i"?"

**Suggested Remedy**  
Clarify meaning.

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

**Reason for Recommendation**  
This text has been deleted

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

**Reason for Group’s Decision/Resolution**  
This text has been deleted

**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**
The description was incorrect.

Suggested Remedy
Change

"c) EAP on the supplicant receives EAP-Request, passes it to the local EAP method for processing, and transmits EAP-Response. Steps a) and b) (EAP-Request/Response exchange) continue as many times as needed based on EAP authentication method. After one or more EAP-Request/Response exchanges, the authentication server (whether local to the Authenticator or connected remotely via an AAA protocol) determines whether or not the authentication is successful."

to

"c) EAP on the supplicant receives EAP-Request, passes it to the local EAP method for processing, and transmits EAP-Response.

Steps b) and c) (EAP-Request/Response exchange) continue as many times as needed based on EAP authentication method. After one or more EAP-Request/Response exchanges, the authentication server (whether local to the Authenticator or connected remotely via an AAA protocol) determines whether or not the authentication is successful."

Proposed Resolution  Recommendation: Accepted  Recommendation by
Change

"c) EAP on the supplicant receives EAP-Request, passes it to the local EAP method for processing, and transmits EAP-Response. Steps a) and b) (EAP-Request/Response exchange) continue as many times as needed based on EAP authentication method. After one or more EAP-Request/Response exchanges, the authentication server (whether local to the Authenticator or connected remotely via an AAA protocol) determines whether or not the authentication is successful."

to

"c) EAP on the supplicant receives EAP-Request, passes it to the local EAP method for processing, and transmits EAP-Response.

Steps b) and c) (EAP-Request/Response exchange) continue as many times as needed based on EAP authentication method. After one or more EAP-Request/Response exchanges, the authentication server (whether local to the Authenticator or connected remotely via an AAA protocol) determines whether or not the authentication is successful."
Resolution of Group: Accepted

Change

"c) EAP on the supplicant receives EAP-Request, passes it to the local EAP method for processing, and
transmits EAP-Response. Steps a) and b) (EAP-Request/Response exchange) continue as many
times as needed based on EAP authentication method. After one or more EAP-Request/Response
exchanges, the authentication server (whether local to the Authenticator or connected remotely via
an AAA protocol) determines whether or not the authentication is successful."

to

"c) EAP on the supplicant receives EAP-Request, passes it to the local EAP method for processing, and
transmits EAP-Response.

Steps b) and c) (EAP-Request/Response exchange) continue as many
times as needed based on EAP authentication method. After one or more EAP-Request/Response
exchanges, the authentication server (whether local to the Authenticator or connected remotely via
an AAA protocol) determines whether or not the authentication is successful."

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions  k) done

Editor’s Questions and Concerns

Editor’s Action Items
The paragraph is out of context. The previous sections talk about EAP authentication and this paragraph talks about binding with RSA authorization.

Suggested Remedy
Delete:

"After successful EAP based authorization if the MS or BS wants to run additional EAP authentication, the protected EAP message shall carry EAP message. It shall cryptographically bind previous RSA authorization and further EAP authentication, while protecting following EAP message."

Proposed Resolution Recommendation: Accepted-Modified Recommendation by
Replace:
"After successful EAP based authorization if the MS or BS wants to run additional EAP authentication, the protected EAP message shall carry EAP message. It shall cryptographically bind previous RSA authorization and further EAP authentication, while protecting following EAP message."
with
"After successful EAP based authorization if the MS or BS wants to run additional EAP authentication, the protected EAP message shall carry the EAP data. It thus cryptographically bind the previous EAP authentication with the following EAP authentication, while protecting following EAP message."

Reason for Recommendation

Resolution of Group Decision of Group: Accepted-Modified
Replace:
"After successful EAP based authorization if the MS or BS wants to run additional EAP authentication, the protected EAP message shall carry EAP message. It shall cryptographically bind previous RSA authorization and further EAP authentication, while protecting following EAP message."
with
"After successful EAP based authorization if the MS or BS wants to run additional EAP authentication, the protected EAP message shall carry the EAP data. It thus cryptographically bind the previous EAP authentication with the following EAP authentication, while protecting following EAP message."

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Questions and Concerns

k) done
Accept contribution C802.16e-05_123 (PKMv2 Key hierarchy changes)
The cross references (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. This was supposed to be fixed from the last revision, yet many remain in the current draft. I counted at least 6."

Proposed Resolution Recommendation: Accepted
"Provide the correct subclause numbers here and throughout the draft, e.g., search for x.x. This was supposed to be fixed from the last revision, yet many remain in the current draft. I counted at least 6."

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 k) done
Editor’s Questions and Concerns

Editor’s Action Items
I object to the resolution of Comments 2136 from session #35 - some security refinements are still needed

**AK context refinements**

The AK context defined in the standard to hold parameters related to AK key and sub-keys. Keys which AK is derived from are higher hierarchy keys which may be used to derive AKs for other BSs. In order to avoid key-sharing between BSs, these keys may be in different entity than the AK thus they should not be part of the context.

**Suggested Remedy**

Incorporate changes documented in IEEE C802.16e-05/145

**Proposed Resolution**

**Recommendation:** Rejected

**Reason for Recommendation**

Both the AK context in the SS and BS has a 1:1 relationship with the PMK, even though the PMK is acquired differently in both cases (according to the EAP keying framework). The PMK will still be different between BSs given the key derivation rules for the PMK.

**Resolution of Group**

**Decision of Group:** Rejected

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

Both the AK context in the SS and BS has a 1:1 relationship with the PMK, even though the PMK is acquired differently in both cases (according to the EAP keying framework). The PMK will still be different between BSs given the key derivation rules for the PMK.

**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**
Inappropriate section heading.

Suggested Remedy

Change "MAC Management Messages" to "TEK State Machine"

Proposed Resolution Recommendation: Accepted Recommendation by
Change "MAC Management Messages" to "TEK State Machine"

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Change "MAC Management Messages" to "TEK State Machine"

Reason for Group’s Decision/Resolution

Group’s Notes
Group’s Action Items

Editor’s Notes Editor’s Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
Possibly, there is a "Change section 7.5.4.2 in 802.16-2004 as follows" instruction missing. This depends on the question whether the formula

\[ KEK = \text{Truncate}(\text{SHA}(K_\text{PAD}_\text{KEK} | AK), 128) \]

\[ K_\text{PAD}_\text{KEK} = 0x53 \text{ repeated 64 times} \]

in section 7.5.4.2 of 802.16-2004 is correct or not.

**Suggested Remedy**

Shouldn't this formula better read as

\[ KEK = \text{Truncate}(\text{SHA}((AK | AK_\text{PAD}) \text{ XOR } K_\text{PAD}_\text{KEK}), 128) \]

\[ K_\text{PAD}_\text{KEK} = 0x53 \text{ repeated 64 times} \]

\[ AK_\text{PAD} = 0x00 \text{ repeated 44 times} \]

| = concatenation

XOR = the boolean exclusive-or function.

**Proposed Resolution**

**Recommendation:** Rejected

**Reason for Recommendation:**
Changing this would break backwards compatibility.

**Resolution of Group**

**Decision of Group:** Rejected

**Reason for Group's Decision/Resolution:**
Changing this would break backwards compatibility.

**Editor's Notes**

**Editor's Actions**

1) None needed
Don't understand why the checking of PN should be CID based if there is only one PN for all CIDs and the PN is always incremental.

Suggested Remedy

Delete:

"In the receiving side, the PN comparison will be made on CID basis meaning - a packet is considered valid if it's PN is higher than the PN of last message in the same CID (or any other mechanism defined for HARQ OOO problem) - in order to avoid replay attack between different CIDs, the CID is part of the calculation of the OMAC."

Proposed Resolution  Recommendation: Accepted  Recommendation by

Delete:

"In the receiving side, the PN comparison will be made on CID basis meaning - a packet is considered valid if it's PN is higher than the PN of last message in the same CID (or any other mechanism defined for HARQ OOO problem) - in order to avoid replay attack between different CIDs, the CID is part of the calculation of the OMAC."

Reason for Recommendation

Resolution of Group  Decision of Group: Accepted

Delete:

"In the receiving side, the PN comparison will be made on CID basis meaning - a packet is considered valid if it's PN is higher than the PN of last message in the same CID (or any other mechanism defined for HARQ OOO problem) - in order to avoid replay attack between different CIDs, the CID is part of the calculation of the OMAC."

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes  Editor's Actions  k) done

Editor's Questions and Concerns

Editor's Action Items
Comment 958 is not fully satisfied as PKMv2 specifies Mutual Authentication but the specification does not include a Certificate Profile for BS Certificates.

Suggested Remedy
Accept contribution C802.16e-05_122 (BS Certificate Profile)

Proposed Resolution
Accept contribution C802.16e-05_122r1 (BS Certificate Profile) with the following change:
Remove the sentence "Other attributes are not allowed and shall not be included."

Reason for Recommendation

Resolution of Group
Accept contribution C802.16e-05_122r1 (BS Certificate Profile) with the following change:
Remove the sentence "Other attributes are not allowed and shall not be included."

Reason for Group's Decision/Resolution
Vote: 11-1

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions

Editor's Questions and Concerns

Editor's Action Items
Additional authorization functionalities during handover are required to omit PKM-REQ/RSP in the network re-entry procedure.

Suggested Remedy

Adopt the contribution C802.16e-05/165

Proposed Resolution

Recommendation: Accepted-Modified

Adopt the contribution C802.16e-05/165r3

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

Adopt the contribution C802.16e-05/165r3

Reason for Group’s Decision/Resolution

Vote: 24-6 (passes)

Editor’s Actions

h) defer to next round

This deletes a lot of text that others made changes to. Please revisit this contribution with Draft 7.

Editor’s Questions and Concerns

Editor’s Action Items
Pre-Authentication is defined in the IEEE P802.16e/D6. This pre-authentication is not fully operated. The Authorization Policy Support and MAC (Message Authentication Code) mode should be negotiated between the MS and the target BS before HO. Moreover, seeds needed to generated the AK should be transfered between the MS and the target BS before HO. Therefore, this contribution provided a resolution for those problems.

Suggested Remedy

Adopt the contribution C802.16e-05/167.

Proposed Resolution Recommendation: Superceded Recommendation by

Reason for Recommendation
See resolution of 3258

Resolution of Group Decision of Group: Superceded

Reason for Group’s Decision/Resolution
See resolution of 3258

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions

Editor’s Questions and Concerns

Editor’s Action Items
Resolution to comment 958 is incomplete because preauthentication is not adequately defined

Suggested Remedy
Accept contribution C802.16e-05_124 (PKMv2 preauthentication)

Proposed Resolution Recommendation: Accepted Recommendation by
Accept contribution C802.16e-05_124 (PKMv2 preauthentication)

Reason for Recommendation
Decision of the group was to remove pre authentication since preauthentication messages are not required for fast handover.

Resolution of Group Decision of Group: Accepted
Accept contribution C802.16e-05_124 (PKMv2 preauthentication)

Reason for Group's Decision/Resolution
Decision of the group was to remove pre authentication since preauthentication messages are not required for fast handover.

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
Description is wrong.

Suggested Remedy
Change:

"If the BS does not receive SA-TEK-Request from the BS within..."

to

"If the BS does not receive SA-TEK-Request from the MS within..."

Proposed Resolution Recommendation: Superceded

Reason for Recommendation
Superceded by resolution of 3261

Resolution of Group
Decision of Group: Superceded

Reason for Group’s Decision/Resolution
Superceded by resolution of 3261

Editor’s Actions
1) none needed
The following text is unclear as it is not explained what "cases" mean: certain scenario of NW Entry / HO or different capabilities with respect of authentication.

7.8.2 BS and MS mutual authentication and AK exchange overview
The BS mutual authentication can take place in two cases: The first case is if this is the only mechanism used for authentication and in this case it will be performed upon any network (re)entry. The second case is when it followed by EAP authentication: in this case the mutual authentication is done only for initial network entry and only EAP is done in case authentication is needed in re-entry.

Suggested Remedy
Clarify

Proposed Resolution
Recommendation: Accepted

7.8.2 BS and MS mutual authentication and AK exchange overview
The BS mutual authentication can take place in one of two modes of operation. In one mode, only mutual authentication is used. In the other mode, the mutual authentication is followed by EAP authentication. In this second mode, the mutual authentication is performed only for initial network entry and only EAP authentication is performed in the case that authentication is needed in re-entry.

Reason for Recommendation

Resolution of Group
Decision of Group: Accepted

7.8.2 BS and MS mutual authentication and AK exchange overview
The BS mutual authentication can take place in one of two modes of operation. In one mode, only mutual authentication is used. In the other mode, the mutual authentication is followed by EAP authentication. In this second mode, the mutual authentication is performed only for initial network entry and only EAP authentication is performed in the case that authentication is needed in re-entry.

7.8.2 BS and MS mutual authentication and AK exchange overview
The BS mutual authentication can take place in 2 cases: The first case is if this is the only mechanism used for authentication and in this case it will be performed upon any network (re)entry. The second case is when it followed by EAP authentication: in this case the mutual authentication is done only for initial network entry and only EAP is done in case authentication is needed in re-entry.

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

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
This method does not provide re-transmission function, so it is not reliable.

Suggested Remedy

Delete:

"During network re-entry or handover, the BS begins the 3-way-handshake by appending the SaChallenge TLV to the RNG-RSP. If the BS does not receive SA-TEK-Request from the BS within SaChallengeTimer, it shall discard the AK and may initiate full re-authentication or drop the MS. If the BS receives RNG-REQ during the period that SA-TEK-Request is expected, it shall send a new RNG-RSP with another SaChallenge TLV."

Proposed Resolution Recommendation: Accepted-Modified

"During initial network entry or reauthorization, the BS shall send SA-Challenge to the MS after protecting it with the OMAC/HMAC tuple. If the BS does not receive SA-TEK-Request from the BS within SaChallengeTimer, it shall resend the previous SA-Challenge. The BS may send SA-Challenge up to SaChallenge-MaxResends times. If the BS reaches its maximum number of resends, it shall discard the AK and may initiate full re-authentication or drop the MS.

During network re-entry or handover, the BS begins the 3-way-handshake by appending the SaChallenge TLV to the RNG-RSP. If the BS does not receive SA-TEK-Request from the BS within SaChallengeHandoverTimer (suggested to be several times greater than the length of SaChallengeTimer), it shall discard the AK and may initiate full re-authentication or drop the MS. If the BS receives RNG-REQ during the period that SA-TEK-Request is expected, it shall send a new RNG-RSP with another SaChallenge TLV."

Reason for Recommendation

The mechanism is suboptimally described in the text but is not broken. The proposed resolution attempts to clarify. Also a second timer would dramatically improve the reliability of this exchange.

Resolution of Group

Decision of Group: Accepted-Modified

"During initial network entry or reauthorization, the BS shall send SA-Challenge to the MS after protecting it with the OMAC/HMAC tuple. If the BS does not receive SA-TEK-Request from the BS within SaChallengeTimer, it shall resend the previous SA-Challenge. The BS may send SA-Challenge up to SaChallenge-MaxResends times. If the BS reaches its maximum number of resends, it shall discard the AK and may initiate full re-authentication or drop the MS.

During network re-entry or handover, the BS begins the 3-way-handshake by appending the SaChallenge TLV to the RNG-RSP. If the BS does not receive SA-TEK-Request from the BS within SaChallengeHandoverTimer (suggested to be several times greater than the length of SaChallengeTimer), it shall discard the AK and may initiate full re-authentication or drop the MS. If the BS..."
If re-authentication or drop the MS. If the BS receives RNG-REQ during the period that SA-TEK-Request is expected, it shall send a new RNG-RSP with another SaChallenge TLV."

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Action Items k) done

Editor's Questions and Concerns

Editor's Action Items
Suggested Remedy
Change

"The message shall include RandomBS, NonceSS, AKID, SS's Security Capabilities and OMAC/HMAC."

to

"The message shall include NonceSS, AKID, SS's Security Capabilities and OMAC/HMAC."

Proposed Resolution Recommendation: Accepted-Modified Recommendation by
Insert into page 204 line 38.
BS shall send SA-Challenge (including a random number RandomBS) to

Reason for Recommendation
RandomBS was included in the challenge in the first message, but the above paragraphs failed to explain this.

Resolution of Group Decision of Group: Accepted-Modified
Insert into page 204 line 38.
BS shall send SA-Challenge (including a random number RandomBS) to

Reason for Group’s Decision/Resolution
RandomBS was included in the challenge in the first message, but the above paragraphs failed to explain this.
EIK derivation for EAP only case is not defined.

Suggested Remedy
See contribution IEEE C802.16e-177

Proposed Resolution Recommendation: Accepted-Modified
Accept contribution IEEE C802.16e-177r1

Reason for Recommendation

Resolution of Group Decision of Group: Accepted-Modified
Accept contribution IEEE C802.16e-05/177r1

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

k) done

Editor’s Notes

Editor’s Actions

k) done

Editor’s Questions and Concerns

Editor’s Action Items
Length of Nonce is wrong

Suggested Remedy
Change the Nonce length from "32 bits" to "8 bits".

Proposed Resolution Recommendation: Superceded Recommendation by

Reason for Recommendation
Superceded by 3526

Resolution of Group Decision of Group: Superceded

Reason for Group's Decision/Resolution
Superceded by 3526

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
Currently in the draft document P802.16e/D6, the AES-CCM mode and the AES-CTR mode of data encryption are provided. But these mechanisms need some overhead of at least 4 bytes for each PDU. There need be some kind of data encryption mode of AES not having any overhead field per PDU. The proposed AES-CBC mode and CBC Initial Vector generation can be a good candidate.

Suggested Remedy
Adopt the contribution C802.16e-05/173.

Proposed Resolution Recommendation: Accepted-Modified
Adopt the contribution C802.16e-05/173.
But remove "MSS MAC Address (6 bytes) XOR" from the IVPlain_Text definition

Reason for Recommendation
(It's not new...Previous rejected comment 2155)

Resolution of Group Decision of Group: Accepted-Modified
Adopt the contribution C802.16e-05/173.
But remove "MSS MAC Address (6 bytes) XOR" from the IVPlain_Text definition

Reason for Group's Decision/Resolution
(It's not new...Previous rejected comment 2155)

Editor's Action Items
k) done

The new figure, 137b, will need a callout in text (in the paragraph before, if possible). You will also need to provide this figure to the IEEE in electronic form.
This section is redundant.

Suggested Remedy
Delete the section 7.8.4.2

Proposed Resolution
Recommendation: Rejected

Reason for Recommendation
Deleting this section would render the informative text inconsistent with the non mutual authentication text in the equivalent section in PKMv1

Resolution of Group
Decision of Group: Rejected

Reason for Group’s Decision/Resolution
Deleting this section would render the informative text inconsistent with the non mutual authentication text in the equivalent section in PKMv1

Editor’s Notes
Editor’s Actions
1) none needed

Editor’s Questions and Concerns

Editor’s Action Items
I object to the resolution of session #35 because accepted comment 2136 from DB 80216-05_001r2 was not applied correctly to D6. Comment 2136 in 80216-05_001r2 was submitted, accepted-modified with Resolution of group:
1. Adopt c802.16e-05/24r1
2. Remove all of Remedy 5

The contribution was applied with the following problems:

1. lower diagram in page 13 in contribution does not appear completely in D6 (from PRE-PAK-256 bit Primary Authorization to PAK) (appears with title figure xx2: AK with RSA+EAP authorization process)
2. 7.5.4. "OMAC key sequence number followed by the OMAC_PN" it should be "OMAC key sequence number followed by the OMAC_PN_*"
3. Table 37e in 6.3.2.3.9.15 was not modified according to contribution
4. In section 6.3.2.3.9.15 table 37e (page 67 line 10) was not updated according to table xx page 54 in 80216-05_001r2 (start of remedy 6)
5. In 7.8.4.2 we have a problem, the contribution gives two versions of this section.

Suggested Remedy

1. include lower diagram in page 13 in contribution (from PRE-PAK-256 bit Primary Authorization to PAK) (appears with title figure xx2: AK with RSA+EAP authorization process)
2. in 6.3.2.3.23 change title from "MS Basic Capability" to "SS Basic Capability".
3. in 7.5.4. "OMAC key sequence number followed by the OMAC_PN" change to "OMAC key sequence number followed by the OMAC_PN_*"
4. modify Table 37e in 6.3.2.3.9.15 according to contribution
5. In section 6.3.2.3.9.15 table 37e (page 67 line 10) update table according to table xx page 54 in 80216-05_001r2
6. adopt the first instance of section 7.8.4.2 in from contribution c802.16e-05/24r1

Proposed Resolution Recommendation by

1. include lower diagram in page 13 in contribution (from PRE-PAK-256 bit Primary Authorization to PAK) (appears with title figure xx2: AK with RSA+EAP authorization process)
2. in 6.3.2.3.23 change title from "MS Basic Capability" to "SS Basic Capability".
3. in 7.5.4. "OMAC key sequence number followed by the OMAC_PN" change to "OMAC key sequence number followed by the OMAC_PN_*"
4. modify Table 37e in 6.3.2.3.9.15 according to contribution
5. In section 6.3.2.3.9.15 table 37e (page 67 line 10) update table according to table xx page 54 in 80216-05_001r2
6. adopt the first instance of section 7.8.4.2 in from contribution c802.16e-05/24r1

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

1. include lower diagram in page 13 in contribution (from PRE-PAK-256 bit Primary Authorization to PAK) (appears with title figure xx2: AK with RSA+EAP authorization process)
2. in 6.3.2.3.23 change title from "MS Basic Capability" to "SS Basic Capability".
3. in 7.5.4. "OMAC key sequence number followed by the OMAC_PN" change to "OMAC key sequence number followed by the OMAC_PN_*"
4. modify Table 37e in 6.3.2.3.9.15 according to contribution
5. In section 6.3.2.3.9.15 table 37e page 67 line 10 update table according to table xx page 54 in 80216-05_001r2
6. adopt the first instance of section 7.8.4.2 from contribution c802.16e-05/24r1

Vote: 31-7

In step 5, IEEE C802.16e-05/001r7 is the most recent version.
In step 7, the reference is apparently to IEEE C802.16e-05/024r1.
I object to the resolution of Comments 1327 because the original resolution requires exhaustive search for preamble sequences. Using a set of 4 PN sequences the preamble sequences can be divided into 4 sub-groups. Current contribution provides a solution for MSS to perform fast cell search.

Suggested Remedy

Adopt the resolution text in contribution IEEE C802.16e-05/036r1 or the latest version.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Rejected

Reason for Group’s Decision/Resolution

Vote: 0-7
Commenter proposes a solution without providing any technical justification for that solution.

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
I object to the resolution of comment 1945 in IEEE 802.16-05/010. This comment is about how the term MSS (now MS) has replaced SS in text pulled from the base document. The Decision of the Group was to supersede that comment by comment #71, and the reason for the Group's Decision was that "This comment has been superseded by comment #71 which changes the usage of MSS and SS." However, I cannot find comment #71 listed in IEEE 802.16-05/010 or IEEE 802.16-04/011. Going back to IEEE 802.16-04/69r4, I find comment #71 (which is also technically binding), and the resolution of the group for that comment was "DJ, possibly David Castelow, possibly others to supply a specific list of changes to be made."

If this action item was done, I do not find that all the necessary fixes were made. The title of this amendment is "Part 16: Air Interface for Fixed and Mobile Broadband Wireless Access Systems, Amendment for Physical and Medium Access Control Layers for Combined Fixed and Mobile Operation in Licensed Bands" I think many sections of this document lose sight of the fact that fixed systems must also be able operate.

My Suggested Remedy is an attempt to fix the SS/FS/MS language in section 8. PHY

Suggested Remedy
1) On page 243, line 36, change "for MSS supporting HARQ" to "for SS supporting HARQ."
2) On page 407, line 42, change "used by any MS that wants to synchronize" to "used by any SS that wants to synchronize" (a fixed SS still needs to be able to do initial ranging).
3) On page 407, line 56, change "onto those the MS shall transmit the two consecutive initial-ranging/handover-ranging codes" to "onto those the SS shall transmit the two consecutive initial-ranging/handover-ranging codes" (a fixed SS still needs to be able to do initial ranging).
4) On page 456, line 37, change "the correction term for MS-specific power offset." to "the correction term for SS-specific power offset." (fixed SS's still need power control).

Proposed Resolution Recommendation: 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

Reason for Recommendation

Resolution of Group Decision of Group: Accepted-Modified
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

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes

Editor's Actions

1) none needed
duplicate

Editor's Questions and Concerns

Editor's Action Items

Document under Review: P802.16e/D6

Ballot Number: 0001010

Comment submitted by: Herbert Ruck

Member

Comment Date: 2005/03/09

Comment # 3270

Starting Page # 214

Starting Line # 19

Fig/Table#: 8.3.3.4.2

Section

Spelling of "Subhchannelization"

Suggested Remedy

Change to "Subchannelization"

Proposed Resolution

Recommendation: Change to "Subchannelization"

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Change to "Subchannelization"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

k) done

Editor's Questions and Concerns

Editor's Action Items
This comment is out of scope of the recirc, but in the interest of harmonization between the Corrigendum project and the Mobile project, I wish to submit this comment.

The ambiguities and errors in OFDM-256 STC operation have been more thoroughly addressed and fixed in the current version of the Corrigendum draft (P802.16-2004/Cor1/D1) through a harmonization effort of several companies. The changes specified in P802.16e/D6 now "conflict" the specification of STC given in the Corrigendum document.

Suggested Remedy

Delete the text from line 36 on page 214 to line 9 on page 215.

On p. 215, line 10, insert the instruction

"[Insert the following text in the location indicated by the included paragraph below:]

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Rejected

Reason for Group's Decision/Resolution

Out of scope.

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
Clarify PMP DL subchannelization zone to indicate that it is OFDMA.

Suggested Remedy

Change:
8.3.5.1.1 PMP DL subchannelization zone to:
8.3.5.1.1 PMP DL subchannelization zone (OFDMA)

Reason for Recommendation

Resolution of Group: Rejected

Reason for Group’s Decision/Resolution

Vote: 6-6
This section is not talking about multiple access.

Editor’s Action Items

1) none needed
**Editorial instruction doesn't make sense:**
"[Insert new Table 224a and text in the location indicated by the included paragraph below:]"

**Suggested Remedy**
Delete instruction, as the whole subsection including this figure are added to the base document

**Proposed Resolution**

<table>
<thead>
<tr>
<th>Proposed Resolution</th>
<th>Recommendation:</th>
<th>Recommendation by</th>
</tr>
</thead>
</table>

**Reason for Recommendation**

**Resolution of Group**

<table>
<thead>
<tr>
<th>Decision of Group: Accepted</th>
</tr>
</thead>
</table>

Delete instruction, as the whole subsection including this figure are added to the base document

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

**Group’s Notes**

**Group’s Action Items**

**Editor’s Notes**

**Editor’s Actions**

k) done

I also changed the cross ref to Table 208a to Figure 208a

**Editor’s Questions and Concerns**

**Editor’s Action Items**
In section 8.3.5.1.1 of 802.16e/D6, the description of the DL subchannelization zone is not explicitly clear from the text how the structure of the subchannelized zone fits in with the DL sub-frame.

Figure 208a is also confusing, as it only shows the DL subchannelized portion of the sub frame and is not completely labeled. This looks similar to an OFDMA style of picture.

Suggested Remedy
Replace figure 208a in 8.3.5.1.1 with the one submitted in contribution C802.16e-05/093.doc

Proposed Resolution
Replace figure 208a in 8.3.5.1.1 with the one submitted in contribution C802.16e-05/093.doc
Correct spelling as required.

Reason for Recommendation
Resolution of Group: Accepted-Modified
Decision of Group: Accepted-Modified
Replace figure 208a in 8.3.5.1.1 with the one submitted in contribution C802.16e-05/093. Correct spelling as required.

Reason for Group’s Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes
If a figure has spelling errors, it needs to be fixed in Visio, which I do not have. This figure will also need to either be drawn in Frame directly in the standard, or submitted to the IEEE as a separate electronic file (eps, tif, gif).

Editor's Action Items

k) done
The table (Fast Ranging_IE) still does not follow the structure of an OFDM UL-MAP extended IE, since it contains fields already defined in the body of the UL-MAP itself. The entries for CID, UIUC and Reserved have to be deleted. My comment 2170 which dealt with this section was accepted (see 802-16-05_001r3.usr) but only partly implemented. Somehow further entries made it into this table in this revision which also have to be deleted. An editorial correction within the original comment was also missed.

Suggested Remedy

In table 251a delete entries for

CID
Start time
Subchannel Index
UIUC

as they are already part of the UL-MAP_IE body. Furthermore delete

Reserved

as it is not necessary to reach a byte boundary and the length of the IE is 8 bytes

p.219 l 61. extend UIUC -> extended UIUC

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group: Superceded

See comment 3276

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
Editor's Action Items
I object to the implementation of Comment 1068 in IEEE 802.16-04/69r4, because not all the changes were implemented. In addition the changes do not fix the entire table (an issue I raised in a reply comment to Rainer's original comment).

The Fast Ranging Information Element (Table 251a) does not conform to the OFDM-256 UL-MAP extended IE format (Table 249 in 8.3.6.3.4 of 802.16-2004), where the first field must be the Extended UIUC field of 4 bits followed by the Length field of 4 bits. In Table 251a, the fields for CID, Start time, Subchannel index, and UIUC are not supposed to be present as these parameters are in the generic UL-MAP IE as shown in 802.16-2004, Table 245, on p. 467.

Suggested Remedy

On page 220, make the following changes to Table 251a:

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Size</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fast_UL_ranging_IE {</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CID</td>
<td>16 bits</td>
<td>= initial ranging 0x0000</td>
</tr>
<tr>
<td>Start time</td>
<td>11 bits</td>
<td></td>
</tr>
<tr>
<td>Subchannel Index</td>
<td>5 bits</td>
<td></td>
</tr>
<tr>
<td>UIUC</td>
<td>4 bits</td>
<td>= 15</td>
</tr>
<tr>
<td>Extented UIUC</td>
<td>4 bits</td>
<td>=0x03</td>
</tr>
<tr>
<td>Length</td>
<td>4 bits</td>
<td>=0x8</td>
</tr>
<tr>
<td>MAC address</td>
<td>48 bits</td>
<td>MSS's MAC address as provided on the RNG_REQ message on initial system entry</td>
</tr>
<tr>
<td>UIUC</td>
<td>4 bits</td>
<td>=UIUC⇒15.UIUC⇒4. A four-bit code used to define the type of uplink access and the burst type associated with that access.</td>
</tr>
<tr>
<td>Duration</td>
<td>12 bits</td>
<td>=The Duration indicates the length, in units of OFDM symbols, of the allocation. The start time of the first allocation shall be the Allocation Start Time given in</td>
</tr>
</tbody>
</table>
On page 219, line 53, insert the following change language:

"8.3.6.3.8 UL-MAP dummy IE format

[Apply the following change to Table 251 in Section 8.3.6.3.8]

|        Extended UIUC         |           4 bits           | 0x03...0x0F |

"
UIUC | 4 bits | UIUC⇒15.UIUC⇒4. A four-bit code used to define the type of uplink access and the burst type associated with that access.

Duration | 12 bits | The Duration indicates the length, in units of OFDM symbols, of the allocation. The start time of the first allocation shall be the Allocation Start Time given in the UL-MAP message.

Reserved | 4 bits

On page 219, line 53, insert the following change language:

"8.3.6.3.8 UL-MAP dummy IE format

[Apply the following change to Table 251 in Section 8.3.6.3.8]

Extended UIUC | 4 bits | 0x03...0x0F

Reason for Recommendation

Resolution of Group: Accepted

On page 220, make the following changes to Table 251a:

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Size</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fast_UL_ranging_IE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GID</td>
<td>16 bits</td>
<td>= initial ranging 0x0000</td>
</tr>
<tr>
<td>Start time</td>
<td>11 bits</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------</td>
<td>-----</td>
<td>-------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Subchannel Index</strong></td>
<td>5 bits</td>
<td></td>
</tr>
<tr>
<td><strong>UIUC</strong></td>
<td>4 bits</td>
<td>= 15</td>
</tr>
<tr>
<td><strong>Extented UIUC</strong></td>
<td>4 bits</td>
<td>=0x03</td>
</tr>
<tr>
<td><strong>Length</strong></td>
<td>4 bits</td>
<td>=0x8</td>
</tr>
<tr>
<td><strong>MAC address</strong></td>
<td>48 bits</td>
<td>MSS's MAC address as provided on the RNG_REQ message on initial system entry</td>
</tr>
<tr>
<td><strong>Duration</strong></td>
<td>12 bits</td>
<td>The Duration indicates the length, in units of OFDM symbols, of the allocation. The start time of the first allocation shall be the Allocation Start Time given in the UL-MAP message</td>
</tr>
<tr>
<td><strong>Reserved</strong></td>
<td>4 bits</td>
<td></td>
</tr>
</tbody>
</table>

The UIUC⇒15.UIUC⇒4. A four-bit code used to define the type of uplink access and the burst type associated with that access.

On page 219, line 53, insert the following change language:

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

**Group’s Notes**

**Group’s Action Items**

**Editor’s Notes**

**Editor’s Actions**

**Editor’s Questions and Concerns**

**Editor’s Action Items**

k) done
The presence of the compressed private DL-MAP format is indicated by the contents of the most significant two bits of the first data byte. These bits overlay the HT and EC bits of a generic MAC header. When these bits are both set to 1 (an invalid combination for a standard header), the compressed private DL-MAP format is present. A compressed private UL-MAP shall only appear immediately after a compressed private DL-MAP. The presence of a compressed private UL-MAP is indicated by a bit in the compressed private DL-MAP data structure.

### 8.3.6.6.1 Compressed private DL-MAP

The compressed private DL-MAP format is presented in Table 251c.

<table>
<thead>
<tr>
<th>Compressed_Private_DL-MAP()</th>
</tr>
</thead>
</table>

### 8.3.6.6.2 Compressed private UL-MAP

The compressed private UL-MAP format is presented in Table 251d. The message may only appear after a compressed private DL-MAP message to which it shall be appended. The message presents the same information as the standard format with the exception that the Generic MAC header and the Uplink Channel ID are omitted.

#### Table 251d - Compressed private UL-MAP message format

<table>
<thead>
<tr>
<th>Compressed_Private_UL-MAP()</th>
</tr>
</thead>
</table>

### 8.3.6.7 Reduced Compressed Private Maps

Reduced compressed private maps are based upon the compressed map format, however they are specifically designed to support a single unicast ID per map. Their use is identical to standard compressed private maps. However, fields have been removed that are not required to support a single ID. The reduced private...
map will be pointed to by a broadcast map or private compressed map which will define the values of several fields that will be constant for the duration of the private map chain. The behavior of the compressed map fields that are not present in the reduced private map are described below:

Note: strikeouts in the above paragraph are only to indicate change w.r.t. the working draft but should not be included into the draft, since the changes are w.r.t. Std IEEE 802.16-2004 ....

Modify Table 251c line 17ff: (note: I changed the NOT condition - positive is my preference...)

<table>
<thead>
<tr>
<th>if (UL-MAP appended) {</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Compressed_Private_UL-MAP( )</td>
<td>Variable</td>
<td></td>
</tr>
<tr>
<td>}</td>
<td></td>
<td></td>
</tr>
<tr>
<td>else {</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HCS</td>
<td>bits</td>
<td></td>
</tr>
<tr>
<td>}</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The presence of the compressed private DL-MAP format is indicated by the contents of the most significant two bits of the first data byte. These bits overlay the HT and EC bits of a generic MAC header. When these bits are both set to 1 (an invalid combination for a standard header), the compressed private DL-MAP format is present. A compressed private UL-MAP shall only appear immediately after a compressed private DL-MAP. The presence of a compressed private UL-MAP is indicated by a bit in the compressed private DL-MAP data structure.

Table 251c - Compressed private DL-MAP message format
Compressed_Private_DL-MAP()

Table 251d - Compressed private UL-MAP message format
Compressed_Private_UL-MAP()
8.3.6.7 Reduced Compressed Private Maps

Reduced compressed private maps are based upon the compressed map format, however they are specifically designed to support a single unicast ID per map. Their use is identical to standard compressed private maps. However, fields have been removed that are not required to support a single ID. The reduced private map will be pointed to by a broadcast map or private compressed map which will define the values of several fields that will be constant for the duration of the private map chain. The behavior of the compressed map fields that are not present in the reduced private map are described below:

Note: strikeouts in the above paragraph are only to indicate change w.r.t. the working draft but should not be included into the draft, since the changes are w.r.t. Std IEEE 802.16-2004 ....

Modify Table 251c line 17ff: (note: I changed the NOT condition - positive is my preference...)

<table>
<thead>
<tr>
<th>if (UL-MAP appended)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compressed_Private_UL-MAP()</td>
</tr>
<tr>
<td>Variable</td>
</tr>
</tbody>
</table>

| else |
| HCS | bits |

Reason for Recommendation

Resolution of Group: Accepted

p. 221 l.53

The presence of the compressed private DL-MAP format is indicated by the contents of the most significant two bits of the first data byte. These bits overlay the HT and EC bits of a generic MAC header. When these bits are both set to 1 (an invalid combination for a standard header), the compressed private DL-MAP format is present. A compressed private UL-MAP shall only appear immediately after a compressed private DL-MAP. The presence of a compressed private UL-MAP is indicated by a bit in the compressed private DL-MAP data structure.

p. 222 l.16

8.3.6.6.1 Compressed private DL-MAP

The compressed private DL-MAP format is presented in Table 251c.

p. 222 l.28

Table 251c - Compressed private DL-MAP message format

Compressed_Private_DL-MAP()
8.3.6.6.2 Compressed private UL-MAP
The compressed private UL-MAP format is presented in Table 251d. The message may only appear after a compressed private DL-MAP message to which it shall be appended. The message presents the same information as the standard format with the exception that the Generic MAC header and the Uplink Channel ID are omitted.

Table 251d- Compressed private UL-MAP message format
Compressed_Private_UL-MAP()

8.3.6.7 Reduced Compressed Private Maps
Reduced compressed private maps are based upon the compressed map format, however they are specifically designed to support a single unicast ID per map. Their use is identical to standard compressed private maps. However, fields have been removed that are not required to support a single ID. The reduced private map will be pointed to by a broadcast map or private compressed map which will define the values of several fields that will be constant for the duration of the private map chain. The behavior of the compressed map fields that are not present in the reduced private map are described below:

Note: strikeouts in the above paragraph are only to indicate change w.r.t. the working draft but should not be included into the draft, since the changes are w.r.t. Std IEEE 802.16-2004....

Modify Table 251c line 17ff: (note: I changed the NOT condition - positive is my preference...)

<table>
<thead>
<tr>
<th>if (not UL-MAP appended) {</th>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compressed_Private_UL-MAP()</td>
<td></td>
</tr>
<tr>
<td>}</td>
<td></td>
</tr>
<tr>
<td>else {</td>
<td></td>
</tr>
</tbody>
</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
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<tr>
<th>Comment # 3278</th>
<th>Comment submitted by: Aik Chindapol</th>
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<tr>
<td>Comment Type</td>
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</tr>
<tr>
<td>Starting Page #</td>
<td>222</td>
</tr>
<tr>
<td>Starting Line #</td>
<td>19</td>
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<tr>
<td>Fig/Table#</td>
<td></td>
</tr>
<tr>
<td>Section</td>
<td>8.3.6.6.1</td>
</tr>
</tbody>
</table>

** typo: "presneted" **

** Suggested Remedy **

 change to "presented"  

** Proposed Resolution **

** Recommendation by **

** Reason for Recommendation **

** Resolution of Group **

** Decision of Group: Accepted **

 change to "presented"  

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

** Group’s Notes **

** Group’s Action Items **

** Editor’s Notes **

** Editor’s Actions **

 k) done  

** Editor’s Questions and Concerns **

** Editor’s Action Items **
Tables 257e/f - HELP!!!!!
- OFDM has neither HARQ/CQICH, nor repetition coding, Fast Feedback,.....
- HCS should be at the end of table 257e with an if/else clause to distinguish
  UL-MAP appended case.
- HCS missing at the end of Table 257f
- Size fields often lack units (i.e. bit or bits)
- No Length field
- Preamble Time Shift descriptors after Table point to wrong section

Suggested Remedy
Consider document C8016e-05_138.doc

Proposed Resolution Recommendation: Accepted Recommendation by
Adopt C8016e-05_138.doc

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Adopt C8016e-05_138.doc

Reason for Group’s Decision/Resolution

Group’s Notes
Group’s Action Items

Editor’s Notes Editor’s Actions k) done
Editor’s Questions and Concerns

Editor’s Action Items
For each SS, the maximum number of bursts transmitted concurrently and directed to the SS is limited to 16 (including all bursts without CID or with CIDs matching the SS’s CIDs). Bursts transmitted concurrently are bursts that share the same OFDMA symbol. Note that concurrency pertains to the symbols allocated in the LDLMAP, therefore when STC/MIMO is applied the definition of concurrency pertains to OFDMSA symbols before STC/MIMO encoding.

Proposed Resolution: Recommendation by

Reason for Recommendation:

Resolution of Group: Decision of Group: Accepted

For each SS, the maximum number of bursts transmitted concurrently and directed to the SS is limited to 16 (including all bursts without CID or with CIDs matching the SS’s CIDs). Bursts transmitted concurrently are bursts that share the same OFDMA symbol. Note that concurrency pertains to the symbols allocated in the LDLMAP, therefore when STC/MIMO is applied the definition of concurrency pertains to OFDMSA symbols before STC/MIMO encoding.

Reason for Group’s Decision/Resolution:

Group’s Notes
Group’s Action Items

Editor’s Notes Editor’s Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
<table>
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</tr>
</thead>
<tbody>
<tr>
<td>3281</td>
<td>typo error ? DL-MAP ?</td>
</tr>
</tbody>
</table>

**Proposed Resolution**

**Recommendation:**

**Reason for Recommendation**

**Resolution of Group**

**Decision of Group:** Accepted

typo error ? DL-MAP ?

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

**Group's Notes**

**Group's Action Items**

**Editor's Notes**

**Editor's Actions**

1) none needed

This typo was not found; presumably it was corrected elsewhere.

**Editor's Questions and Concerns**

**Editor's Action Items**
<table>
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<th>Comment #</th>
<th>3282</th>
<th>Comment Type</th>
<th>Editorial</th>
<th>Comment submitted by</th>
<th>Lei Wang</th>
<th>Member</th>
<th>Document under Review</th>
<th>P802.16e/D6</th>
<th>Ballot Number</th>
<th>0001010</th>
<th>Comment Date</th>
<th>2005/03/09</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comment</td>
<td>typo</td>
<td>Suggested Remedy</td>
<td>Change &quot;LDL-MAP&quot; to &quot;DL-MAP&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Proposed Resolution: Change "LDL-MAP" to "DL-MAP"

Reason for Recommendation:

Resolution 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:
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<td>Lei Wang</td>
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<tr>
<td>Type</td>
<td>Editorial</td>
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<tr>
<td>Suggested Remedy</td>
<td>Change &quot;OFDMSA&quot; to &quot;OFDMA&quot;</td>
</tr>
<tr>
<td>Starting Page #</td>
<td>232</td>
</tr>
<tr>
<td>Starting Line #</td>
<td>36</td>
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<tr>
<td>Fig/Table#</td>
<td></td>
</tr>
<tr>
<td>Section</td>
<td></td>
</tr>
</tbody>
</table>

**Proposed Resolution**

**Recommendation:**

**Reason for Recommendation**

**Resolution of Group**

**Decision of Group:** Accepted

**Change "OFDMSA" to "OFDMA"**

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

**Group’s Notes**

**Group’s Action Items**

**Editor’s Notes**

**Editor’s Actions**

k) done

**Editor’s Questions and Concerns**

**Editor’s Action Items**
Discuss and Adopt the contribution C80216e-05/114

Suggested Remedy
Adopt the contribution C80216e-05/114

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Rejected

Reason for Group’s Decision/Resolution
Contributor asked to have the comment rejected because the text was removed by the corrigendum. BS using these proposed indicators is likely to omit the UL MAP IE with UIUC=12 to reduce the overhead, but this brings the reduction of initial ranging opportunity for MS trying the first initial ranging.

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
"I object to the current DL-MAP transmission structure for not providing STC option in the first PUSC zone. For deployments using STC zones, not providing STC in the first PUSC zone causes large MAC overhead in the DL-MAP and imbalance of cell coverage."

Suggested Remedy
Adopt contribution C80216e-05_29 or the latest revision.

Proposed Resolution Recommendation: Accepted-Modified
Adopt contribution C80216e-05_29r2

Reason for Recommendation

Resolution of Group Decision of Group: Rejected

Reason for Group's Decision/Resolution
Vote: 34-27
Putting an optional coding on a mandatory message effectively makes it mandatory for everyone.

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
I object to the implementation in the draft of Comment #2130, because coding indication field of DL_frame_format does not include LDPC encoding.

**Suggested Remedy**

Table 268b.OFDMA downlink frame prefix format for 128 FFT

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Size</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>DL_Frame_Prefix_Format() {}</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Used subchannel indicator</td>
<td>1 bits</td>
<td>0: Subchannel 0 is used for segment 0, Subchannel 1 is used for segment 1, Subchannel 2 is used for segment 2, 1: Use all subchannels</td>
</tr>
<tr>
<td>Ranging Change Indication</td>
<td>1 bits</td>
<td></td>
</tr>
<tr>
<td>Repetition Coding Indication</td>
<td>2 bits</td>
<td>0b 00 - No repetition coding on DL-MAP 0b 01 - Repetition coding of 2 used on DL-MAP 0b 10 - Repetition coding of 4 used on DL-MAP 0b 11 - Repetition coding of 6 used on DL-MAP</td>
</tr>
<tr>
<td>Coding Indication</td>
<td>2 bits</td>
<td>0b000 - CC encoding used on DL-MAP 3 bits 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 0b 101 ~ 111 - reserved</td>
</tr>
<tr>
<td>DL-Map_Length</td>
<td>65 bits</td>
<td></td>
</tr>
</tbody>
</table>

**Proposed Resolution**

Recommendation: Accepted

**Recommendation by**

Table 268b.OFDMA downlink frame prefix format for 128 FFT
## Resolution of Group

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

### Table 268b. OFDMA downlink frame prefix format for 128 FFT

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Size</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>DL_Frame_Prefix_Format()</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Used subchannel indicator</td>
<td>1 bits</td>
<td>0: Subchannel 0 is used for segment 0, Subchannel 1 is used for segment 1, Subchannel 2 is used for segment 2, 1: Use all subchannels</td>
</tr>
<tr>
<td>Ranging_Change_Indicator</td>
<td>1 bits</td>
<td></td>
</tr>
<tr>
<td>Repetition_Coding_Indication</td>
<td>2 bits</td>
<td>0b 00 - No repetition coding on DL-MAP 0b 01 - Repetition coding of 2 used on DL-MAP 0b 10 - Repetition coding of 4 used on DL-MAP 0b 11 - Repetition coding of 6 used on DL-MAP</td>
</tr>
<tr>
<td>Coding_Indication</td>
<td>2 bits</td>
<td>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 ~ 111 - reserved</td>
</tr>
<tr>
<td>DL-Map_Length</td>
<td>6 bits</td>
<td></td>
</tr>
<tr>
<td>Field</td>
<td>Length</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------</td>
<td>--------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Ranging_Change_Indication</td>
<td>1 bits</td>
<td>0b 00 - No repetition coding on DL-MAP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0b 01 - Repetition coding of 2 used on DL-MAP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0b 10 - Repetition coding of 4 used on DL-MAP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0b 11 - Repetition coding of 6 used on DL-MAP</td>
</tr>
<tr>
<td>Repetition_Coding_Indication</td>
<td>2 bits</td>
<td>0b 00 - CC encoding used on DL-MAP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0b 01 - BTC encoding used on DL-MAP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0b 10 - CTC encoding used on DL-MAP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0b 11 - ZT CC encoding used on DL-MAP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0b100 - LDPC encoding used on DL-MAP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0b 101 ~ 111 - reserved</td>
</tr>
<tr>
<td>Coding_Indication</td>
<td>2 bits</td>
<td>0b 00 - CC encoding used on DL-MAP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0b 001 - BTC encoding used on DL-MAP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0b 010 - CTC encoding used on DL-MAP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0b 011 - ZT CC encoding used on DL-MAP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0b100 - LDPC encoding used on DL-MAP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0b 101 ~ 111 - reserved</td>
</tr>
<tr>
<td>DL-Map_Length</td>
<td>6 bits</td>
<td></td>
</tr>
</tbody>
</table>

Reason for Group’s Decision/Resolution

Vote: 10-7

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
In the current text for AAS operation, there is no mechanism for supporting codebook based beam-forming, where MS reports index of predefined beamforming vector using CQICH channels. The codebook scheme can be very useful when uplink coverage is limited from MS's power amplifier. To enable codebook mechanism in AAS mode, the required specifications are proposed in C80216e-05_153.

Suggested Remedy
Adopt the changes in Contribution C80216e-05_153.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Rejected

Reason for Group’s Decision/Resolution
Out of scope.

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
For FFT sizes other that 128, the DLFP is 24-bit long. To map DLFP into FCH with 48-bit, the DLFP can be only repeated twice, not 4 times. That is, repetition coding of 4 is not do-able here.

**Suggested Remedy**

Change 4 to 2.

**Proposed Resolution**

Recommendation: Accepted

**Recommended by**

Change 4 to 2.

**Reason for Recommendation**

**Resolution of Group**

Decision of Group: Accepted

**Change 4 to 2.**

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

**Group’s Notes**

**Group’s Action Items**

**Editor’s Notes**

**Editor’s Actions**

k) done

**Editor’s Questions and Concerns**

**Editor’s Action Items**
The FCH shall be at the beginning of the DL part of the segment for 128FFT, i.e., the first slot.

Suggested Remedy
change "one" to "the first"

Proposed Resolution Recommendation: Accepted
change "one" to "the first"

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
change "one" to "the first"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
In section 8.4.3.1, a concept of "slot" is defined as the minimum data allocation unit. The sizes of a slot varies with permutation methods. However, in section 8.4.4.5, the uplink allocation unit is one subchannel and 3 OFDMA symbol, which does not varies with permutation methods. This does not completely agree with the slot definition given in Section 8.4.3.1. For example, for uplink with the adjacent subcarrier permutation (i.e., AMC), a slot is one subchannel by one OFDMA symbol.

**Suggested Remedy**

in line 19 page 235, insert the following:

[change the text in 8.4.4.5 as indicated]

The allocation for a user uplink transmission is a number of subchannels over a number of OFDMA symbols. The number of symbols shall be equal to 3*N, where N is a positive integer. The basic allocation structure is a slot, as defined in Section 8.4.3.1. The size of a slot varies with the permutation schemes. For example, for uplink PUSC, one slot is one subchannel by 3 OFDMA symbols. For uplink using adjacent subcarrier permutation, one slot is one subchannel by one OFDMA symbol.

The basic allocation structure is one subchannel for a duration of 3 times the OFDMA symbol duration $T_s$, (N=1). Larger allocation are repetitions of the basic structure (N=k, for a positive integer k).

The framing structure used for the uplink includes an allocation for ranging and an allocation for data transmission. The MAC layer sets the length of the uplink framing, and the uplink mapping.
in line 19 page 235, insert the following:

[change the text in 8.4.4.5 as indicated]

The allocation for a user uplink transmission is a number of subchannels over a number of OFDMA symbols. The number of symbols shall be equal to 3*N, where N is a positive integer. The basic allocation structure is a slot, as defined in Section 8.4.3.1. The size of a slot varies with the permutation schemes. For example, for uplink PUSC, one slot is one subchannel by 3 OFDMA symbols. For uplink using adjacent subcarrier permutation, one slot is one subchannel by one OFDMA symbol.

The basic allocation structure is one subchannel for a duration of 3 times the OFDMA symbol duration Ts, (N=1). Larger allocation are repetitions of the basic structure (N=k, for a positive integer k).

The framing structure used for the uplink includes an allocation for ranging and an allocation for data transmission. The MAC layer sets the length of the uplink framing, and the uplink mapping.

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes
Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
Suggested Remedy

correct page 235, line 26:
The BS shall not allocate more than three ranging allocation IE (UIUC 12) per frame, one for initial ranging, and one for periodic ranging, and one for initial ranging for the paged MS.

Proposed Resolution Recommendation: Recommendation by

Resolution of Group Decision of Group: Accepted

correct page 235, line 26:
The BS shall not allocate more than three ranging allocation IE (UIUC 12) per frame, one for initial ranging, and one for periodic ranging, and one for initial ranging for the paged MS.

Reason for Group’s Decision/Resolution

Group’s Action Items

Editor’s Action Items k) done

Editor’s Questions and Concerns

Editor’s Action Items
What's ASCA? cannot find its definition in the spec.

Suggested Remedy
Remove it or define it.

<table>
<thead>
<tr>
<th>Comment</th>
<th>Type</th>
<th>Starting Page</th>
<th>Starting Line</th>
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<td>3292</td>
<td>Technical, Binding</td>
<td>235</td>
<td>48</td>
<td></td>
</tr>
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</table>

Proposed Resolution
Recommendation: Accepted
Recommendation by

Under clause 3, add: "Adjacent subcarrier allocation: a permutation where the subcarriers are located adjacent to each other".
Under clause 4, add: "PUSC-ASCA: PUSC adjacent subcarrier allocation".

Reason for Recommendation

Resolution of Group
Decision of Group: Accepted

Under clause 3, add: "Adjacent subcarrier allocation: a permutation where the subcarriers are located adjacent to each other".
Under clause 4, add: "PUSC-ASCA: PUSC adjacent subcarrier allocation".

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes
Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
The C80216e-05/084r4 was adopted at Session 35 but not implemented P802.16e/D6. (Comment #2289 in 80216-05-001r2 data base)

Incorporate the changes suggested in C80216e-05/084r5

Incorporate the changes suggested in C80216e-05/084r6

The original comment was 2189.

Please provide Figure 234 from the contribution. Currently, this is just an empty anchored frame.
Suggested Remedy
Adopt 802.16e-05/84r5 which corrects the editorial error.

Proposed Resolution Recommendation: Accepted-Modified Recommendation by
Incorporate the changes suggested in C80216e-05/084r6

Reason for Recommendation

Resolution of Group Decision of Group: Accepted-Modified
Incorporate the changes suggested in C802.16e-05/084r6

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions 1) none needed

Dupe of previous resolution

Editor's Questions and Concerns

Editor's Action Items
Switched and fully adaptive beamforming are two major applications of the smart antenna systems and each has its own advantages and disadvantages. Switched beam applications are considered by many to be a robust and cost-effective method of increasing capacity in cellular networks. But the switched beam forming is broken in the current spec. Make a room for the vendors to decide switched beam application according to their policy.

Please review and adopt contribution "C80216e-05/101.pdf."

Suggested Remedy

Proposed Resolution Recommendation:

Resolution of Group Decision of Group: Rejected

Out of scope.

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
I object to the resolution of Comments 2192 from session #35 - etiting of the feature was not compleated.

Extended DIUC/UIUC editorial corrections.

Suggested Remedy

In 8.4.5.3 DL-MAP IE format, table 275 does not reflect the extended DIUC 2 option. Need to add the red entry to the table as following:

```java
if (DIUC == 14) {
    Extended DIUC 2 dependent IE
} Else if (DIUC == 15) {
    Extended DIUC dependent IE variable See clauses following 8.4.5.3.1
} else {
    Same sould be done to the UL MAP in section: 8.4.5.4 UL-MAP IE format
```

Proposed Resolution

Recommended: Accepted

In 8.4.5.3 DL-MAP IE format, table 275 does not reflect the extended DIUC 2 option. Need to add the red entry to the table as following:

```java
if (DIUC == 14) {
    Extended DIUC 2 dependent IE
} Else if (DIUC == 15) {
    Extended DIUC dependent IE variable See clauses following 8.4.5.3.1
} else {
    .....
Same should be done to the UL MAP in section: 8.4.5.4 UL-MAP IE format

if (UIUC == 11) {
    Extended UIUC 2 dependent IE
} Else if (UIUC == 15) {
    ....

Reason for Recommendation

Resolution of Group: Accepted

In 8.4.5.3 DL-MAP IE format, table 275 does not reflect the extended DIUC 2 option. Need to add the red entry to the table as following:

if (DIUC == 14) {
    Extended DIUC 2 dependent IE
} Else if (DIUC == 15) {
    Extended DIUC dependent IE variable See clauses following 8.4.5.3.1
} else {
    Same should be done to the UL MAP in section: 8.4.5.4 UL-MAP IE format
if (UIUC == 11) {
    Extended UIUC 2 dependent IE
} Else if (UIUC == 15) {
    ....

Reason for Group's Decision/Resolution

Group's Action Items

Editor's Action Items

k) done

Editor's Questions and Concerns

Editor's Action Items
I object to the implementation in the draft of comments2219, because the proposed texts are not fully reflected in the revised standard.

**Clarifications on the Extended DIUC/UIUC are proposed in C802.16e-05/088.**

**Suggested Remedy**

Incorporate changes documented in IEEE C802.16e-05/088.

**Proposed Resolution**

**Recommendation:** Accepted-Modified

**Incorporate changes documented in IEEE C802.16e-05/088r1.**

**Reason for Recommendation**

**Decision of Group:** Accepted-Modified

**Incorporate changes documented in IEEE C802.16e-05/088r1.**

**Group's Notes**

088 was originally accepted, the comment was re-opened and 88r1 was accepted. The change was editorial (updates to section and table numbers only).

**Editor's Notes**

The subclause numbers seem incorrect and it is unclear whether you want Table 277 moved into the new subclause you are creating. Delete existing 8.5.4.3.21.1?
The field, OFDMA_Symbol_Offset, need to be insert in the AAS DL IE to indicate the start point of the AAS zone. The same field has been added in the corrigendum document.

Suggested Remedy
1. change the length value in Table 278 to "Length=0x04"
2. insert a row in Table 278 right after the length field row
   OFDMA_Symbol_Offset  8 bits indicates the start of the AAS Zone in unit of OFDMA symbols, counting from the frame preamble.

Proposed Resolution

1. change the length value in Table 278 to "Length=0x04"
2. insert a row in Table 278 right after the length field row
   OFDMA_Symbol_Offset  8 bits indicates the start of the AAS Zone in unit of OFDMA symbols, counting from the frame preamble.

Reason for Recommendation

Resolution of Group: Accepted

1. change the length value in Table 278 to "Length=0x04"
2. insert a row in Table 278 right after the length field row
   OFDMA_Symbol_Offset  8 bits indicates the start of the AAS Zone in unit of OFDMA symbols, counting from the frame preamble.

Editor's Action Items

k) done
### Table 279 - OFDMA downlink STC_ZONE IE format

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Size (bits)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>STC_ZONE_IE()</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extended DIUC</td>
<td>4</td>
<td>STC_ZONE = 0x01</td>
</tr>
<tr>
<td>Length</td>
<td>4</td>
<td>Length = 0x02 or 0x03</td>
</tr>
<tr>
<td>OFDMA Symbol offset</td>
<td>8</td>
<td>Denotes the start of the zone (counting from the frame preamble and starting from 0)</td>
</tr>
<tr>
<td>Permutation</td>
<td>2</td>
<td>0b00 = PUSC permutation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0b01 = FUSC permutation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0b10 = Optional FUSC permutation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0b11 = Adjacent subcarrier permutation</td>
</tr>
<tr>
<td>Use All SC indicator</td>
<td>1</td>
<td>0 = Do not use all subchannels</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = Use all subchannels</td>
</tr>
<tr>
<td>STC</td>
<td>2</td>
<td>0b00 = No STC/FHDC No transmit diversity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0b01 = STC using 2 antennas</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0b10 = STC using 4 antennas</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0b11 = FHDC using 2 antennas</td>
</tr>
<tr>
<td>Matrix Indicator</td>
<td>2</td>
<td>Antenna STC/FHDC matrix (see 8.4.8.1.4)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STC = STC mode indicated in the latest STCTD_Zone_IE().</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ant23 = 2/3 antennas select' as indicated in the latest</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STC_Zone_IE().</td>
</tr>
<tr>
<td></td>
<td></td>
<td>if (STC== 0b01 and Ant23 == 0)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>{</td>
</tr>
<tr>
<td></td>
<td></td>
<td>00 = Matrix A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>01 = Matrix B</td>
</tr>
</tbody>
</table>
else if (STC == 0b00) {
    00 = Matrix A
    01 = Matrix B
    10 = Matrix C
    11 = Codebook
}
else if (STC == 0b01 and Ant23 == 1) or (STC == 0b10) {
    00 = Matrix A
    01 = Matrix B
    10 = Matrix C
    11 = Reserved
}
else {
    00 11 = Reserved
}
0b00 = Matrix A
0b01 = Matrix B
0b10 = Matrix C
0b11 = Codebook

-------------------------------------------------------------------------------------------------------------------------------------------------------------------
DL_Permbase                                                                            |  5 |
PRBS_ID                                                                                      |  2 | Refer to 8.4.9.4.1
-------------------------------------------------------------------------------------------------------------------------------------------------------------------
AMC_type                                                                                     |  2 |
| Indicates the AMC type in case permutation type = 0b11, otherwise shall be set to 0 |
| AMC_type (N*M = N bins by M symbols); |
| 0b00 = 1*6 |
| 0b01 = 2*3 |
| 0b10 = 3*2 |
| 0b11 = reserved

-------------------------------------------------------------------------------------------------------------------------------------------------------------------
IDcell                                                                                             | 6 |
-------------------------------------------------------------------------------------------------------------------------------------------------------------------
Midamble presence                                                                   |  1 | 0 = not present |
| 1 = present at the first symbol in STC zone
-------------------------------------------------------------------------------------------------------------------------------------------------------------------
Midamble boosting                                                                    |  1 | 0 = no boost |
| 1 = Boosting (3dB)
-------------------------------------------------------------------------------------------------------------------------------------------------------------------
2/3 antennas select                                                                  |  1 | 0 = STC using 2 antennas |
| 1 = STC using 3 antennas |
| Selects 2/3 antennas when STC = 01
-------------------------------------------------------------------------------------------------------------------------------------------------------------------
if length = 0x03 {
Dedicated Pilots                                                                      |  1 |
| 0 = Pilot symbols are broadcast |
| 1 = Pilot symbols are dedicated. An MS should use only pilots specific to its burst for channel estimation
-------------------------------------------------------------------------------------------------------------------------------------------------------------------
Reserved | 47 | Reserved | Shall be set to zero

Proposed Resolution: Recommendation by

Reason for Recommendation

Resolution of Group: Decision of Group: Rejected

Out of scope

Reason for Group’s Decision/Resolution

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
Reserved field is unnecessary as the last field of an extended DIUC.

Suggested Remedy
Replace "Reserved", "7 bits" by Syntax "Padding;" Size "Variable;" Notes "Pad to byte boundary."

Proposed Resolution Recommendation: Accepted  
Replace "Reserved", "7 bits" by Syntax "Padding;" Size "Variable;" Notes "Pad to byte boundary."

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Replace "Reserved", "7 bits" by Syntax "Padding;" Size "Variable;" Notes "Pad to byte boundary."

Reason for Group's Decision/Resolution

Group's Notes
Note to editor: if a contribution has changed this table, accept the changes from the contribution and ignore the change in this comment.

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
"I object to the current solutions of providing only PUSC or FUSC (or the like) deployments only. In multiple sector deployment scheme, the current PUSC deployment incurs large equipment cost on antenna subsystems whereas FUSC deployment needs to overcome interference problem. By introducing a hybrid scheme of transmit diversity, the OFDMA deployment brings about a mild increase of equipment cost while delivering interference mitigation."

Suggested Remedy

Adopt contribution C80216e-05_30 or the latest revision.
In the H-ARQ MAP or Sub-MAP pointer IE, the length field is erroneously specified as 2xN. It is not 2xN and the exact length can be specified in the 4-bit field.

Suggested Remedy

Eliminate "=2xN" from the Length field. Also in the Notes field eliminate "N is the number of HARQ MAP or Sub MAP bursts."

Proposed Resolution

Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Superceded

See comment 3336

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
H-ARQ MAP / Sub-Map Pointer IE should be nibble alligned to add reserved bits fields such as:

If (CID mask included) {
...
} else {
reserved // 3 bits
}

Proposed Resolution Recommendation: Accepted

Resolution of Group Decision of Group: Accepted

H-ARQ MAP / Sub-Map Pointer IE should be nibble alligned to add reserved bits fields such as:

If (CID mask included) {
...
} else {
reserved // 3 bits
}

Editor's Actions k) done
Tables 285a and 285b appear as independent definitions of the MBS_MAP_IE. Table 285a does not define the case when "Macro diversity enhanced == 0," and there are fewer "}" than "{".

Suggested Remedy
Include additional "}" between "IdCell" and "OFDMA Symbol Offset." Also eliminate Table 285b.

Proposed Resolution Recommendation: Accepted

Reason for Recommendation
Include additional "}" between "IdCell" and "OFDMA Symbol Offset." Also eliminate Table 285b.

Reason for Group’s Decision/Resolution

Group's Notes

Editor's Action Items

Editor's Notes

Editor's Actions k) done

Just a reminder, when I deleted Table 285b, all subsequent tables renumbered. Check cross referencing.
OFDMA DL extended DIUC 0x05 has been used by "MIMO DL Basic IE", so the newly added multicast and broadcast service IE shall use a different one, e.g., 0x0A.

Suggested Remedy
change "0x05" to "0x0A"

Proposed Resolution Recommendation: Accepted

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
change "0x05" to "0x0A"

Reason for Group’s Decision/Resolution

Group’s Action Items

Editor’s Notes

k) done

Editor’s Action Items

Editor’s Questions and Concerns
confusing names in section 8.4.5.3.14 and section 8.4.5.3.15, including the section names, table names, and MAP IE names. It looks like the words "active" and "anchor" are shuffled around.

**Suggested Remedy**

1. change "HO Anchor Active DL MAP IE" of section title of 8.4.5.3.14, table title of Table 285d, and the message name in Table 285d to "HO DL MAP IE in non-anchor BS"

3. change "HO Active Anchor DL MAP IE" of section title of 8.4.5.3.15 and table title of Table 285e, and the message name in Table 285e to "HO DL MAP IE in anchor BS"

**Proposed Resolution**

**Recommendation by**

1. change "HO Anchor Active DL MAP IE" of section title of 8.4.5.3.14, table title of Table 285d, and the message name in Table 285d to "HO DL MAP IE in non-anchor BS"

3. change "HO Active Anchor DL MAP IE" of section title of 8.4.5.3.15 and table title of Table 285e, and the message name in Table 285e to "HO DL MAP IE in anchor BS"

**Reason for Recommendation**

**Resolution of Group**

**Decision of Group: Accepted**

1. change "HO Anchor Active DL MAP IE" of section title of 8.4.5.3.14, table title of Table 285d, and the message name in Table 285d to "HO DL MAP IE in non-anchor BS"

3. change "HO Active Anchor DL MAP IE" of section title of 8.4.5.3.15 and table title of Table 285e, and the message name in Table 285e to "HO DL MAP IE in anchor BS"

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

**Editor's Action Items**

k) done
The extended DIUC 0x09 in OFDMA PHY has been used by the "DL PUSC burst allocation in other segment IE), as shown in Table 285c, on page 248. Also, all 16 extended DIUC codes have been allocated. So, the newly added "MIMO in another BS IE" has to use an extended-2 DIUC code.

Suggested Remedy

1. change "Extended DIUC" to "Extended-2 DIUC"
2. change "0x09" to "0x00"

Proposed Resolution

1. change "Extended DIUC" to "Extended-2 DIUC"
2. change "0x09" to "0x00"

Reason for Recommendation

See comment 3297.

Resolution of Group

Decision of Group: Superceded

Editor’s Notes

1) none needed
The bits for the following fields are not consistent with other MAP_IE:

- **OFDMA Symbol offset**: 10 bits
- **Subchannel offset**: 5 bits
- **No. OFDMA Symbols**: 9 bits
- **No. subchannels**: 5 bits
- **Matrix_indicator**: 1 bit

**Suggested Remedy**

Change the following fields:

- **OFDMA Symbol offset**: 8 bits
- **Subchannel offset**: 6 bits
- **No. OFDMA Symbols**: 7 bits
- **No. subchannels**: 6 bits
- **Matrix_indicator**: 2 bits

**Proposed Resolution**

**Recommendation**: Accepted

Change the following fields:

- **OFDMA Symbol offset**: 8 bits
- **Subchannel offset**: 6 bits
- **No. OFDMA Symbols**: 7 bits
- **No. subchannels**: 6 bits
- **Matrix_indicator**: 2 bits

**Reason for Recommendation**

**Resolution of Group**: Accepted

Change the following fields:

- **OFDMA Symbol offset**: 8 bits
- **Subchannel offset**: 6 bits
- **No. OFDMA Symbols**: 7 bits
- **No. subchannels**: 6 bits
- **Matrix_indicator**: 2 bits

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

**Group’s Notes**
The size of "UIUC" field should be 4 bits.

Proposed Resolution Recommendation: Accepted

The size of "UIUC" field should be 4 bits.

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

The size of "UIUC" field should be 4 bits.

Reason for Group's Decision/Resolution
The 'Feedback polling IE' contains some errors:
1) table is missing title
2) the Allocation offset indicates 0-8 delay relative to current frame, however relevance time for UL is always 1 frame ahead. In addition, the name is misleading since the same name is used to mean slot offset for CQI allocations.

**Suggested Remedy**

1) Add title to table:

"Feedback polling IE format"

2) change field 'Allocation offset':

<table>
<thead>
<tr>
<th>Allocation Frame offset</th>
<th>3 bits</th>
</tr>
</thead>
<tbody>
<tr>
<td>The offset of the frame in which the first UL feedback header shall be transmitted. A value of zero indicates the subsequent frame. The UL feedback shall be transmitted in the frame which is 0-8 frame delay relative to the current frame</td>
<td></td>
</tr>
</tbody>
</table>

3) Allocation Duration (d) 3 bits

| The allocation is valid for 10 x 2d frame starting from the frame defined by Frame Allocation 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 |

---

**Proposed Resolution**

**Recommendation: Accepted-Modified**

1) Add title to table:

"Feedback polling IE format"

2) change field 'Allocation offset':

<table>
<thead>
<tr>
<th>Allocation Frame offset</th>
<th>3 bits</th>
</tr>
</thead>
<tbody>
<tr>
<td>The offset (in units of frames) from the current frame in which the first UL feedback header shall be transmitted on the allocated UL resource. A value of zero indicates the subsequent frame.</td>
<td></td>
</tr>
</tbody>
</table>

3) Allocation Duration (d) 3 bits

| The allocation is valid for 10 x 2d frame starting from the frame defined by Frame Allocation 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 |
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

1) Add title to table:
"Feedback polling IE format"

2) change field 'Allocation offset':

<table>
<thead>
<tr>
<th>Allocation</th>
<th>Frame offset</th>
<th>3 bits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The offset (in units of frames) from the current frame in which the first UL feedback header shall be transmitted on the allocated UL resource. A value of zero indicates the subsequent frame.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The UL feedback shall be transmitted in the frame which is 0-8 frame delay relative to the current frame</td>
<td></td>
</tr>
</tbody>
</table>

3) Allocation Duration (d) 3 bits

The allocation is valid for 10 x 2d frame starting from the frame defined by Frame Allocation 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

Editor's Questions and Concerns

Editor's Action Items
The number of bits for N_CID is not specified.

Suggested Remedy
N_CID | 8 bits | Number of CIDs

Proposed Resolution Recommendation: Accepted-Modified
Table under 8.4.5.3.24 contains missing size for N_CID

Reason for Recommendation
Resolution of Group Decision of Group: Accepted-Modified
Table under 8.4.5.3.24 contains missing size for N_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
Feedback Polling IE is used to allocate UL for the MSS to transmit feedback header. So, it shall belong to UL MAP IE sections. Also, an extended UIUC code shall be assigned to this IE.

Suggested Remedy
1. Move section 8.4.5.3.20 on page 256 to line 53 on page 346.
2. re-number this section to 8.4.5.4.24, and change the section numbers of all the sections following this one.
3. add a table title for the Feedback Polling IE table: Table 302s Feedback Polling IE Format
4. change the notes box of Extended UIUC row from "0x??" to "0xf".

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Superceded

Reason for Group’s Decision/Resolution
See comment 3297

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
I object to the text change in D6, in relation to Section 8.4.5.3.20, since there is some error in referencing and in the number of the bits for the feedback type.

Suggested Remedy

Line 25-26:
Change '6 bits" into "4 bits" and change "See Table 7b" into "See Table 7d"

Line 49:
Change "See Table 7b" into "See Table 7d".

Proposed Resolution: Accepted

Reason for Recommendation

Resolution of Group: Accepted

Reason for Group’s Decision/Resolution

Group’s Notes

Editor’s Notes

Editor's Actions: k) done

Editor's Questions and Concerns

Editor’s Action Items
The period field should be 3-bits as in most other similar IEs

Suggested Remedy
Change Period to 3-bits from 2-bits.

Proposed Resolution
"Change Period to 3-bits from 2-bits.

Reason for Recommendation
Adding one bit will result in a required extra 7 padding bits.

Group's Notes
None

Group's Action Items
None

Editor's Notes
None

Editor's Questions and Concerns
None

Editor's Action Items
None
I object to the resolution of session #35 because accepted comment 1096 from DB 80216-04_69r4 was not applied correctly to D6. Comment 1096 in 80216-04_69r4 was sent an accepted. The adopted contribution was C80216e-04_411. Resulting D6 has two typos.

change text to "the symbols allocated in the LDL-MAP, therefore when STC/MIMO is applied the definitions of concurrency pertains to OFDM& symbols before STC/MIMO encoding"

Suggested Remedy
change text in 8.4.4.2 "PMP Frame Structure" to "the symbols allocated in the LDL-MAP, therefore when STC/MIMO is applied the definitions of concurrency pertains to OFDM& symbols before STC/MIMO encoding"

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

change text in 8.4.4.2 "PMP Frame Structure" to "the symbols allocated in the LDL-MAP, therefore when STC/MIMO is applied the definitions of concurrency pertains to OFDM& symbols before STC/MIMO encoding"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
make the changes as suggested in the Contribution C802.16e-05_160.

Proposed Resolution Recommendation: Accepted-Modified Recommendation by
Adopt Contribution C802.16e-05_160r1.

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Adopt Contribution C802.16e-05/160r1.

Reason for Group's Decision/Resolution

Group's Notes
This resolution supercedes 3403, 3324, 3391, and 3392

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
There are couple of problems in the Dedicated DL control IE definition, e.g.,
1. extended-2 DIUC code is not assigned;
2. description paragraph, line 33 to line 36 on page 257 is not in this section.
3. the length field is in unit of bytes, not nibble.

Suggested Remedy

make the following changes:
1. insert a row in Table 285k, line 13, page 258:
   | Exteded-2 DIUC | 4 bits | set to value 0x01 |
2. change "Nibble" to "Byte" in the notes box of line 14, page 258
3. move paragraph in line 33 to line 36 on page 257 to line 4 on page 258

Proposed Resolution

Recommendation: Accepted-Modified

Change "Nibble" to "Byte" in the notes box of line 14, page 258

Reason for Recommendation

Resolution of Group: Rejected

Reason for Group's Decision/Resolution

Vote: 1-9
This will increase the overhead in what is a very short field.

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions

Editor's Questions and Concerns

Editor's Action Items
The section 8.4.5.3.21.2 has no text. It shall be deleted.

Suggested Remedy
Delete line 40 to line 43 on page 258

Proposed Resolution Recommendation: Accepted
Delete line 40 to line 43 on page 258

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Delete line 40 to line 43 on page 258

Reason for Group’s Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes     Editor's Actions e) editor disagrees
Other changes added text to this section, so the header was not removed.

Editor's Questions and Concerns

Editor's Action Items
This sub-clause is empty.

Suggested Remedy
Use sub-clause 6.3.2.3.43.3 ('Reduced CID') as the content for this sub-clause

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Superceded

See 3318

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
I object to the resolution of session #35 because accepted comment 405 from DB 80216-04_38r4 was not applied correctly to D6.

Group resolution was to adopt change from contribution C80216-e-04-173r2.

Unfortunately the changes in the contribution were not applied in D6. Please apply them.

Suggested Remedy

apply changes in contribution C80216-e-04-173r2

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Rejected

Out of scope.
This refers to a comment placed during working group letter ballot and is not directly applicable to any version of the sponsor ballot draft.

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
There is inconsistency in the section when it refers to MS, sometime it uses MSS, sometime, it uses SS

Search the whole section, replace MSS and SS by MS.

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
The title is missing for Table 285I

Suggested Remedy
Add the title: Skip IE

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Superceded

See 3323

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
"The table, 258l, is missing its title."

Suggested Remedy
Add a title.

Proposed Resolution
Recommendation: Accepted
Add the title: Skip IE

Reason for Recommendation

Resolution of Group
Decision of Group: Accepted
Add the title: Skip IE

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items
The skip IE does not have an Extended-2 DIUC code.

Suggested Remedy
1. change "Extended DIUC" to "Extended-2 DIUC"
2. add "set to 0x02"

Proposed Resolution

Reason for Recommendation

Resolution of Group: Superceded

See comment #3316

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
The draft standard contains a new HARQ DL MAP IE. As this is a new addition, it is important that the MAP be reasonably flexible to allow for future capabilities and optimization by the system implementation. In addition, the capability expansion must be efficient so as not to degrade the coverage reliability of the DL_MAP.

Suggested Remedy

Adopt the resolution in contribution C80216e-05_132.pdf

Proposed Resolution Recommendation: Accepted-Modified

Adopt the resolution in contribution C80216e-05_132r1.pdf

Reason for Recommendation

Resolution of Group Decision of Group: Rejected

Reason for Group’s Decision/Resolution

Vote: 24-20

Adds complexity, based on what may be a future amendment.

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
Contribution IEEE C802.16e-05/038r1 was adopted at the last meeting but not incorporated into the D6 document.

Suggested Remedy
Incorporate IEEE C802.16e-05/038r1 into the document.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Superceded

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes Editor’s Actions 1) None needed

Editor’s Questions and Concerns

Editor’s Action Items
Above Table 306i in IEEE C802.16e-05/038r1, insert the following text:
"When MU Indicator = 1 for a particular loop index j 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 it's own ACK channel. In this case, the number of ACK channels associated with the sub-burst IE will be greater than N_sub_burst."

Above Table 306t in IEEE C802.16e-05/038r1, insert the following text:
"When MU Indicator = 1 for a particular loop index j 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 it's own bit position in the ACK channel bitmap. In this case, the number of bits in the ACK channel bitmap associated with the sub-burst IE will be greater than N_sub_burst."
I object to the text change in D6 and resolution of comment #1083 in relation to introducing HARQ IE into the the normal MAP, because the HARQ IEs adopted into the D6 text incurs unnecessary overhead by using explicit OFDMA symbol and subchannel to define the data region. Also, the HARQ IEs in D6 is not able to support multiple HARQ modes within the same data region. The above restriction will inhibit scheduler flexibility and optimization in actual implementation.

Suggested Remedy

Adopt the proposed text change in IEEE C802.16e-05/120 "Traffic Channel Definition and Enhancements for HARQ Burst Allocation in OFDMA PHY"
I object to the implementation in the D6 of Comment #3329, because contribution "Normal MAP Extension for MIMO H-ARQ" (IEEE C802.16e-05/038r1) that was adopted was not included in the D6 draft. Also, I object to the resolution of Comment #3329 because the definition of MIMO DL STC H-ARQ Sub-Burst IE in IEEE C802.16e-05/038r1 needs to be corrected.

Suggested Remedy

Include the proposed text change in "Normal MAP Extension for MIMO H-ARQ" (IEEE C802.16e-05/038r1) and make the following modification on top:

Replace "Table 306I MIMO DL STC H-ARQ Sub-Burst IE Format" in IEEE C802.16e-05/038r1 by the following:

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Size</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIMO DL STC H-ARQ Sub-Burst IE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sub-burst offset indication</td>
<td>1 bit</td>
<td></td>
</tr>
<tr>
<td>if (Sub-burst offset indication == 1) {</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sub-burst offset</td>
<td>10 bits</td>
<td>Offset in slots with respect to the previous sub-burst defined in this data region. If this is the first sub-burst within the data region, this offset is with respect to slot 0 of the data region</td>
</tr>
<tr>
<td>Dedicated MIMO DL Control Indicator</td>
<td>1 bit</td>
<td></td>
</tr>
<tr>
<td>for (j=0;j&lt;N sub burst;j++)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCID_IE()</td>
<td>Variable</td>
<td></td>
</tr>
<tr>
<td>Length</td>
<td>10 bits</td>
<td></td>
</tr>
<tr>
<td>Tx_count</td>
<td>2 bits</td>
<td>00: first transmission 01: second transmission 10: third transmission 11: fourth transmission</td>
</tr>
<tr>
<td>if (Tx_count == 00) {</td>
<td></td>
<td></td>
</tr>
<tr>
<td>if (Dedicated MIMO DL Control Indicator ==1) {</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dedicated MIMO DL Control IE()</td>
<td>variable</td>
<td></td>
</tr>
<tr>
<td>Proposed Resolution</td>
<td>Recommendation:</td>
<td>Recommendation by</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------------</td>
<td>------------------</td>
</tr>
</tbody>
</table>

Reason for Recommendation

Resolution of Group

Decision of Group: **Superceded**

See comment 3333

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
The description of the HARQ DL/UL IEs states that they may also be used to indicate a non-H-ARQ transmission. This is currently not the case (at least it is not clear how), nor does it seem to have any value.

Suggested Remedy

In Section 8.4.5.3.22, page 259: Remove line 43:
"The IE may also be used to indicate a non-H-ARQ transmission."

Also, in Section 8.4.5.4.25, page 347: Remove line 40:
"The IE may also be used to indicate also a non-H-ARQ transmission."

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  I) none needed

Editor’s Questions and Concerns

Editor’s Action Items
The type of fast-feedback encoding (4-bit or enhanced 6-bit) to be used by CQI channels allocated through H-ARQ IEs is not clear.

Suggested Remedy
Clarify that FFB CQI channels allocated through H-ARQ IEs are enhanced feedback channels (6 bits):

add the following text to page 259, line 55:

*The enhanced feedback 6-bit channel type shall be used for CQI channels allocated through any of the DL HARQ sub-burst IEs.*

Proposed Resolution

**Recommendation by**

Resolution of Group: **Superceded**

Reason for Recommendation

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions

Editor's Questions and Concerns

Editor's Action Items
The figure is missing axes

Suggested Remedy
Add two axes, horizontal axis to indicate time, vertical to indicate frequency

Proposed Resolution

Recommendation:

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Add two axes, horizontal axis to indicate time, vertical to indicate frequency

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
There are two objectives that this document is prepared to achieve: one editorial and one technical. The editorial part is to provide the correct Section/Table numbers and the technical part is to provide an important feature with small amount of text changes.

The H-ARQ MAP IE for MIMO bursts was introduced in [2] and accepted by the Working Group in 35th meeting in Sanya, but it failed to be added to the current draft standard [1]. The same proposal is re-written with proper Section and Table numbers in line with the existing texts. This is the editorial part. Based on this accepted texts, a much needed closed-loop capability is proposed with a minimal impact to the spec, which is the technical part of the document. The CL-MIMO functionalities included in the text change are identical to the accepted CL-MIMO DL MAP IE (8.4.5.3.25) with additional H-ARQ features.

Suggested Remedy
Adopt the changes proposed in C802.16e-05/156

Proposed Resolution Recommendation: Accepted-Modified Recommendation by
Adopt the changes proposed in C802.16e-05/156r2

Reason for Recommendation

Resolution of Group Decision of Group: Accepted-Modified
Adopt the changes proposed in C802.16e-05/156r2

Editor's Notes c) instructions unclear
When I went to the draft, page 264, line 65--it did not seem like the correct place to put this information. Please look at draft 7 and redirect.

Editor's Action Items
The contribution C802.16e-05/38r1 was accepted by Comment #2194 by WG in January, but failed to be added into D6 document.

Suggested Remedy
Adopt the changes proposed in C802.16e-05/38r1

Proposed Resolution
Recommendation by

Reason for Recommendation
Decision of Group: Superceded

See comment 3333

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
I object to the resolution of Comments 2194 from session #35 because H-ARQ harmonization still requires some refinements.

HARQ refinements

This contribution presents some fixes and refinements to the MAP/HARQ harmonization contribution from last session.

The changes include the following:

1. Alignments for the new/changed IEs
2. MAC ordering refinements
3. Text refinements
4. Additional text clarifications

Suggested Remedy

Incorporate changes documented in IEEE C802.16e-05/147
Discuss and Adopt C80216e-05_115

Suggested Remedy

Discuss and Adopt C80216e-05_115

Proposed Resolution Recommendation: Accepted-Modified Recommendation by

Adopt C80216e-05_115r3

Reason for Recommendation

Resolution of Group Decision of Group: Accepted-Modified

Adopt C802.16e-05/115r3

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

This contribution made changed to 8.4.9.6, which does not exist. I ran a search for the specific wording, and could not locate that either.

Editor's Questions and Concerns

Editor's Action Items
<table>
<thead>
<tr>
<th>Comment #</th>
<th>Type</th>
<th>Starting Page</th>
<th>Starting Line</th>
<th>Fig/Table#</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>3337</td>
<td>Technical, Non-binding</td>
<td>260</td>
<td>34</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Suggested Remedy**

1. Change "Extended DIUC 2" to "Extended-2 DIUC"
2. Change the notes box in line 34 page 260 to "set to 0x03"
3. Change the size box in line 36 page 260 to "4 bits"

**Proposed Resolution**

**Recommendation:** Accepted-Modified

1. Change "Extended DIUC 2" to "Extended-2 DIUC"
2. Change the notes box in line 34 page 260 to "set to 0x03"
3. Change the size box in line 36 page 260 to "4 bits"

**Reason for Recommendation**

Resolving Group Decision of Group: Accepted-Modified

1. Change "Extended DIUC 2" to "Extended-2 DIUC"
2. Change the notes box in line 34 page 260 to "set to 0x03"

**Group’s Notes**

**Group's Action Items**

**Editor's Notes**

**Editor's Actions**

k) done

**Editor's Questions and Concerns**

**Editor's Action Items**
I object to the resolution of comment 1593 because the performance of the CTC can be greatly improved.

Suggested Remedy
Adopt an expanded block set for the CTC code as described in the contribution C80216e-05_159.doc.
Contributions IEEE C802.16e-05/23r5 introduced CQICH control as optional dedicated control within each DL HARQ sub-burst IE. However, this control field can be inefficient in a number of ways.

In general, a system employing adaptive modulation and coding should assign feedback prior to the first packet transmission and discontinue feedback once the final packet in the queue has been successfully received. The CQI report is used to select the appropriate DIUC prior for the HARQ sub-burst transmission. However, the CQICH control is the DL HARQ sub-burst IE does serve either purpose. The CQICH control cannot be used to assign resource prior to the first transmission or deallocate resources after the last successful transmission. The CQI Alloc IE must be used for this purpose.

The CQI control could be made more efficient and useful.

Suggested Remedy

Adopt the changes proposed in contribution IEEE C802.16e-05/133

Proposed Resolution: Recommendation by

Reason for Recommendation

Resolution of Group: Decision of Group: Superceded

See comment 3336

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
Add the following field to table 285n ("DL HARQ Chase sub-burst IE") after the AI_SN field:

**ACK disable**  
1 bit  
*When this bit is "1" no ACK channel is allocated and the SS shall not reply with an ACK*

Add the following field to table 285p ("DL HARQ IR CC sub-burst IE") after the AI_SN field:

**ACK disable**  
1 bit  
*When this bit is "1" no ACK channel is allocated and the SS shall not reply with an ACK*
The definition is not consistent with the rest of the document.

Suggested Remedy

0b0000 = Chase HARQ
0b0001 = Incremental redundancy HARQ for CTC
0b0010 = Incremental redundancy HARQ for convolutional code
3-15 Reserved

Proposed Resolution

Decision of Group: Accepted-Modified

See comment 3336

Reason for Group’s Decision/Resolution

Group’s Action Items

Editor’s Action Items

k) done
The ACK disable bit is not present in the DL HARQ Chase sub-burst IE.

Suggested Remedy

Add a new row to the DL HARQ Chase sub-burst IE immediately after the AI_SN row. Use the new row for specifying the ACK_disable bit.

Specifically, the contents of the new row are the same as Table 285o, page 262 line 63:

| ACK_disable | 1 bit | When this bit is set to "1" no ACK channel is allocated and the SS shall not reply with an ACK.

Proposed Resolution

 Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

See comment 3336

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions

k) done

Editor’s Questions and Concerns

Editor’s Action Items
The DL HARQ Chase sub-burst IE format in Table 285n does not allow the system to adjust the modulation and coding on a per sub-burst basis. The DIUC should optionally be allowed to vary on per sub-burst.

Suggested Remedy

Adopt the resolution in contribution C80216e-05_131.pdf

Proposed Resolution Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Superceded

See comment 3336

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes Editor’s Actions

Editor’s Questions and Concerns

Editor’s Action Items
There should be a "ACK disable" field preceding the ACiD field to enable HARQ-IR allocations with DIUC based HARQ IR CTC blocks for voice/video (non-ACK) traffic.

Suggested Remedy
Insert "ACK disable" field with "1 bit" size before the SPID field (line #28).

Proposed Resolution

Reason for Recommendation

Resolution of Group

Decision of Group: Superceded

See comment 3336

Reason for Group's Decision/Resolution

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
use the same name "extended-2 DIUC", not too many variants.

extended-2 DIUC code for HARQ_ACK IE needs to be assigned.

Suggested Remedy
1. Change "Extended DIUC" to "Extended-2 DIUC"
2. change the notes box in line 32 page 265 to "set to 0x04"

Proposed Resolution: Accepted
1. Change "Extended DIUC" to "Extended-2 DIUC"
2. change the notes box in line 32 page 265 to "set to 0x04"

Resolution of Group: Accepted
1. Change "Extended DIUC" to "Extended-2 DIUC"
2. change the notes box in line 32 page 265 to "set to 0x04"

Editor's Actions: k) done
I object to the text change in D6 with regard to section 8.4.5.3.24, because some clarification is needed for the usage of Enhanced_DL_MAP_IE().

Suggested Remedy

Page 265, Line 53-54:
Modify: "This IE is used by the BS to indicate **to the MS** the DL resource allocation **based on** by using the channel definition specified in the DL channel definition TLV in the DCD"

Page 266, line 36-37:
Modify: "**Index to the DL region As-defined in DL channel definition TLV in DCD**"

Page 266, line 51:
Modify: "**Index to the DL region Channel-index-defined in DL channel definition TLV in DCD message**"

Proposed Resolution Recommendation: Accepted

Page 265, Line 53-54:
Modify: "This IE is used by the BS to indicate **to the MS** the DL resource allocation **based on** by using the channel definition specified in the DL channel definition TLV in the DCD"

Page 266, line 36-37:
Modify: "**Index to the DL region As-defined in DL channel definition TLV in DCD**"

Page 266, line 51:
Modify: "**Index to the DL region Channel-index-defined in DL channel definition TLV in DCD message**"

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

Page 265, Line 53-54:
Modify: "This IE is used by the BS to indicate **to the MS** the DL resource allocation **based on** by using the channel definition specified in the DL channel definition TLV in the DCD"

Page 266, line 36-37:
Modify: "**Index to the DL region As-defined in DL channel definition TLV in DCD**"

Page 266, line 51:
Modify: "**Index to the DL region Channel-index-defined in DL channel definition TLV in DCD message**"

Reason for Group's Decision/Resolution
N_CID field size unspecified

Suggested Remedy
Insert size as "8 bits" to be consistent with the regular DL-MAP IE.

Proposed Resolution
Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group
Decision of Group: Superceded

See comment 3311

Reason for Group's Decision/Resolution

Group's Notes
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/D6
Ballot Number: 0001010

Comment # 3347  Comment submitted by: Aditya Agrawal Member 2005/03/09

Comment Type Editorial  Starting Page # 266  Starting Line # 8.4.5.3.24
Fig/Table# 285r  Section 8.4.5.3.24

Starting Line # 8.4.5.3.24
use "extended-2 DIUC"

Suggested Remedy
change "extended DIUC" to "Extended-2 DIUC"

Proposed Resolution Recommendation: Accepted
change "extended DIUC" to "Extended-2 DIUC"

Reason for Recommendation
Resolution of Group Decision of Group: Accepted
change "extended DIUC" to "Extended-2 DIUC"

Reason for Group’s Decision/Resolution
Group Notes
Group Action Items

Editor’s Notes Editor’s Actions  k) done
Editor’s Questions and Concerns
Editor’s Action Items
Matrix indicator incorrectly specified as 1-bit

Suggested Remedy
Change Matrix indicator field to 2-bits

Proposed Resolution
Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group
Decision of Group: Superceded

See 3354

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions

Editor’s Action Items

Editor’s Questions and Concerns
The title of the Table is incorrect

**Suggested Remedy**

*Change the title into "Close-loop MIMO DL enhanced IE"*

**Proposed Resolution**

*Recommendation:*

**Reason for Recommendation**

**Resolution of Group**

*Decision of Group: Accepted*

*Change the title into "Close-loop MIMO DL enhanced IE"*

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

**Group’s Notes**

**Group’s Action Items**

**Editor’s Notes**

**Editor’s Actions**

k) done

**Editor’s Questions and Concerns**

**Editor’s Action Items**

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*Document under Review: P802.16e/D6*  
*Ballot Number: 0001010*  
*Comment Date: 2005/03/09*  
*Starting Page #: 267*  
*Starting Line #: 4*  
*Fig/Table #: 285s*  
*Section: 8.4.5.3.25*
Some clarification is needed in CL-MIMO_Enhanced_IE()

In Table 285s.
1. Change the table name.
2. Clarification of the Antennal Grouping Index .
3. Antenna Grouping should be applied in Matrix A(00) or Matrix B(01), not just for Matrix B.

Suggested Remedy
[modify the table 285s, Line 5,45,46 Page 267]

Table 285s - CL MIMO DL enhanced IE

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Size</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CL_MIMO_DL_Enhanced_IE ()</td>
<td></td>
<td></td>
</tr>
<tr>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>If(Matrix_indicator == 00 or 01)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antenna Grouping Index</td>
<td>3 bits</td>
<td>Indicating the index of the antenna grouping index</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If((Matrix_indicator == 00)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>000<del>010 = 0b101110</del>0b110000 in Table 298c</td>
</tr>
<tr>
<td></td>
<td></td>
<td>else</td>
</tr>
<tr>
<td></td>
<td></td>
<td>000<del>101 = 0b110001</del>0b110110 in Table 298c</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Proposed Resolution Recommendation: Accepted
[modify the table 285s, Line 5,45,46 Page 267]

Table 285s - CL MIMO DL enhanced IE

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Size</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CL_MIMO_DL_Enhanced_IE ()</td>
<td></td>
<td></td>
</tr>
<tr>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
</tbody>
</table>
If $(\text{Matrix} \_\text{indicator} == 00 \text{ or } 01)$

<table>
<thead>
<tr>
<th>Antenna Grouping Index</th>
<th>3 bits</th>
<th>Indicating the index of the antenna grouping index</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>If$(\text{Matrix} _\text{indicator} == 00)$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$000\sim010 = 0b101110\sim0b110000$ in Table 298c</td>
</tr>
<tr>
<td></td>
<td></td>
<td>else</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$000\sim101 = 0b110001\sim0b110110$ in Table 298c</td>
</tr>
</tbody>
</table>

Reason for Recommendation

Resolution of Group: Accepted

*modify the table 285s, Line 5456 Page 267*

Table 285s - CL MIMO DL enhanced IE

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Size</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CL_MIMO_DL_Enhanced_IE () {</td>
<td></td>
<td></td>
</tr>
<tr>
<td>...</td>
<td></td>
<td>...</td>
</tr>
</tbody>
</table>

If $(\text{Matrix} \_\text{indicator} == 00 \text{ or } 01)$

<table>
<thead>
<tr>
<th>Antenna Grouping Index</th>
<th>3 bits</th>
<th>Indicating the index of the antenna grouping index</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>If$(\text{Matrix} _\text{indicator} == 00)$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$000\sim010 = 0b101110\sim0b110000$ in Table 298c</td>
</tr>
<tr>
<td></td>
<td></td>
<td>else</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$000\sim101 = 0b110001\sim0b110110$ in Table 298c</td>
</tr>
</tbody>
</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
Extended DIUC number is missing

Suggested Remedy
Assign an unused number

Proposed Resolution
Recommendation: Superceded

Reason for Recommendation

Resolution of Group
Decision of Group: Superceded

See 3316

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
use the same name "extended-2 DIUC", not too many variants.

extended-2 DIUC code for MIMO DL enhanced IE needs to be assigned.

Suggested Remedy
1. Change "Extended DIUC" to "Extended-2 DIUC"
2. Change the notes box in line 12 page 267 to "set to 0x05"

Proposed Resolution

Recommendation: Accepted

1. Change "Extended DIUC" to "Extended-2 DIUC"
2. Change the notes box in line 12 page 267 to "set to 0x05"

Reason for Recommendation

Resolution of Group: Accepted

1. Change "Extended DIUC" to "Extended-2 DIUC"
2. Change the notes box in line 12 page 267 to "set to 0x05"

Group's Action Items

k) done
The Matrix_indicator field should be 2 bits instead of 1, the following fields are not consistent with other IEs

**Suggested Remedy**
Change the following fields

<table>
<thead>
<tr>
<th>Field</th>
<th>Bits</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFDMA Symbol offset</td>
<td>10</td>
</tr>
<tr>
<td>Subchannel offset</td>
<td>5</td>
</tr>
<tr>
<td>No. OFDMA Symbols</td>
<td>9</td>
</tr>
<tr>
<td>No. subchannels</td>
<td>5</td>
</tr>
<tr>
<td>Matrix_indicator</td>
<td>2</td>
</tr>
</tbody>
</table>

**Proposed Resolution**

**Recommended Resolution 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**
"I object to the DL-MAP and UL-MAP IE without providing the CID table at the beginning. MSS should be able to only check this table to determine whether there is traffic designated in the frame. As defined in the current 802.16e standard, a MSS has to, at the minimum, finish listening to the whole DL-MAP and UL-MAP regardless there is DL traffic or UL traffic for the MSS in the current frame."

Suggested Remedy

Adopt the resolution text in contribution IEEE C802.16e-05/059r2 or the latest version.

Proposed Resolution

Reason for Recommendation

Resolution of Group Decision of Group: Rejected

Out of scope of the recirc.

These are new sections to provide new capabilities.

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
In the regular UL-MAP IE, to parse the line "if (AAS or AMC UL Zone)," we need to know whether the current UL zone is an AAS/AMC UL zone.

Suggested Remedy

Add the following text following Table 287.
For Sub-UL-DL-MAPs, the current UL zone is automatically reset to the first UL zone at the beginning of a new Sub-MAP. The current UL zone is thereafter updated whenever an UL-MAP IE contains an explicit OFDMA symbol offset.

Proposed Resolution Recommendation: Accepted

Add the following text following Table 287.
For Sub-UL-DL-MAPs, the current UL zone is automatically reset to the first UL zone at the beginning of a new Sub-MAP. The current UL zone is thereafter updated whenever an UL-MAP IE contains an explicit OFDMA symbol offset.

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

Add the following text following Table 287.
For Sub-UL-DL-MAPs, the current UL zone is automatically reset to the first UL zone at the beginning of a new Sub-MAP. The current UL zone is thereafter updated whenever an UL-MAP IE contains an explicit OFDMA symbol offset.

Reason for Group’s Decision/Resolution

Group’s Notes
Group’s Action Items

Editor’s Notes Editor’s Actions k) done
Editor’s Questions and Concerns
Editor’s Action Items
The reuse of fast feedback subchannel is required to reduce UL system bandwidth overhead.

Suggested Remedy
Adopt the changes in Contribution C80216e-05/070r4

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Rejected

Reason for Group's Decision/Resolution
Out of scope of the recirc. Adds new capability and new material.

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
Some services need a constant bit rate for an extended time. In such cases the overhead used to allocate bandwidth frame by frame is wasted.

**Suggested Remedy**

We propose a method to allocate multiple frames when requested by the subscriber station without changing the current method of normal burst allocation. To make this possible we change a single bit in the PAPR/Safety Zone IE and create two short IEs. Adopt the proposal in IEEE C802.16e-05/158.
The tables describing 6-bit enhanced feedback (section 8.4.5.4.10.4) have been replaced with 3-bit encoding tables.

Suggested Remedy

Undo the changes to 8.4.5.4.10.4 in 802.16e/D6

or add 6-bit encoding tables for enhanced feedback channels

or explain how 6-bit encoding can be obtained from the 3-bit encoding tables.

Proposed Resolution Recommendation: **Accepted-Modified**

Insert the table spanning page 260, line 58 - page 264, line 49 in D5a into page 273 line 20 in D6

Reason for Recommendation

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

Insert the table spanning page 260, line 58 - page 264, line 49 in D5a into page 273 line 20 in D6

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes Editor’s Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
In Figure 229b, average SNR (over the layers) is feedback in CQICH as the channel quality indicator for vertically encoded systems. However, the average SNR is not a good measure of MIMO channel quality and the BS make make overly pessimistic choice of modulation and coding set according to average SNR. Instead, a new SNR measure derived from the post-processing mutual information should be used as the CQI measure for vertically encoded systems.

Suggested Remedy

Suggested Remedy: Adopt the changes in contribution C80216-05_118

Proposed Resolution

Recommended: Accepted-Modified

Reason for Recommendation

Resolution of Group: Accepted-Modified

Reason for Group’s Decision/Resolution

Adopt the changes in contribution C80216-05_118r3.doc

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions

b) awaiting missing input

I found 118, 118r1, and 118r2, but not 118r3.
8.4.5.4.10.5 refers to reporting of average SNR over MIMO layers and reporting of SNR per layer. It is not clear when each of the modes is used and how this is signalled.

In addition, equation (107b) quantizes the SNR to 4 bits while eq(107c) and eq(107a) use 6 bits.

**Suggested Remedy**

Clarify the text.
Align quantization of eq(107b) with eq(107a) and eq(107c).

**Proposed Resolution**

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Accepted-Modified</th>
<th>Recommendation by</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Replace the first paragraph in section 8.4.5.10.1 as follows</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

When the FAST_FEEDBACK subheader Feedback Type field is '00' or at a specific frame indicated in the CQICH_Alloc_IE() (see section 8.4.5.4.12, or the Feedback_type field in CQICH_Enhanced_Alloc_IE() is '00' (see 8.4.5.4.15), the SS shall report the S/Ñ it measures on the DL. The following formula shall be used:

2. Move text from line 35 on page 273 to line 12 on page 274 in section 8.4.5.4.10.5 to section 8.4.5.10.1 at line 54.

3. Move text in section 8.4.5.4.11.1 to section 8.4.5.4.15 to line 11, after delete the section 8.4.5.4.11.1.

**Reason for Recommendation**

<table>
<thead>
<tr>
<th>Resolution of Group</th>
<th>Decision of Group: Accepted-Modified</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Replace the first paragraph in section 8.4.5.10.1 as follows</td>
<td></td>
</tr>
</tbody>
</table>

When the FAST_FEEDBACK subheader Feedback Type field is '00' or at a specific frame indicated in the CQICH_Alloc_IE() (see section 8.4.5.4.12, or the Feedback_type field in CQICH_Enhanced_Alloc_IE() is '00' (see 8.4.5.4.15), the SS shall report the S/Ñ it measures on the DL. The following formula shall be used:

2. Move text from line 35 on page 273 to line 12 on page 274 in section 8.4.5.4.10.5 to section 8.4.5.10.1 at line 54.

3. Move text in section 8.4.5.4.11.1 to section 8.4.5.4.15 to line 11, after delete the section 8.4.5.4.11.1.
Group's Action Items

Editor's Notes

c) instructions unclear

Editor's Questions and Concerns

My line numbers in draft 6 seems to differ from this comment. I need help locating the correct text. (I was able to take care of item 1.)

It appears that the text to be moved (MIMO related) has been removed or changed.

Editor's Action Items
<table>
<thead>
<tr>
<th>Comment #</th>
<th>3362</th>
<th>Comment submitted by:</th>
<th>Peiying Zhu</th>
<th>Member</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document under Review:</td>
<td>P802.16e/D6</td>
<td>Ballot Number:</td>
<td>0001010</td>
<td></td>
</tr>
<tr>
<td>Comment Type</td>
<td>Editorial</td>
<td>Starting Page #</td>
<td>273</td>
<td></td>
</tr>
<tr>
<td>Starting Line #</td>
<td>38</td>
<td>Fig/Table#</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Section</td>
<td>8.4.5.4.10.5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Missing spaces: processing S/R, or CQICH_Enhanced_Alloc_IE() and layer S/N

**Suggested Remedy**

Insert spaces:

processing S/R
or CQICH_Enhanced_Alloc_IE()
layer S/N

**Proposed Resolution**

**Recommendation:**

**Reason for Recommendation**

**Resolution of Group**

**Decision of Group:** *Accepted*

Insert spaces:

processing S/R
or CQICH_Enhanced_Alloc_IE()
layer S/N

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

**Group’s Notes**

**Group’s Action Items**

**Editor’s Notes**

**Editor’s Actions** k) done

**Editor’s Questions and Concerns**

**Editor’s Action Items**
There is a picture here without a figure title. It looks suspiciously like Figure 229c.

Suggested Remedy
Probably the best thing to do here is to delete the extra picture. Even better would be for the draft to have been read through by a few people before it was sent for ballot with so many obvious mistakes.

Proposed Resolution
Delete the first figure (page 275).

Resolution of Group
Delete the first figure (page 275).

You need a title for the second (now the first) figure in 8.4.5.4.10.6. Also, you will need to provide electronic copies of these figures with your submittal to the IEEE, since they are not drawn into the Frame file.
Change the table 298c.

**Suggested Remedy**

Table should be changed as following

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0b101110</td>
<td>Antenna Group A1 for rate 1</td>
</tr>
<tr>
<td></td>
<td>For 3-antenna BS, See <strong>8.4.8.3.4</strong></td>
</tr>
<tr>
<td></td>
<td>For 4-antenna BS, See <strong>8.4.8.3.5</strong></td>
</tr>
<tr>
<td>0b101111</td>
<td>Antenna Group A2 for rate 1</td>
</tr>
<tr>
<td>0b110000</td>
<td>Antenna Group A3 for rate 1</td>
</tr>
<tr>
<td>0b110001</td>
<td>Antenna Group B1 for rate 2</td>
</tr>
<tr>
<td></td>
<td>For 3-antenna BS, See <strong>8.4.8.3.4</strong></td>
</tr>
<tr>
<td></td>
<td>For 4-antenna BS, See <strong>8.4.8.3.5</strong></td>
</tr>
</tbody>
</table>

**Proposed Resolution**

Recommendation: **Accepted**

**Reason for Recommendation**

Resolution of Group: **Accepted**

Table should be changed as following

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0b101110</td>
<td>Antenna Group A1 for rate 1</td>
</tr>
<tr>
<td></td>
<td>For 3-antenna BS, See <strong>8.4.8.3.4</strong></td>
</tr>
<tr>
<td></td>
<td>For 4-antenna BS, See <strong>8.4.8.3.5</strong></td>
</tr>
<tr>
<td>Antenna Group</td>
<td>Rate</td>
</tr>
<tr>
<td>---------------</td>
<td>------</td>
</tr>
<tr>
<td>A2</td>
<td>1</td>
</tr>
<tr>
<td>A3</td>
<td>1</td>
</tr>
<tr>
<td>B1</td>
<td>2</td>
</tr>
</tbody>
</table>

For 3-antenna BS, See 8.4.8.3.4.2
For 4-antenna BS, See 8.4.8.3.5.2

Reason for Group's Decision/Resolution

Group's Action Items

Editor's Notes

Editor's Actions

k) done

Editor's Questions and Concerns

Editor's Action Items
Suggested Remedy

Page 277, Line 46, Table 298c should be changed as following

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0b101110</td>
<td>Antenna Group A1 for rate 1</td>
</tr>
<tr>
<td></td>
<td>For 3-antenna BS, See 8.4.8.3.4.1</td>
</tr>
<tr>
<td></td>
<td>For 4-antenna BS, see 8.4.8.3.5.1</td>
</tr>
<tr>
<td>0b101111</td>
<td>Antenna Group A2 for rate 1</td>
</tr>
<tr>
<td>0b110000</td>
<td>Antenna Group A3 for rate 1</td>
</tr>
<tr>
<td>0b110001</td>
<td>Antenna Group B1 for rate 2</td>
</tr>
<tr>
<td></td>
<td>For 3-antenna BS, See 8.4.8.2.4.8.3.4.2</td>
</tr>
<tr>
<td></td>
<td>For 4-antenna BS, see 8.4.8.3.5.2</td>
</tr>
<tr>
<td>0b110010</td>
<td>Antenna Group B2 for rate 2</td>
</tr>
<tr>
<td>.</td>
<td>.</td>
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<tr>
<td>.</td>
<td>.</td>
</tr>
</tbody>
</table>

Proposed Resolution: Recommendation by

Reason for Recommendation

Resolution of Group: Accepted

Page 277, Line 46, Table 298c should be changed as following
<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0b101110</td>
<td>Antenna Group A1 for rate 1</td>
</tr>
<tr>
<td></td>
<td>For 3-antenna BS, See 8.4.8.3.48.4.8.3.4.1</td>
</tr>
<tr>
<td></td>
<td>For 4-antenna BS, see 8.4.8.3.58.4.8.3.5.1</td>
</tr>
<tr>
<td>0b101111</td>
<td>Antenna Group A2 for rate 1</td>
</tr>
<tr>
<td>0b110000</td>
<td>Antenna Group A3 for rate 1</td>
</tr>
<tr>
<td>0b110001</td>
<td>Antenna Group B1 for rate 2</td>
</tr>
<tr>
<td></td>
<td>For 3-antenna BS, See 8.4.8.3.48.4.8.3.4.2</td>
</tr>
<tr>
<td></td>
<td>For 4-antenna BS, see 8.4.8.3.58.4.8.3.5.2</td>
</tr>
<tr>
<td>0b110010</td>
<td>Antenna Group B2 for rate 2</td>
</tr>
</tbody>
</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
1) Text on page 280 seems out of place. The text refers to UEP and probably belongs in section 8.4.5.4.10.9
2) The text refers to 5-bit CQI payload, however there is no such thing - the standard includes 4 and 6 bits CQI payload.
3) It is not clear how to signal the usage of the mode.

Suggested Remedy

Either:
Update the content of this section to support 6-bit CQI, and provide means to signal this mode, and move content (text and figure) of page 280 to page 281, starting line 41.

Or:
delete the content of page 280 and section 8.4.5.4.10.9 altogether.

 Proposed Resolution Recommendation: Accepted-Modified Recommendation by

8.4.5.4.10.9 Optional fast DL measurement feedback UEP fast-feedback
When the UEP fast-feedback is employed and the Fast-feedback allocation subheader Feedback type field is '00' or the BS requests the feedback through CQICH_Alloc_IE() or CQICH_Control_IE(), the MS may report the feedback payload on the assigned CQICH by using the following UEP fast-feedback method. The UEP fast-feedback optional fast DL measurement feedback provides the payload bits carried by the Fast-feedback channel with the unequal error protection (UEP) capability. The UEP fast-feedback optional fast DL measurement feedback repeats each payload bit according to a predefined repetition ratio, as illustrated in Figure 229d. The repeated bit sequence is interleaved and used for binary DPSK modulation on the sub-carriers for the Fast-feedback channel.

... skip ...

When the MS reports the measured S/N, each payload bit is repeated according to the predefined UEP ratio $R_0:R_1:R_2:R_3$, where ....

... skip ...

In case of the 5-bit CQI payload, $R_0:R_1:R_2:R_3:R_4 = 24:18:12:6:6$ and $R_0:R_1:R_2:R_3:R_4 = 17:13:8:5:5$ are used for the 4 by 3 uplink tile structure and the 3 by 3 uplink tile structure, respectively.

... skip ...
The length of the repeated bit sequence is $R = R_0 + R_1 + R_2 + R_3 = N(L-1)$ for the 4-bit CQI or $R = R_0 + R_1 + R_2 + R_3 + R_4 = N(L-1)$ for the 5-bit CQI.

... skip ...

11.8.3.7.9 Uplink control channel support

<table>
<thead>
<tr>
<th>Type</th>
<th>Length</th>
<th>Value</th>
<th>scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>159</td>
<td>1</td>
<td>bit #4: Optional FAST FEEDBACK for the 4-bit payload</td>
<td>SBC-REQ (see 6.3.2.3.23)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SBC-RSP (see 6.3.2.3.24)</td>
</tr>
</tbody>
</table>
Resolution of Group Decision of Group: Accepted-Modified

8.4.5.4.10.9 Optional fast DL measurement feedback

When the UEP fast-feedback is employed and the Fast-feedback allocation subheader Feedback type field is '00' or the BS requests the feedback through CQICH_Alloc_IE() or CQICH_Control_IE(), the MS may report the feedback payload on the assigned CQICH by using the following UEP fast-feedback method. The UEP fast-feedback optional fast DL measurement feedback provides the payload bits carried by the Fast-feedback channel with the unequal error protection (UEP) capability. The UEP fast-feedback optional fast DL measurement feedback repeats each payload bit according to a predefined repetition ratio, as illustrated in Figure 229d. The repeated bit sequence is interleaved and used for binary DPSK modulation on the sub-carriers for the Fast-feedback channel.

... skip ...

When the MS reports the measured S/N, each payload bit is repeated according to the predefined UEP ratio R0:R1:R2:R3, where ....

... skip ...

In case of the 5-bit CQI payload, R0:R1:R2:R3:R4 = 24:18:12:6:6 and R0:R1:R2:R3:R4 = 17:13:8:5:5 are used for the 4 by 3 uplink tile structure and the 3 by 3 uplink tile structure, respectively.

... skip ...

The length of the repeated bit sequence is R = R0+R1+R2+R3 = N(L-1) for the 4-bit CQI or R = R0+R1+R2+R3+R4 = N(L-1) for the 5-bit CQI.

... skip ...

11.8.3.7.9 Uplink control channel support

<table>
<thead>
<tr>
<th>Type</th>
<th>Length</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>159</td>
<td>1</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Re: #1519

PUSC-ASCA permutation accepted in session #34 requires support from the MAC for proper operation.

THE STANDARD IS BROKEN WITHOUT THIS MAC SUPPORT.

Suggested Remedy

Add the following text:

"8.4.5.3.26 PUSC ASCA Allocation

In the DL-MAP, a BS may transmit DIUC=15 with the PUSC_ASCA_IE() to indicate that data is transmitted to a PUSC-ASCA supporting MSS using the PUSC-ASCA permutation.

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Size</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUSC_ASCA_Alloc_IE {</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extended DIUC</td>
<td>4 bits</td>
<td></td>
</tr>
<tr>
<td>Length</td>
<td>4 bits</td>
<td>Length = 0x06</td>
</tr>
<tr>
<td>DIUC</td>
<td>4 bits</td>
<td></td>
</tr>
<tr>
<td>Short Basic CID</td>
<td>12 bits</td>
<td>12 least significant bits of the Basic CID</td>
</tr>
<tr>
<td>OFDMA Symbol offset</td>
<td>8 bits</td>
<td></td>
</tr>
<tr>
<td>Subchannel offset</td>
<td>6 bits</td>
<td></td>
</tr>
<tr>
<td>No. OFDMA Symbols</td>
<td>7 bits</td>
<td></td>
</tr>
<tr>
<td>No. Subchannels</td>
<td>6 bits</td>
<td></td>
</tr>
</tbody>
</table>
|  Repetition Coding Indication | 2 bits| 0b00 - No repetition coding
|                            |      | 0b01 - Repetition coding of 2 used       |
|                            |      | 0b10 - Repetition coding of 4 used       |
|                            |      | 0b11 - Repetition coding of 6 used       |
|  Permutation ID           | 4 bits|                                          |
DIUC used for the burst.

**Short Basic CID**
12 least significant bits of the Basic CID

**OFDMA Symbol offset**
The offset of the OFDMA symbol in which the burst starts, measured in OFDMA symbols from beginning of the downlink frame in which the DL-MAP is transmitted.

**Subchannel offset**
The lowest index OFDMA subchannel used for carrying the burst, starting from subchannel 0.

**No. OFDMA Symbols**
The number of OFDMA symbols that are used (fully or partially) to carry the downlink PHY Burst.

**No. of subchannels**
The number of subchannels with subsequent indexes, used to carry the burst.

**Repetition coding Indication**
Indicates the repetition code used inside the allocated burst.

**Permutation ID**
Identifies the MIMO PUSC permutation used to carry the burst.

---

**8.4.5.3.26 PUSC ASCA Allocation**
In the DL-MAP, a BS may transmit DIUC=15 with the PUSC_ASCA_IE() to indicate that data is transmitted to a PUSC-ASCA supporting MSS using the PUSC-ASCA permutation.

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Size</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUSC_ASCA_Alloc_IE {</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extended DIUC</td>
<td>4</td>
<td>bits</td>
</tr>
<tr>
<td>Length</td>
<td>4</td>
<td>4 bits</td>
</tr>
<tr>
<td>DIUC</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Short Basic CID</td>
<td>12</td>
<td>12 least significant bits of the Basic CID</td>
</tr>
</tbody>
</table>
**DIUC**
DIUC used for the burst.

**Short Basic CID**
12 least significant bits of the Basic CID

**OFDMA Symbol offset**
The offset of the OFDMA symbol in which the burst starts, measured in OFDMA symbols from beginning of the downlink frame in which the DL-MAP is transmitted.

**Subchannel offset**
The lowest index OFDMA subchannel used for carrying the burst, starting from subchannel 0.

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The number of OFDMA symbols that are used (fully or partially) to carry the downlink PHY Burst.

**No. of subchannels**
The number of subchannels with subsequent indexes, used to carry the burst.

**Repetition coding Indication**
Indicates the repetition code used inside the allocated burst.

**Permutation ID**
Identifies the MIMO-PUSC ASCA permutation used to carry the burst.

---

<table>
<thead>
<tr>
<th>Field</th>
<th>Bits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFDMA Symbol offset</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Subchannel offset</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>No. OFDMA Symbols</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>No. Subchannels</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>
| 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  |
| Permutation ID         | 4    |             |
Add the following text:

"8.4.5.3.26 PUSC ASCA Allocation
In the DL-MAP, a BS may transmit DIUC=15 with the PUSC_ASCA_IE() to indicate that data is transmitted to a PUSC-ASCA supporting MSS using the PUSC-ASCA permutation.

<table>
<thead>
<tr>
<th>Syntax</th>
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<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>PUSC_ASCA_Alloc_IE {</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extended DIUC</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Length</td>
<td>4</td>
<td>Length = 0x06</td>
</tr>
<tr>
<td>DIUC</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Short Basic CID</td>
<td>12</td>
<td>12 least significant bits of the Basic CID</td>
</tr>
<tr>
<td>OFDMA Symbol offset</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Subchannel offset</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>No. OFDMA Symbols</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>No. Subchannels</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Repetition Coding Indication</td>
<td>2</td>
<td>0b00 - No repetition coding</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0b01 - Repetition coding of 2 used</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0b10 - Repetition coding of 4 used</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0b11 - Repetition coding of 6 used</td>
</tr>
<tr>
<td>Permutation ID</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

DIUC
DIUC used for the burst.

Short Basic CID
12 least significant bits of the Basic CID

OFDMA Symbol offset

Reason for Group's Decision/Resolution
2005/04/14

Group's Notes
Group's Action Items

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

k) done
The matrix codebooks specified in 8.4.5.4.11 are generated from some simple rules and equations (originally in contribution 05-50). In the current spec, these codebooks are specified numerically in tables that take 30 pages. This not only lengthens the spec to a great degree, but also prevents the implementation benefits from the simple generation rules outlines in contribution 05-50.

Suggested Remedy
Adopt the proposal in contribution C80216-05_50r7.

Proposed Resolution
Adopt remedy 1 (replace tables with text), retain 3 tables as informative examples

Reason for Recommendation

Resolution of Group
Acceptance of Group: Accepted-Modified

Vote: 46-9
Adopt remedy 1 (replace tables with text), retain 3 tables as informative examples

Editor's Notes
Substantial changes were made to this section, and this comment was inadvertently not implemented. It is the editor's intent to correct this in the next draft.

Editor's Action Items
h) defer to next round
The matrix codebooks specified in 8.4.5.4.11 only allow 3-bit and 6-bit codebooks. However, with a large antenna configuration a 9-bit can bring the performance much closer to the optimal solution. Since both 3-bit and 6-bit CQICHs are already available in the spec 8.4.5.4.15 table 302a, it is possible to combine a 3-bit and a 6-bit CQICH to allow a 9-bit payload.

Suggested Remedy
Adopt the proposal in contribution C80216-05_104r2

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Rejected

Reason for Group’s Decision/Resolution
Out of scope of the recirc. Adds new capability and new material.

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
I object to the resolution of session #35 because accepted comment 2192 from DB 80216-05_001r2 was not applied correctly to D6.

Comment 2192 in 80216-05_001r2 was submitted and accepted modified group resolution was

Incorporate changes documented in IEEE C802.16e-05/022r1 with the following changes:

8.4.5.4.x: "a UIUC value of delete(15)11" : read 11
8.4.5.3.x: "delete(15)14" :read14
8.4.5.3.1: delete(UIUC)DIUC

In 8.4.5.3.2.1 the text was changed erroneously to "A DL-MAP IE entry with DIUC value of 15"

Suggested Remedy
change the text in 8.4.5.3.2.1 to "A DL-MAP IE entry with DIUC value of 15"
Insert a new section 8.4.5.4.10.11:

8.4.5.4.10.11 Indication Flag Feedback

For an MS which supports the feedback method using the Feedback header, the MS can send an indication flag on the Fast-feedback channel or the enhanced Fast-feedback channel. The indication flag is a specific encoding of the payload bits on the Fast-feedback channel or the enhanced Fast-feedback channel. The indication flag is used by the MS to indicate to the BS its intention to transmit a Feedback header or a Bandwidth Request header without the need to perform bandwidth request ranging. After receiving the indication flag from the MS, the BS may allocate the required UL resource to the MS.

For the case of Fast-feedback channel, if the Indication Flag feedback operation is enabled, the specific encoding of the payload bits is defined in the Use CQICH indication flag TLV. This specific encoding is reserved for the purpose of indication flag and shall not be used to send other feedback information (see section 8.4.5.4.10.1).

For the case of enhanced Fast-feedback channel, the encoding of 0b111100 shall be used as the indication flag.

Remove line 32-35, in Page 274.

Proposed Resolution Recommendation: Accepted Recommendation by

Insert a new section 8.4.5.4.10.11:

8.4.5.4.10.11 Indication Flag Feedback

For an MS which supports the feedback method using the Feedback header, the MS can send an indication flag on the Fast-feedback channel or the enhanced Fast-feedback channel. The indication flag is a specific encoding of the payload bits on the Fast-feedback channel or the enhanced Fast-feedback channel. The indication flag is used by the MS to indicate to the BS its intention to transmit a Feedback header or a Bandwidth Request header without the need to perform bandwidth request ranging. After receiving the indication flag from the MS, the BS may allocate the required UL resource to the MS.

For the case of Fast-feedback channel, if the Indication Flag feedback operation is enabled, the specific encoding of the payload bits is defined in the Use CQICH indication flag TLV. This specific encoding is reserved for the purpose of indication flag and shall not be used to send other feedback information (see section 8.4.5.4.10.1).

For the case of enhanced Fast-feedback channel, the encoding of 0b111100 shall be used as the indication flag.
Insert a new section 8.4.5.4.10.11:

8.4.5.4.10.11 Indication Flag Feedback

For an MS which supports the feedback method using the Feedback header, the MS can send an indication flag on the Fast-feedback channel or the enhanced Fast-feedback channel. The indication flag is a specific encoding of the payload bits on the Fast-feedback channel or the enhanced Fast-feedback channel. The indication flag is used by the MS to indicate to the BS its intention to transmit a Feedback header or a Bandwidth Request header without the need to perform bandwidth request ranging. After receiving the indication flag from the MS, the BS may allocate the required UL resource to the MS.

For the case of Fast-feedback channel, if the Indication Flag feedback operation is enabled, the specific encoding of the payload bits is defined in the Use CQICH indication flag TLV. This specific encoding is reserved for the purpose of indication flag and shall not be used to send other feedback information (see section 8.4.5.4.10.1).

For the case of enhanced Fast-feedback channel, the encoding of 0b111100 shall be used as the indication flag.

Remove line 32-35, in Page 274.
MIMO transmission can greatly increase the capacity of the system especially when combined with receivers implementing successive cancellation. However, the decoded BER performance of successive cancellation receivers is limited by the performance of the stream with the highest mean squared error. The decoded BER performance of a successive cancellation receiver can be greatly improved by applying a different power weighting to each MIMO stream in a frequency-selective communications channel. Moreover, it is possible to further simplify the receiver by predetermining the successive cancellation decoding order. Unequal power weighting on MIMO streams can provide a 5.0 dB improvement in frequency-selective channels over MIMO with equal power on each stream.

Per-stream power weighting was adopted into the standard as part of the Closed-Loop MIMO framework (Contribution 04/552r7). Table 302a of the D6 draft provides the ability to feedback per-stream power control values (Feedback type = 101). However, the specification text for enabling the use of per-stream power control is missing from the D6 draft.

**Suggested Remedy**

Adopt Contribution IEEE C802.16e-05/142

**Proposed Resolution**

Recommendation: **Accepted-Modified**

Adopt Contribution IEEE C802.16e-05/142 remedy 1.

**Reason for Recommendation**

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

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

Vote: **10-15**

Simulation results for this specific remedy were not provided.

**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**
I object to the text change on D6 and resolution of Comment #1226 in relation to the Indication Flag feedback, since more clarification text is required to ensure consistency in the text.

**Suggested Remedy**

Page 271, line 60, modify '... nibble calculation based on Eq. 107 is M. See section 8.4.5.4.10.11 for description of the usage of the indication flag.'

Page 274, line 35, modify "... nibble calculation based on the above equations is M. See section 8.4.5.4.10.11 for description of the usage of the indication flag."

Insert a new section 8.4.5.4.10.11:

8.4.5.4.10.11 Indication Flag Feedback

For an MS which supports the feedback method using the Feedback header, and if the Use CQICH indication flag TLV is included in the UCD, the MS can send an indication flag on the Fast-feedback channel or the enhanced Fast-feedback channel. The indication flag is a specific encoding of the payload bits (defined in the Use CQICH indication flag TLV) on the Fast-feedback channel or the enhanced Fast-feedback channel. The indication flag is used by the MS to indicate to the BS its intention to transmit a Feedback header or a Bandwidth Request header without the need to perform bandwidth request ranging. After receiving the indication flag from the MS, the BS may allocate the required UL resource to the MS.

The specific encoding of the payload bits as defined in the Use CQICH indication flag TLV is reserved for the purpose of indication flag and shall not be used to send other feedback information (see section 8.4.5.4.10.1 and section 8.4.5.4.10.5). If the indication flag is sent on the enhanced Fast-feedback channel, the MSB of the payload bits shall be set to 0.

**Proposed Resolution**

Resolution of Group: **Superceded**

See comment 3371

**Reason for Recommendation**

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

I) none needed
The standard contains about 50 A4 pages of MIMO code-book tables. Specifying specific code-books seems paper-consuming, memory-consuming, as well as limits future improvements.

Suggested Remedy

consider to add a generic signalling scheme for sending arbitrary code-book formats to the MS, instead of listing so many specific code-book tables.

Proposed Resolution

Resolution of Group: Rejected

Reason for Group’s Decision/Resolution

No specific text provided.
Section 8.4.5.4 has been changed due to comment #1445 in the sponsor ballot, especially a new section 8.4.5.4.11 MIMO feedback for transmit beamforming has been introduced. The new section contains a codebook optimized for closed loop MIMO operation with spatial multiplexing (STC Matrix C) but lacks a codebook for closed loop MIMO operation with STC matrix A or B with antenna grouping.

Suggested Remedy
Adopt the codebook for closed loop MIMO with STC matrix A and B with antenna grouping which is described in contribution C80216e-05/098

Proposed Resolution Recommendation: Recommendation by

Resolution of Group Decision of Group: Rejected

Vote: 44-21
Can't be done using the current MAP.
Increases overhead.

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
I object to the changes incorporated into D6 as to being the correct resolution of comment #1445. Part of the resolution of comment #1445 was to incorporate the changes contained in contribution C802.16e-04/552r7 with certain text to be converted to tables and provided to the editor. The tables that were provided to the editor contained additional technical material that was not approved by the ballot resolution committee and should not be included in the draft standard. The specific material is enumerated below in the suggested remedy.

Suggested Remedy

Since this text was never approved by the ballot resolution committee and needs to be voted on, it is proposed to accept the following text, which is already contained in the D6 draft.

Should this text not be accepted by the ballot resolution committee, the chair intends to rule, as a procedural matter, that it be deleted from the draft, since it never supposed to be in there in the first place.

The text proposed for acceptance:

Pg 282, lines 48-56
Pg 283, lines 26-31, table 298j
Pg 284, lines 17-24, table 298k
Pg 285, lines 10-17, table 298l
Pg 286, lines 19-29, table 298n
Pg 287, lines 30-38, table 298o
Pg 288, lines 38-47, table 298p
Pg 290, lines 44-51, table 298r
Pg 294, lines 31-36, table 298s
Pg 297, lines 27-35, table 298u
Pg 301, lines 18-28, table 298w
Pg 306, lines 56-63, table 298x
Pg 314, lines 16-26, table 298z
Pg 319, lines 56-63, table 298aa
Pg 327, lines 14-24, table 298ac
Pg 334, lines 42-50, table 298ad

Proposed Resolution Recommendation: Rejected

Reason for Recommendation

Resolution of Group Decision of Group: Rejected
Vote: 19-29
Since this material currently exists in the text but was not accepted by the group, the Chair ruled procedurally to remove that material.

Editor is to remove the following text:
Pg 282, lines 48-56
Pg 283, lines 26-31, table 298j
Pg 284, lines 17-24, table 298k
Pg 285, lines 10-17, table 298l
Pg 286, lines 19-29, table 298n
Pg 287, lines 30-38, table 298o
Pg 288, lines 38-47, table 298p
Pg 290, lines 44-51, table 298r
Pg 294, lines 31-36, table298s
Pg 297, lines 27-35, table 298u
Pg 301, lines 18-28, table 298w
Pg 306, lines 56-63, table 298x
Pg 314, lines 16-26, table 298z
Pg 319, lines 56-63, table 298aa
Pg 327, lines 14-24, table 298ac
Pg 334, lines 42-50, table 298ad

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions

Editor's Questions and Concerns

Editor's Action Items
I object the implementation of comment #1445. The contribution 552r7 was accepted during the last meeting as the remedy for this comment. R-Matrix related text were not in the contribution 552r7, which were accidently included in the .D6 draft. These text should be removed.

Suggested Remedy

Remove the R-Matrix from Table 289j-ad.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted-Duplicate

See comment 3376 (marked rejected)

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes Editor’s Actions 1) none needed

Editor’s Questions and Concerns

Editor’s Action Items
I object the implementation of comment #1445. The code book should be in binary format.

Suggested Remedy
Change code book (or w) to binary format.

Proposed Resolution  Recommendation: Accepted  Recommendation by

In tables 298j-p, replace as follows:
w1 -> 0b000
w2 -> 0b001
... w8 -> 0b111

In tables 298q-ac, replace as follows:
w1 -> 0b0000
w2 -> 0b0001
w3 -> 0b0010
... w64 -> 0b1111

Reason for Recommendation

Resolution of Group  Decision of Group: Accepted

In tables 298j-p, replace as follows:
w1 -> 0b000
w2 -> 0b001
... w8 -> 0b111

In tables 298q-ac, replace as follows:
w1 -> 0b0000
w2 -> 0b0001
w3 -> 0b0010
... w64 -> 0b1111

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items
The contribution 552r7 was accepted during the last meeting with the instruction to replace formula by the tables. There are some additional texts which are mistakenly put in the text, specifically, the R-Matrix. These texts should be removed.

Suggested Remedy
Remove the following text between 46-56 on page 282.

Remove lines 26-31 in Table 298j on page 282
Remove lines 17-24 in Table 298k on page 284
Remove lines 10-17 in Table 298l on page 285
Remove Table 298n
Remove lines 30-38 in Table 298o on page 287
Remove lines 39-47 in Table 298p on page 288
Remove Table 298r on page 290
Remove lines 32-36 in Table 298s on page 294
Remove Table 298u on page 297
Remove Table 298w on page 301
Remove lines 56-63 in Table 298x on page 306
Remove Table 298z on page 314
Remove lines 57-63 in Table 298aa on page 319
Remove Table 298ac on page 327
Remove lines 42-50 in Table 298ad on page 334

Proposed Resolution
Recommendation: Accepted-Duplicate

Reason for Recommendation

Resolution of Group: Accepted-Duplicate
See comment 3376

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes
Editor's Actions k) done
I object the implementation of comment #1445. The code book should be in a implementable binary format.

Suggested Remedy

Change code book (or w) to binary format.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Superceded

See comment 3278

Reason for Group's Decision/Resolution

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
In the current standard, a codebook based CL-MIMO scheme is considered for better link performance. But, this CL-MIMO has a power imbalance problem since some antennae are switched off for special cases (when the number of TX antennae is larger than the number of streams). In this contribution, we propose a rotation matrix \( R \) for the codebook based CL-MIMO scheme for solving the power imbalance problem.

Suggested Remedy
Adopt the changes proposed in C802.16e-05/176

Proposed Resolution Recommendation by
Adopt the changes proposed in C802.16e-05/176

Reason for Recommendation

Resolution of Group Decision of Group: Rejected

Reason for Group’s Decision/Resolution
Vote: 2-20
The probability of power imbalance is too small to justify this change.

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
I object to the resolution of session #35 because accepted comment 2194 from DB 80216-05_001r2 was not applied correctly to D6.

Comment 2194 was submitted in 80216-05_001r2 and accepted modified. Group resolution was to apply contributions in files 05_023r5.pdf and C80216e-05_038r1.pdf. The following problems/errors in application of the changes to D6:

Section 8.4.5.3.21.2 "Reduced CID IE". Contribution asked to Copy contents of section 6.3.2.3.43 (Reduced CID) renumber tables and figures accordingly. These changes do not appear in D6.

Section 3.1.5.2 in 23r5 was not applied in D6.
Section 8.4.5.3.10 Table 285 (table 283 in contribution) value DIUC should have no Note.
Section 11.8.3.7.12 Type in table is 162. Should be 159 according to contribution.

in 0381r1
No changes from C80216e-05_038r1.pdf have been applied.

Suggested Remedy
Section 8.4.5.3.21.2 "Reduced CID IE". Contribution asked to Copy contents of section 6.3.2.3.43 (Reduced CID) renumber tables and figures accordingly. These changes do not appear in D6.

Apply changes from Section 3.1.5.2 in 023r5.pdf
Remove note from value of DIUC in Section 8.4.5.3.10 Table 285
In Section 11.8.3.7.12 Type in table is 162. change it to 159

adopt all changes from C80216e-05_038r1.pdf

Proposed Resolution
Resolution of Group: Superceded
See comment 3336

Reason for Group’s Decision/Resolution
<table>
<thead>
<tr>
<th>Group’s Notes</th>
<th>Editor’s Notes</th>
<th>Editor’s Actions</th>
<th>Editor’s Questions and Concerns</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>none needed</td>
<td></td>
</tr>
</tbody>
</table>

Editor’s Action Items
Packet Classification Action

The proposal is to define a new classifier TLV which defines an action associate with a Classifier rule. In particular the proposal defines a new drop action to be used by the MSS and or by the BS to identified and discard specific types of SDUs.

Suggested Remedy

[Add the following to the end of section 11.13.19.3.4]

11.13.19.3.4.xx Classifier Action Rule

The value of this field specifies an action associate with the classifier rule. If this classification action rule exists, its action shall be applied on the packets that match this classifier rule.

<table>
<thead>
<tr>
<th>type</th>
<th>length</th>
<th>value</th>
</tr>
</thead>
<tbody>
<tr>
<td>[145/146],cst.3.xx</td>
<td>1</td>
<td>see below</td>
</tr>
</tbody>
</table>

bit 0:
0 = none.
1 = Discard packet

bit 1-7:
Reserved.

Proposed Resolution Recommendation: Accepted

[Add the following to the end of section 11.13.19.3.4]

11.13.19.3.4.xx Classifier Action Rule

The value of this field specifies an action associate with the classifier rule. If this classification action rule exists, its action shall be applied on the packets that match this classifier rule.

<table>
<thead>
<tr>
<th>type</th>
<th>length</th>
<th>value</th>
</tr>
</thead>
<tbody>
<tr>
<td>[145/146],cst.3.xx</td>
<td>1</td>
<td>see below</td>
</tr>
</tbody>
</table>
bit 0:
0 = none.
1 = Discard packet

bit 1-7:
Reserved.

Reason for Recommendation

Resolution of Group | Decision of Group: Accepted

[Add the following to the end of section 11.13.19.3.4]

11.13.19.3.4.xx Classifier Action Rule
The value of this field specifies an action associate with the classifier rule.
If this classification action rule exists, its action shell be applied on the packets that match this classifier rule.

<table>
<thead>
<tr>
<th>type</th>
<th>value</th>
</tr>
</thead>
<tbody>
<tr>
<td>[145/146].cst.3.xx</td>
<td>see below</td>
</tr>
</tbody>
</table>

bit 0:
0 = none.
1 = Discard packet

bit 1-7:
Reserved.

Reason for Group’s Decision/Resolution

Group’s Notes
Group’s Action Items

Editor’s Notes
Editor’s Questions and Concerns
Editor’s Action Items

k) done
"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: Accepted-Modified Recommendation by
Remove Figure C6 through Figure C12, Figure C18, Figure C19.

Reason for Recommendation
Resolution of Group: Accepted-Modified
Decision of Group: Accepted-Modified
Remove Figure C6 through Figure C12, Figure C18, Figure C19.

Reason for Group's Decision/Resolution
Group's Notes
Group's Action Items
Refer these figures over to 802.16g

Editor's Notes
Editor's Actions k) done
Editor's Questions and Concerns

Editor's Action Items
The MSC references 2 commands, I-am-host-of and MS-info-req, that do not appear in this document or in 802.16-2001. 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: Accepted Recommendation by

Remove Figure C20

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

Remove Figure C20

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Refer these figures over to 802.16g

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
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 average post processing S/R. 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

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 average post processing S/R. 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
Move the section to the section 8.4.5.4.15 and make the following editorial changes.

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 ‘000-010’, MS shall report the average post processing S/R. For \( CQICH\_Num>0 \) and feedback type is ‘000-010’, MS shall report post processing SNR of individual layers, the order of CQICH channel allocation shall match the order of layer index.

Resolution of Group: **Superceded**

See comment 3361
CQICH-related control elements should specify on which zone CINR should be reported, since CINR measurements are very much dependent on the zone type (for example whether it is reuse-1, reuse-3, etc.)

Suggested Remedy

Adopt contribution 802.16e-05/150 ("Corrections to CINR feedback through CQI Channels")

Reason for Recommendation

Technically incomplete.
Ran Yaniv requested this be rejected as technically incomplete.

Reason for Group’s Decision/Resolution

Rejected

Editor's Notes

none needed

Editor's Action Items
The filed CQICH Type is not clearly defined.

**Suggested Remedy**

Clarify the CQICH Type, for example, the definition of DIUC-CQI.

**Proposed Resolution**

Add definition: "A DIUC-CQI is a CQI channel that uses a modulation and coding level derived from the DIUC."

**Reason for Recommendation**

Add definition: "A DIUC-CQI is a CQI channel that uses a modulation and coding level derived from the DIUC."

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

Group Notes

**Editor’s Notes**

**Editor’s Action Items**
Change SS to MS on line 28 and 30.

SS should be changed to MS.

Suggested Remedy
Change SS to MS on line 28 and 30.

Proposed Resolution
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

Resolution of Group
Decision of Group: Accepted-Modified

Reason for Recommendation
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

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions 1) none needed
duplicate

Editor’s Questions and Concerns

Editor’s Action Items
There are multiple problems in the current extended UIUC assignment for OFDMA, e.g., Extended UIUC 0x09 has been tribble-used by both CQICH enhanced UL-MAP IE, the HO Anchor active UL-MAP IE, and HO active anchor IE.

Suggested Remedy

make the following changes:
1. page 339, line 36, change "0x09" to "0x0a"
2. page 340, line 15, change "0x09" to "0x0b"
3. page 341, line 11, change "0x??" to "0x0c"
4. page 342, line 20, change "0x06" to "0x0d"
5. page 344, line 8, change "0x03" to "0x0e"

Proposed Resolution

Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group

Decision of Group: Superceded

See comment #3316

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
I object to the implementation of comment #1202 and #2219 because it needs to allocate extended UIUC number of MIMO_UL_Enhanced_IE.

Suggested Remedy
Insert the number of extended UIUC in Table 302g - MIMO UL Enhanced IE format as below format.

<table>
<thead>
<tr>
<th>Extended UIUC</th>
<th>4 bits</th>
<th>Enhanced MIMO</th>
</tr>
</thead>
<tbody>
<tr>
<td>0x0A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Proposed Resolution: Recommendation

Resolution of Group: Superceded

See comment #3316

Reason for Recommendation

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
There are several reserved fields in message of 3, 40, 1, and 20 bits in length.

Suggested Remedy
Remove all the reserved fields except the last one to reduce IE size.

Proposed Resolution
Recommendation: Remove all the reserved fields except the last one to reduce IE size.

Reason for Recommendation

Resolution of Group: Rejected

Reason for Group’s Decision/Resolution
The reserved bits are included for alignment within the structure.

Editor’s Notes

Editor’s Questions and Concerns

Editor’s Action Items
1) none needed
the UIUC in the OFDMA Fast_Ranging_IE() shall not be 0, 11, or 15.

Suggested Remedy
change "UIUC<>15" to "UIUC<>0, 11, or 15"

Proposed Resolution Recommendation: Accepted
change "UIUC<>15" to "UIUC<>0, 11, or 15"

Reason for Recommendation
Resolution of Group Decision of Group: Accepted
change "UIUC<>15" to "UIUC<>0, 11, or 15"

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
The Fast Ranging IE() allocates a unicast UL allocation for an MS to perform initial ranging/HO ranging. The size of the allocation is determined by the ranging method parameter. In the current spec, both ranging method and explicit size parameters, i.e., number of subchannels and number of symbols are present. There are at least two issues with it:
1. need extra cautions to make sure those two description agree with each other;
2. wast bandwidth by sending redundant info.

**Suggested Remedy**
remove the two parameters: No. OFDMA symbols and No. Subchannels, i.e., line 52 to line 54 on page 342
For the allocation given by the "else" branch, the allocation starting point parameters, OFDMA symbol offset and subchannel offset, are missing.

Suggested Remedy

insert the following two rows in Table 302h before the duration row in line 2 page 343:

<table>
<thead>
<tr>
<th>OFDMA Symbol offset</th>
<th>8 bits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subchannel offset</td>
<td>7 bits</td>
</tr>
</tbody>
</table>

Proposed Resolution Recommendation: Accepted

insert the following two rows in Table 302h before the duration row in line 2 page 343:

<table>
<thead>
<tr>
<th>OFDMA Symbol offset</th>
<th>8 bits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subchannel offset</td>
<td>7 bits</td>
</tr>
</tbody>
</table>

Reason for Recommendation

Decision of Group: Withdrawn

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions

Editor's Questions and Concerns

Editor's Action Items
The one parameter, Duration, OFDMA allocation is problematic, because the duration in slots is not a deterministic two-dimensional allocation. For the same number of slots, there are many different ways in a two-dimensional domain.

Suggested Remedy
replace the "duration" row in Table 302h, i.e., line 2 on page 343 by the following two rows:

<table>
<thead>
<tr>
<th>No. OFDMA symbols</th>
<th>7 bits</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. subchannels</td>
<td>7 bits</td>
</tr>
</tbody>
</table>

Proposed Resolution Recommendation: Accepted
replace the "duration" row in Table 302h, i.e., line 2 on page 343 by the following two rows:

<table>
<thead>
<tr>
<th>No. OFDMA symbols</th>
<th>7 bits</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. subchannels</td>
<td>7 bits</td>
</tr>
</tbody>
</table>

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 I) none needed

Editor's Questions and Concerns

Editor's Action Items
The Fast_Ranging_IE does not include an absolute slot offset for allocations in an AAS zone.

Insert the following three rows into Table 302h following the "Repetition Coding Indication" field:

|+-------------------------+--------+-------------------------+| if {AAS or AMC UL Zone |
|AAS/AMC Allocations      ||        |                         |||include absolute slot  |
|offset                   ||        |                         ||+-------------------------+|

Slot offset        |12 bits |Offset from start of the |||AAS or AMC |
zone for this |||allocation, specified in |||    |
|slots.             ||        |                         ||+-------------------------+|

Proposed Resolution Recommendation: Accepted

Insert the following three rows into Table 302h following the "Repetition Coding Indication" field:

|+-------------------------+--------+-------------------------+| if {AAS or AMC UL Zone |
|AAS/AMC Allocations      ||        |                         |||include absolute slot  |
|offset                   ||        |                         ||+-------------------------+|

Slot offset        |12 bits |Offset from start of the |||AAS or AMC |
zone for this |||allocation, specified in |||    |
|slots.             ||        |                         ||+-------------------------+|

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

Insert the following three rows into Table 302h following the "Repetition Coding Indication" field:

|+-------------------------+--------+-------------------------+| if {AAS or AMC UL Zone |
|AAS/AMC Allocations      ||        |                         |||include absolute slot  |
|offset                   ||        |                         ||+-------------------------+|

Slot offset        |12 bits |Offset from start of the |||AAS or AMC |
zone for this |||allocation, specified in |||    |
|slots.             ||        |                         ||+-------------------------+|

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items
I think it is a little unclear what exactly goes in each table cell. Please re-submit in a readable format.

Suggested Remedy
Change to "subchannels"

Proposed Resolution
Recommendation: Change to "subchannels"

Decision of Group: Accepted

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

c) instructions unclear

Editor's Questions and Concerns

Editor's Action Items

Editor's Action Items

k) done
### Suggested Remedy
Discuss and Adopt C802.16e-05_112

### Proposed Resolution

**Recommendation:** Accepted

**Recommendation by:**

Adopt C802.16e-05_112

### Reason for Recommendation

**Resolution of Group**

Decision of Group: Accepted

Adopt C802.16e-05_112

### Reason for Group's Decision/Resolution

**Group's Notes**

**Group's Action Items**

**Editor's Notes**

Editor's Actions: k) done

**Editor's Action Items**

**Group should take a look at Table 302j. It was changed a few times by different comments.**
The period field should be 3-bits as in most other similar IEs.

Suggested Remedy
Change Period to 3-bits from 2-bits.
The Dedicated UL Control IE is optionally included twice for every Sub-burst -- the first thing within the "for" loop and again after the RCID_IE() in every Sub-burst IE format.

**Suggested Remedy**

Eliminate 4 lines in Table 302I after the beginning of the For loop (line #48) to the "If (Mode == 000) {" (Line #53).

**Proposed Resolution**

Proposed Resolution: Recommendation: Recommendation by

**Reason for Recommendation**

**Resolution of Group**

Decision of Group: Superceded

See comment 3336

**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**
The length of 8-bit is too long for extended-2 IE. 4-bit shall be enough, the same as the original extended IE. With 4 bits, you can have 15 bytes, i.e., 120 bits. It is a lot. So far, no extended IEs need more than 120 bit data. More importantly, we will try to shorten the MAP IE as much as possible for a better efficiency.

Also, the two sections 8.4.5.4.4 and 8.4.5.4.24 are almost the same contents. They shall be combined.

Suggested Remedy
1. change 8 to 4 in line 17, page 347,
2. change 8 to 4 in line 13, page 348
3. combine sections 8.4.5.4.4 and 8.4.5.4.24 as suggested in the contribution C802.16e-05_161.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Superceded

See comment #3316

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
For the extended UL-MAP IEs with UIUC=4, let’s use the term "Extended-2" consistently.

Multiple extended-2 UL-MAP IEs, e.g., HARQ ACKCH region IE, do not have extended-2 UIUC code.

Suggested Remedy
1. line 11 page 348, change Extended to Extended-2
2. line 33 page 352, change “ACHCH” to “ACKCH”
3. line 40 page 352, change Extended to Extended-2
4. line 40 page 352, add "set to 0x02" in the notes box
3. line 24 page 353, change Extended to Extended-2
4. line 24 page 353, add "set to 0x03" in the notes box
The dedicated control indicator appears both before the sub-burst IEs as well as inside the sub-burst IEs. This could create confusion/conflicts or unnecessary duplication of the dedicated control information.

**Suggested Remedy**

Keep the dedicated control indicator in the sub-burst IEs but remove it from the parent HARQ UL_MAP_IE. This means delete lines 48-51 from Table 302l.

**Proposed Resolution**

Recommendation:

Reason for Recommendation

Decision of Group: **Superceded**

See comment 3336

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
AI_SN field has incorrect size

Suggested Remedy
Change AI_SN field size from "4 bit" to "1 bit"

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Superceded

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions 1) none needed

Editor's Questions and Concerns

Editor's Action Items
There should be a "ACK disable" field preceding the ACID field to enable HARQ-IR allocations with Nep/Nsch block sizes for voice/video (non-ACK) traffic. This is to complete the UL part of the specification for similar DL Map format specified in Table 285o.

**Suggested Remedy**

Insert "ACK disable" field with "1 bit" size before the SPID field.

**Proposed Resolution**  
Recommended by

**Reason for Recommendation**

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

See comment 3336

**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**
Suggested Remedy
Remove it or define it.

If remove it, the following changes are needed:
1. remove line 31 to line 60 on page 351
2. remove line 5 to line 10 on page 351
3. remove line 45 on page 350
4. remove line 13 to line 18 on page 350
5. remove line 38 to line 43 on page 349
6. remove line 46 to line 53 on page 348

The dedicated control IE defined in section 8.4.5.4.25.1 does not have any control information defined. It is actually empty.
The dedicated control IE for the uplink is currently empty. It needs to be revised to provide at least the same functionality as already defined for the downlink.

Suggested Remedy
Replace the content of section 8.4.5.4.25.1 (Dedicated UL control IE) with the content of section 8.4.5.3.21 (Dedicated DL control IE), but replace "DL" with "UL" and make the table number 302p.

Proposed Resolution: Replace the content of section 8.4.5.4.25.1 (Dedicated UL control IE) with the content of section 8.4.5.3.21 (Dedicated DL control IE), but replace "DL" with "UL" and make the table number 302p.

Resolution of Group: Superceded
See comment 3336

Editor's Notes
1) none needed
Discuss and Adopt C80216e-05_116

Suggested Remedy
Discuss and Adopt C80216e-05_116

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Superceded

See comment 3336

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
For the Compressed DL-MAP with appended Compressed UL-MAP, it is implied by 802.16-2004 (8.4.5.6.1) that the DL portion of the compressed map is padded to a byte boundary before the UL portion is appended. This detail is no longer clear in the Compressed DL-MAP message format defined in REVe/D6.

Suggested Remedy
Insert "If (UL-MAP appended == 1) { Compressed_UL-MAP()}
" before "CRC"

Reason for Recommendation
Resolution of Group: Accepted
Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes
Editor's Action Items
k) done

Editor's Questions and Concerns

Editor's Action Items
Modify the second reserved field in table 305, page 354, line 36, as follows:

reserved **Compressed map type** 1 bit shall be set to 0

---

The "Reduced AAS-private DL-MAP message" (8.4.5.8.1) can not be distinguished from the "Compressed DL-MAP" (8.4.5.6.1). Both messages begin with the same 5 bits.

Use the second reserved field to differentiate between the two messages.

---

**Proposed Resolution**

Modify the **second** reserved field in table 305, page 354, line 36, as follows:

reserved **Compressed map type** 1 bit shall be set to 0

---

**Reason for Recommendation**

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

Modify the **second** reserved field in table 305, page 354, line 36, as follows:

reserved **Compressed map type** 1 bit shall be set to 0

---

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

---

**Editor’s Notes**

k) done
Similar changes were put into corrigendum group about the CRC field in OFDMA compressed MAP message. However, corrigendum say this reserved bit shall be set to 0, while TGe says it shall be set to 1. Why not the same value?

**Suggested Remedy**
1. line 36, page 354, change "shalle be set to 1" to "shall be set to 0"
2. line 5, page 355, change "1" to "0"

**Proposed Resolution**
Recommendation by
1. line 36, page 354, change "shalle be set to 1" to "shall be set to 0"
2. line 5, page 355, change "1" to "0"

**Editor's Actions**
k) done
CRC is now a fixed field in the compressed MAP and it shall covers compressed UL-MAP if present. So, the compressed UL-MAP shall be located before the CRC in Table 305.

Suggested Remedy
insert the following rows before the CRC field in Table 305:

if (UL-MAP appended ==1)
{
    Compressed UL-MAP message variable
}

Proposed Resolution Recommendation: Accepted

insert the following rows before the CRC field in Table 305:

if (UL-MAP appended ==1)
{
    Compressed UL-MAP message variable
}

Reason for Recommendation
Resolution of Group Decision of Group: Accepted

insert the following rows before the CRC field in Table 305:

if (UL-MAP appended ==1)
{
    Compressed UL-MAP message variable
}

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

Editor's Notes Editor's Actions k) done
Editor's Questions and Concerns
Editor's Action Items
The C80216e-05/071r3 was adopted at Session 35 but not implemented P802.16e/D6. (Comment #2241 in 80216-05-001r2 data base)

Suggested Remedy
Incorporate the changes suggested in C80216e-05/071r3.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Superceded

See 3416

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions

Editor's Action Items

Editor's Questions and Concerns
contribution 802.16e-05/071r3 was accepted in session #35 but was not incorporated into 802.16e/D6

Suggested Remedy

Adopt contribution 802.16e-05/71r3 ("Clarification of H-ARQ Operation with Reduced AAS Private Map")

Proposed Resolution Recommendation: Accepted

Adopt contribution 802.16e-05/71r3 ("Clarification of H-ARQ Operation with Reduced AAS Private Map")

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

Adopt contribution 802.16e-05/71r3 ("Clarification of H-ARQ Operation with Reduced AAS Private Map")

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes Editor’s Actions  b) awaiting missing input

Did not find the contribution in time to implement it. Defer to next round.

Editor’s Questions and Concerns

Editor’s Action Items
Inconsistencies between the definition of reduced private maps and other aspects of the specification exist. In addition, recent changes to the definition of reduced private maps introduced errors.

Suggested Remedy
Adopt the changes defined in contribution C80216e-05_096r2

Proposed Resolution Recommendation: Accepted
Adopt the changes defined in contribution C80216e-05_096

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Adopt the changes defined in contribution C80216e-05_096r2

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions h) defer to next round
These tables have been changed so extensively by different comments, someone needs to sit down and figure out what the tables should look like.

Editor’s Questions and Concerns

Editor’s Action Items
The notes for the fields 'Permutation' and 'Preamble indication' are erroneous: permutation field should specify UL and not DL permutations.

Suggested Remedy

Change note for 'permutation' field, page 359, line 53:

0b01 = FUSC Optional PUSC permutation

Change note for 'preamble indication' field, page 359, line 60:

0b00 = 0 symbols
0b01 = 1 symbol FUSC permutation
0b10 = 2 symbols AMC permutation
0b11 = 3 symbols Reserved

Proposed Resolution

Resolution of Group: Accepted

Change note for 'permutation' field, page 359, line 53:

0b01 = FUSC Optional PUSC permutation

Change note for 'preamble indication' field, page 359, line 60:

0b00 = 0 symbols
0b01 = 1 symbol FUSC permutation
0b10 = 2 symbols AMC permutation
0b11 = 3 symbols 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: P802.16e/D6

Ballot Number: 0001010

Comment # 3419

Comment submitted by: Samuel Kang

Other

2005/03/09

Comment Date

Starting Page # 362

Starting Line # 26

Fig/Table#

8.4.6.1.1

Section

'Stable 307b' in line number 26, 'Table 307c' in line number 32, and 'Table 307b' in line number 38 are incorrect

Suggested Remedy

Correct 'Table 307b' in line 26 to 'Table 309a', 'Table 307c' to 'Table 309b', 'Table 307b' in line 38 to 'Table 309c'

Proposed Resolution

Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group: Accepted

Decision of Group: Accepted

Correct 'Table 307b' in line 26 to 'Table 309a', 'Table 307c' to 'Table 309b', 'Table 307b' in line 38 to 'Table 309c'

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions

k) done

Editor's Questions and Concerns

Editor's Action Items
I object to that the standard can only allow the Common SYNC symbol to be transmitted in every fourth downlink frame. It may introduce too much overhead for system of short frames and my not be frequent enough for system of long frames.

Suggested Remedy

Adopt the resolution text in contribution IEEE C802.16e-05/128 or the latest version.

Reason for Recommendation

Resolution of Group: Rejected

Reason for Group’s Decision/Resolution

Out of scope of the recirc.

Editor’s Notes

1) none needed
<table>
<thead>
<tr>
<th>Comment #</th>
<th>3421</th>
<th>Comment submitted by</th>
<th>Aik Chindapol Member</th>
</tr>
</thead>
</table>

**Comment**

<table>
<thead>
<tr>
<th>Type</th>
<th>Editorial</th>
</tr>
</thead>
</table>

**Suggested Remedy**

```
change to "1024/512/128"
```

**Fig/Table#**

<table>
<thead>
<tr>
<th>Section</th>
<th>8.4.6.1.1</th>
</tr>
</thead>
</table>

**Proposed Resolution**

**Recommendation by**

<table>
<thead>
<tr>
<th>Reason for Recommendation</th>
</tr>
</thead>
</table>

**Decision of Group**

| Accepted |

**Resolution of Group**

```
change to "1024/512/128"
```

**Group's Notes**

**Group's Action Items**

| k) done |

**Editor's Notes**

**Editor's Actions**

| k) done |

**Editor's Questions and Concerns**

**Editor's Action Items**

|  |  |  |
Comment # 3422  Comment submitted by: Aik Chindapol

Suggested Remedy
change to "1024/512/128"

Proposed Resolution  Recommendation:  Recommendation by

Reason for Recommendation

Resolution of Group  Decision of Group: Accepted
change to "1024/512/128"

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
insert the following text into line 40 on page 379:

8.4.6.1.2.1.1 Downlink subchannels subcarrier allocation in PUSC

1) Dividing the subcarriers into $N_{clusters}$ physical clusters containing 14 adjacent subcarriers each (starting from carrier 0). The number of clusters, $N_{clusters}$, varies with FFT sizes. See Table 310 for details.

2) Renumbering the physical clusters into logical clusters using the following formula: $\text{LogicalCluster} = \text{RenumberingSequence}(\text{PhysicalCluster} + 13 \times \text{IDcellDL}_{\text{PermBase}}) \mod N_{clusters}$ In the first PUSC zone of the downlink (first downlink zone), the default used IDcell is 0. In the first PUSC zone of the downlink (first downlink zone), the default used DL PermBase is 0. When the 'Use all SC indicator=0' in the STC_DL_Zone_IE(), DL PermBase is replaced with 0. For all other cases DL PermBase parameter in the STC_DL_Zone_IE() shall be used.

4) Allocating subcarriers to subchannels in each major group is performed separately for each OFDMA symbol by first allocating the pilot carriers within each cluster, and then taking all remaining data carriers within the symbol and using the same procedure described in 8.4.6.1.2.2.2 (with the parameters from Table 310, using the PermutationBase appropriate for each major group, based on Table 268a) to partition the subcarriers into subchannels containing 24 data subcarriers in each symbol. Note that IDcell used for the first PUSC zone is the preamble IDcell, otherwise a PUSC zone shall use the DL PermBase parameter in the STC_DL_Zone_IE(). The subcarrier indexing within each group shall start from 0, where 0 is the first data subcarrier in the group according to ascending frequency order.

5) The data subcarriers of each slot shall be mapped to the subchannel such that data subcarriers numbered 0 to 23 reside on the first (time wise) symbol of each pair on the subcarriers whose index is 0 to 23 respectively in Equation (111) and the data subcarriers numbered 24 to 47 reside on the second symbol on the subcarriers whose index is 0 to 23 respectively in Equation (111).
5) The data subcarriers of each slot shall be mapped to the subchannel such that data subcarriers numbered 0 to 23 reside on the first (time wise) symbol of each symbol pair on the subcarriers whose index is 0 to 23 respectively in Equation (111) and the data subcarriers numbered 24 to 47 reside on the second symbol on the subcarriers whose index is 0 to 23 respectively in Equation (111).

Resolution of Group: Accepted

Reason for Recommendation

8.4.6.1.2.1.1 Downlink subchannels subcarrier allocation in PUSC

1) Dividing the subcarriers into Nclusters physical clusters containing 14 adjacent subcarriers each (starting from carrier 0). The number of clusters, Nclusters, varies with FFT sizes. See Table 310 for details.

2) Renumbering the physical clusters into logical clusters using the following formula: LogicalCluster = RenumberingSequence (PhysicalCluster + 13 * IDcell * DL_PermBase) mod Nclusters. In the first PUSC zone of the downlink (first downlink zone), the default used IDcell is 0. In the first PUSC zone of the downlink (first downlink zone) the default used DL_PermBase is 0. When the 'Use all SC indicator=0' in the STC_DL_Zone_IE(), DL_PermBase is replaced with 0. For all other cases DL_PermBase parameter in the STC_DL_Zone_IE() shall be used.

4) Allocating subcarriers to subchannels in each major group is performed separately for each OFDMA symbol by first allocating the pilot carriers within each cluster, and then taking all remaining data carriers within the symbol and using the same procedure described in 8.4.6.1.2.2.2 (with the parameters from Table 310, using the PermutationBase appropriate for each major group, based on Table 268a) to partition the subcarriers into subchannels containing 24 data subcarriers in each symbol. Note that IDcell used for the first PUSC zone is 0 (the preamble IDcell, otherwise a PUSC zone shall use the DL_PermBase parameter in the STC_DL_Zone_IE()). The subcarrier indexing within each group shall start from 0, where 0 is the first data subcarrier in the group according to ascending frequency order.

5) The data subcarriers of each slot shall be mapped to the subchannel such that data subcarriers numbered 0 to 23 reside on the first (time wise) symbol of each symbol pair on the subcarriers whose index is 0 to 23 respectively in Equation (111) and the data subcarriers numbered 24 to 47 reside on the second symbol on the subcarriers whose index is 0 to 23 respectively in Equation (111).

Reason for Group's Decision/Resolution

Editor's Action Items: k) done
The current value of the PermutationBase field in table 311b (FUSC for FFT-512) results in a high hit ratio. The maximum hit ratio between two subchannels from different cells can reach 38%.

This can be reduced to 25% through a simple change to the PermutationBase value.

Suggested Remedy
Modify the value of the 'PermutationBase' field in table 311b to
2,0,1,6,4,3,5,7

Proposed Resolution Recommendation: Accepted
Modify the value of the 'PermutationBase' field in table 311b to
2,0,1,6,4,3,5,7

Reason for Recommendation
Resolution of Group: Accepted
Modify the value of the 'PermutationBase' field in table 311b to
2,0,1,6,4,3,5,7

Reason for Group's Decision/Resolution

Editor's Action Items
k) done
... 8.4.6.1.2.2 Downlink subchannels subcarrier allocation
[Remove the two paragraphs in 8.4.6.1.2.2.1, and insert the following text:]
...
the headline "8.4.6.1.2.2.2 Downlink subchannels subcarrier allocation"
has to be located after the text which refers to 8.4.6.1.2.2.1 to provide right ordering of sub chapter

<table>
<thead>
<tr>
<th>Suggested Remedy</th>
<th>reorder of subchapter and text plug-in</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposed Resolution Recommendation</td>
<td>Recommendation by</td>
</tr>
<tr>
<td>Reason for Recommendation</td>
<td></td>
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<tr>
<td>Resolution of Group</td>
<td>Decision of Group: Rejected</td>
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<tr>
<td>Reason for Group's Decision/Resolution</td>
<td></td>
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<tr>
<td>Quoted paragraphs do not exist.</td>
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<td></td>
</tr>
<tr>
<td>Editor's Actions</td>
<td>I) none needed</td>
</tr>
<tr>
<td>Editor's Questions and Concerns</td>
<td></td>
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<tr>
<td>Editor's Action Items</td>
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</tbody>
</table>
Some of the comments and the contributions accepted in the previous IEEE meeting are not reflected correctly in P802.16e/D6 standard. In this comment, the non-reflected parts is proposed again for the purpose of clarification. Also some minor editorial corrections are proposed.

Corrections in OFDMA Subcarrier Allocations are proposed in C802.16e-05/107.

Suggested Remedy
Adopt the text proposed in contribution IEEE C802.16e-05/107

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Adopt the text proposed in contribution IEEE C802.16e-05/107

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions  k) done

Editor’s Questions and Concerns

Editor’s Action Items
Table 4 doesn't exist.

Suggested Remedy
Replace table 4 with table 311a in lines 7 and line 11 on page 382

Proposed Resolution Recommendation: Accepted Recommendation by
Replace table 4 with table 311a in lines 7 and line 11 on page 382

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Replace table 4 with table 311a in lines 7 and line 11 on page 382

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
<table>
<thead>
<tr>
<th>Comment #</th>
<th>3428</th>
<th>Comment submitted by:</th>
<th>Kenneth Stanwood</th>
<th>Member</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comment Type</td>
<td>Editorial</td>
<td>Starting Page #</td>
<td>382</td>
<td>Starting Line #</td>
</tr>
</tbody>
</table>

**Suggested Remedy**

change "8.4.6.1.2.2.3" to "8.4.6.1.2.3"

**Proposed Resolution**

Resolution of Group: **Accepted**

change "8.4.6.1.2.2.3" to "8.4.6.1.2.3"

**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**
The fixed pattern of pilot tones regardless of the start symbol offset of each zone can be helpful for easy implementation of subscribers without sacrificing performance. In this contribution, the reference symbol offset for rotating pilots in O-FUSC and AMC subchannels is changed to be the very first symbol of each zone.

Changes of Reference Symbol Offset for Rotating Pilots in O-FUSC and AMC subchannels are proposed in C802.16e-05/108.

Suggested Remedy
Accept the text proposed in contribution IEEE C802.16e-05/108

Proposed Resolution Recommendation: Accepted-Modified Recommendation by
Adopt C802.16e-05/108r1

Reason for Recommendation
Resolution of Group Decision of Group: Accepted-Modified
Adopt C802.16e-05/108r1

Reason for Group’s Decision/Resolution

Group's Notes
Group's Action Items

Editor’s Notes
Editor’s Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
I object to the resolution of session #35 because accepted comment 1101 from DB 80216-04_69r4 was not applied correctly to D6.

Comment 1101 was submitted in 80216-04_69r4. Group resolution was to adopt contribution 480r5.pdf. One changes is still required:

change the reference to "table YYY1" in 8.4.5.8.2 to "table 308b"

Suggested Remedy

change the reference to "table YYY1" in 8.4.5.8.2 to "table 308b"

Proposed Resolution

Resolution of Group: Accepted
change the reference to "table YYY1" in 8.4.5.8.2 to "table 308b"
<table>
<thead>
<tr>
<th>Comment</th>
<th>Type</th>
<th>Starting Page</th>
<th>Starting Line</th>
<th>Fig/Table</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>3431</td>
<td>Technical, Binding</td>
<td>383</td>
<td>55</td>
<td>312</td>
<td>8.4.6.1.2.2.3</td>
</tr>
</tbody>
</table>

1. Number is missing in table 312b for number of data subcarriers per subchannel
2. Description of subcarrier allocation is missing

**Proposed Resolution**

1. Add the number 48 in the value box of line 55 page 383
2. In line 28 on page 384, insert the following text:

In the equation 112, \( P_1, P_2 \)- permutation sequences shall be taken from table 311a. \( k' \) shall be calculated as follows:

\[ k' = k \mod (\text{length of permutation sequence}) \]

**Suggested Remedy**

1. Add the number 48 in the value box of line 55 page 383
2. In line 28 on page 384, insert the following text:

In the equation 112, \( P_1, P_2 \)- permutation sequences shall be taken from table 311a. \( k' \) shall be calculated as follows:

\[ k' = k \mod (\text{length of permutation sequence}) \]
<table>
<thead>
<tr>
<th>Suggested Remedy</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Omit 'optional' in the phrase of 'optional PUSC'.</td>
<td></td>
</tr>
</tbody>
</table>

**Proposed Resolution**

**Recommendation:**

**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**
Table 310e doesn't exist

Suggested Remedy
change to table 311a.

Proposed Resolution

<table>
<thead>
<tr>
<th>Reason for Recommendation</th>
<th>Recommendation by</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Resolution of Group
Decision of Group: Accepted
change to table 311a.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions

k) done

Editor's Questions and Concerns

Editor's Action Items
Move Sections 8.4.6.3.2.1 and 8.4.6.3.2.2 of the D6 document to right after Section 8.4.6.2.8.2 thereby making those sections be Section 8.4.6.2.8.3 and 8.4.6.2.8.4 respectively (i.e., subclauses of the Optional Uplink Channel Sounding Section).
I object to the resolution of Comment #1861 because it was rejected. Since in TGe various FFT sizes was added, a specific relation between FFT size and BW need to be clearly defined and additional profile parameters must be added.

Suggested Remedy
Incorporate changes documented in IEEE C802.16e-05/025 (to be uploaded by 11 January AOE)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Rejected

Reason for Group’s Decision/Resolution
No such contribution exists in the upload directory or on the wirelessman site.

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
Current draft standard features several MIMO techniques in a form of transmission matrix for each optional permutation zones [1]. Since the mapping of data subcarriers for each transmission matrix in STC/MIMO zones is different from that in the regular SISO zones, allocation of data subchannels for STC/MIMO zones is different from that of SISO zones. It gets more complicated when the system employs CTC and there is pilot puncturing, e.g., 3, 4 Tx for DL and 2 Tx for UL. The current draft standard, however, is not clear on these issues.

In this document, the notion of data subchannel allocation and subcarrier mapping for two basic transmission matrices (TD and SM) in two optional zones (band AMC and optional FUSC permutations) are clarified. In addition, pilot puncturing processes are described with an example.

Suggested Remedy

Adopt the changes proposed in C802.16e-05/155

Proposed Resolution Recommendation: Accepted-Modified Recommendation by

Adopt the changes in C802.16e-05/155r2

Reason for Recommendation

Resolution of Group Decision of Group: Accepted-Modified

Adopt the changes in C802.16e-05/155r2

Reason for Group’s Decision/Resolution

Group's Notes

Group’s Action Items

Editor’s Notes Editor’s Actions k) done

You will need to provide electronic files to the IEEE for these new figures.

Editor’s Questions and Concerns

Editor’s Action Items
Please give the definition of TUSC

<table>
<thead>
<tr>
<th>Starting Page</th>
<th>Starting Line</th>
<th>Fig/Table</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>411</td>
<td>32</td>
<td>8.4.6.1.2.4</td>
<td></td>
</tr>
</tbody>
</table>

**Suggested Remedy**

Define TUSC

**Proposed Resolution**

Discussion:

**TUSC = Tile usage of subchannels**

(insert into clause 4)

**Reason for Recommendation**

**Resolution of Group**

**Decision of Group:** Accepted

**Group’s Notes**

**Group’s Action Items**

**Editor’s Notes**

**Editor’s Actions**

- k) done

**Editor’s Questions and Concerns**

**Editor’s Action Items**
1. Clarification on the pilot allocation for 2, 4 tx antenna in DL optional Zone.
2. Correct the editor’s mistake on the figure 251g (Comment #1510 that was resolved in Nov. 2004 meeting)

Suggested Remedy

[Add the following text after line 15 in p.412]

Pilot Location for Antenna #0 = 9k+3[m mod 3]+1 (m=even)
Pilot Location for Antenna #1 = 9k+3[(m-1) mod 3]+1 (m=odd)
for m=[symbol index], symbol index 0 is the first symbol(except midamble) in which the STC Zone is applied, k is defined in 8.4.6.1.2.2.3.
In other words, symbol index shall be reset to '0' when a new STC Zone is applied.

[Add the following text after line 32 in p.413]

Pilot Location for Antenna #0 = 9k+3[m mod 3]+2 (m=even)
Pilot Location for Antenna #1 = 9k+3[(m-1) mod 3]+2 (m=odd)
Pilot Location for Antenna #2 = 9k+3[m mod 3]+2 (m=even)
Pilot Location for Antenna #3 = 9k+3[(m-1) mod 3]+2 (m=odd)
for m=[symbol index], symbol index 0 is the first symbol(except midamble) in which the STC Zone is applied, k is defined in 8.4.6.1.2.2.3.
In other words, symbol index shall be reset to '0' when a new STC Zone is applied.

[Replace the figure 251g in page 413 with the figure ccc in the accepted contribution C802.16e-04/558r2 (Comment #1510) in Nov. 2004 meeting]

Proposed Resolution

Recommendation: Accepted

[Add the following text after line 15 in p.412]

Pilot Location for Antenna #0 = 9k+3[m mod 3]+1 (m=even)
Pilot Location for Antenna #1 = 9k+3[(m-1) mod 3]+1 (m=odd)
for m=[symbol index], symbol index 0 is the first symbol(except midamble) in which the STC Zone is applied, k is defined in 8.4.6.1.2.2.3.
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Pilot Location for Antenna #2 = 9k+3[m mod 3]+2 (m=even)
Pilot Location for Antenna #3 = 9k+3[(m-1) mod 3]+2 (m=odd)
for m=[symbol index], symbol index 0 is the first symbol(except midamble) in which the STC Zone is applied, k is defined in 8.4.6.1.2.2.3.
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[Replace the figure 251g in page 413 with the figure ccc in the accepted contribution C802.16e-04/558r2 (Comment #1510) in Nov. 2004 meeting]

Reason for Recommendation

Resolution of Group: Accepted

[Add the following text after line 15 in p.412]

Pilot Location for Antenna #0 = 9k+3[m mod 3]+1 (m=even)
Pilot Location for Antenna #1 = 9k+3[(m-1) mod 3]+1 (m=odd)
for m=[symbol index], symbol index 0 is the first symbol(except midamble) in which the STC Zone is applied, k is defined in 8.4.6.1.2.2.3. In other words, symbol index shall be reset to '0' when a new STC Zone is applied.

[Add the following text after line 32 in p.413]

Pilot Location for Antenna #0 = 9k+3[m mod 3]+1 (m=even)
Pilot Location for Antenna #1 = 9k+3[(m-1) mod 3]+1 (m=odd)
Pilot Location for Antenna #2 = 9k+3[m mod 3]+2 (m=even)
Pilot Location for Antenna #3 = 9k+3[(m-1) mod 3]+2 (m=odd)
for m=[symbol index], symbol index 0 is the first symbol(except midamble) in which the STC Zone is applied, k is defined in 8.4.6.1.2.2.3. In other words, symbol index shall be reset to '0' when a new STC Zone is applied.

[Replace the figure 251g in page 413 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 Action Items

Editor’s Notes

b) awaiting missing input

Editor’s Action Items

Did not locate C802.16e-04-558r2 in time to implement. Defer to next round.

Editor’s Questions and Concerns

Editor’s Action Items
1. Change the equation

Page 415, Line 7, replace "for i=1,2,...,5, where \( \theta = \text{atan}(1/3) \)" with "for i=1,2,...,8, where \( \theta = \tan^{-1}(1/3) \)".

Proposed Resolution: Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group: Decision of Group: Accepted

Page 415, Line 7, replace "for i=1,2,...,5, where \( \theta = \text{atan}(1/3) \)" with "for i=1,2,...,8, where \( \theta = \tan^{-1}(1/3) \)".

Reason for Group’s Decision/Resolution

Group’s Notes
Group’s Action Items

Editor’s Notes
Editor’s Actions: k) done

Editor’s Questions and Concerns

Editor’s Action Items
Page 415, Line 21, 26, 32 replace $\tilde{S}^*$ with $\tilde{S}^3$ in matrices A1, A2 and A3.

Matrices should be changed as following

\[
A_1 = \begin{bmatrix}
\tilde{S}_1 & \tilde{-S}^2 & 0 & \ldots & 0 \\
\tilde{S}_2 & \tilde{-S}^2 & \tilde{S}_1 & \tilde{-S}^4 \\
0 & 0 & \tilde{S}_2 & \tilde{S}_3 & \tilde{-S}^4 \\
0 & 0 & 0 & \tilde{S}_3 & \tilde{-S}^4 \\
\end{bmatrix}
\]

\[
A_2 = \begin{bmatrix}
\tilde{S}_1 & \tilde{-S}^2 & 0 & \ldots & 0 \\
\tilde{S}_2 & \tilde{-S}^2 & \tilde{S}_1 & \tilde{-S}^4 \\
0 & 0 & \tilde{S}_2 & \tilde{S}_3 & \tilde{-S}^4 \\
0 & 0 & 0 & \tilde{S}_3 & \tilde{-S}^4 \\
\end{bmatrix}
\]

\[
A_3 = \begin{bmatrix}
\tilde{S}_1 & \tilde{-S}^2 & 0 & \ldots & 0 \\
\tilde{S}_2 & \tilde{-S}^2 & 0 & \ldots & 0 \\
0 & 0 & \tilde{S}_2 & \tilde{S}_3 & \tilde{-S}^4 \\
0 & 0 & 0 & \tilde{S}_3 & \tilde{-S}^4 \\
\end{bmatrix}
\]
| k) done |

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

**Group's Notes**

**Group's Action Items**

**Editor's Notes**

**Editor's Actions**

k) done

**Editor's Questions and Concerns**

**Editor's Action Items**
Add \( \tilde{S}_5 \) in eq.124c

Proposed Resolution Recommendation:

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
Suggested Remedy
Page 416, Line 30, replace "When MSS reports 0b101111 on its CQICH (See 6.x.x)" with "When MSS reports 0b101110 on its CQICH (See 8.4.5.4.10.7)".
Page 416, Line 43, change 0b110000 to 0b101111.
Page 416, Line 56, change 0b110001 to 0b110000.

Proposed Resolution Recommendation: Change the codewords.

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Page 416, Line 30, replace "When MSS reports 0b101111 on its CQICH (See 6.x.x)" with "When MSS reports 0b101110 on its CQICH (See 8.4.5.4.10.7)".
Page 416, Line 43, change 0b110000 to 0b101111.
Page 416, Line 56, change 0b110001 to 0b110000.

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes
Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
Page 416, Line 40, 53 and Page 417, Line 7, replace "\tilde \{S\}_s^*" with "\tilde \{S\}_s^3" in matrices A₁, A₂ and A₃ - (3,4).

Page 416, Line 36, A₁ and A₂ should be changed as following:

\[
\begin{bmatrix}
\tilde S₁ & \tilde -S₂ & 0 & 0 \\
\tilde S₂ & \tilde S₁ & 0 & 0 \\
0 & 0 & \tilde S₄ & \tilde S₃ \\
\end{bmatrix}
\]

When MSS ...

\[
\begin{bmatrix}
\tilde S₁ & \tilde -S₂ & 0 & 0 \\
\tilde S₂ & \tilde S₁ & \tilde S₃ & \tilde -S₄ \\
0 & 0 & \tilde S₄ & \tilde S₃ \\
\end{bmatrix}
\]

---

**Proposed Resolution**

**Recommendation:**

**Reason for Recommendation**

**Resolution of Group**

**Decision of Group:** Accepted

Page 416, Line 40, 53 and Page 417, Line 7, replace "\tilde \{S\}_s^*" with "\tilde \{S\}_s^3" in matrices A₁, A₂ and A₃ - (3,4).

Page 416, Line 36, A₁ and A₂ should be changed as following:

\[
\begin{bmatrix}
\tilde S₁ & \tilde -S₂ & 0 & 0 \\
\tilde S₂ & \tilde S₁ & 0 & 0 \\
0 & 0 & \tilde S₄ & \tilde S₃ \\
\end{bmatrix}
\]

When MSS ...

\[
\begin{bmatrix}
\tilde S₁ & \tilde -S₂ & 0 & 0 \\
\tilde S₂ & \tilde S₁ & \tilde S₃ & \tilde -S₄ \\
0 & 0 & \tilde S₄ & \tilde S₃ \\
\end{bmatrix}
\]
Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions

k) done

Editor's Questions and Concerns

Editor's Action Items
Suggested Remedy
Page 417, Line 19, change 0b110010 to 0b110001.
Page 417, Line 32, change 0b110011 to 0b110010.
Page 417, Line 45, change 0b110100 to 0b110011.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Page 417, Line 19, change 0b110010 to 0b110001.
Page 417, Line 32, change 0b110011 to 0b110010.
Page 417, Line 45, change 0b110100 to 0b110011.

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes Editor’s Actions  k) done

Editor's Questions and Concerns

Editor’s Action Items
Capability negotiation and other corrections for sounding methods

Sounding capabilities negotiation should be more specific, since there are multiple methods that are indicated under a single capability bit. In addition some specifications are required to guarantee minimal response time between the sounding instruction and the sounding transmission.

Suggested Remedy
Adopt contribution C80216e-05/094 (Corrections to sounding protocol)

Proposed Resolution Recommendation: Accepted-Modified
Adopt contribution C80216e-05/094r3 with the following modification:
Delete the sentence "The maximum allowed sounding response time for an SS shall be 2 ms."

Reason for Recommendation

Resolution of Group Decision of Group: Accepted-Modified
Adopt contribution C802.16e-05/094r3 with the following modification:
Delete the sentence "The maximum allowed sounding response time for an SS shall be 2 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
I object to the resolution of Comments 2256 from session #35 because soundings requires a fine capability for all its advance mechanisms.

**Capability negotiation and other corrections for sounding methods**

Sounding capabilities negotiation should be more specific, since there are multiple methods that are indicated under a single capability bit. In addition some specifications are required to guarantee minimal response time between the sounding instruction and the sounding transmission.

**Suggested Remedy**

Adopt contribution C80216e-05/094r1 (Corrections to sounding protocol)
Suggested Remedy
Page 418, Line 47, replace "-s_2" with "-s^*_2 in matrix A_2 - (1,2)

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Page 418, Line 47, replace "-s_2" with "-s^*_2 in matrix A_2 - (1,2)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done
Also noticed a question mark in the row below. Should this be removed?

Editor's Questions and Concerns

Editor's Action Items
We propose a modification to the space-time codes for 3 and 4 transmit antennas in the OFDMA PHY.

Suggested Remedy
Adopt the changes proposed in C802.16e-05/175

Proposed Resolution Recommendation: Accepted-Modified Recommendation by
Adopt the changes proposed in C802.16e-05/175r1

Reason for Recommendation

Resolution of Group Decision of Group: Accepted-Modified
Adopt the changes proposed in C802.16e-05/175r1

Reason for Group’s Decision/Resolution
Vote: 25-5

Group’s Notes
Group’s Action Items

Editor’s Notes Editor’s Actions c) instructions unclear
The end of this contribution makes changes that were proposed and accepted in 009r1. I was unclear as to whether I was adding additional matrices or was replacing those that appeared in 8.4.3.4.

Editor’s Questions and Concerns

Editor’s Action Items
Change the codewords.

Suggested Remedy
Page 419, Line 63, replace "When MSS reports 0b101111 on its CQICH (See 6.x.x)" with "When MSS reports 0b101110 on its CQICH (See 8.4.5.4.10.7)".
Page 420, Line 13, change 0b110000 to 0b101111.
Page 420, Line 29, change 0b110001 to 0b110000.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Page 419, Line 63, replace "When MSS reports 0b101111 on its CQICH (See 6.x.x)" with "When MSS reports 0b101110 on its CQICH (See 8.4.5.4.10.7)".
Page 420, Line 13, change 0b110000 to 0b101111.
Page 420, Line 29, change 0b110001 to 0b110000.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
Suggested Remedy

Page 420, Line 6, delete tilde in matrices A1, A2 and A3

Proposed Resolution Recommendation:  

Reason for Recommendation

Decision of Group: Accepted

Page 420, Line 6, delete tilde in matrices A1, A2 and A3

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes Editor’s Actions  k) done

Editor’s Questions and Concerns

Editor’s Action Items
Suggested Remedy

Page 420, Line 53, change 0b110010 to 0b110001.
Page 421, Line 13, change 0b110011 to 0b110010.
Page 421, Line 29, change 0b110100 to 0b110011.
Page 421, Line 45, change 0b110101 to 0b110100.
Page 421, Line 60, change 0b110110 to 0b110101.
Page 422, Line 13, change 0b110111 to 0b110110.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

Page 420, Line 53, change 0b110010 to 0b110001.
Page 421, Line 13, change 0b110011 to 0b110010.
Page 421, Line 29, change 0b110100 to 0b110011.
Page 421, Line 45, change 0b110101 to 0b110100.
Page 421, Line 60, change 0b110110 to 0b110101.
Page 422, Line 13, change 0b110111 to 0b110110.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
Suggested Remedy

Proposed Resolution Recommendation: 

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
ARQ block size

Suggestion summary:
Require the value of ARQ_BLOCK_SIZE to be an integer power of 2.

Reasoning:
When implementing ARQ for Mobility, the MSS often needs to translate numbers in bytes units to numbers in block units. One example is the need to compute how many blocks an SDU is made of.

To do this translation, division by ARQ_BLOCK_SIZE must be done.

ARQ requires quick timing response in order to be effective, while Mobile devices usually have limited computing power. Therefore, it would be greatly beneficial to set ARQ_BLOCK_SIZE to be an integral power of 2, so that the needed division operations can be done quickly using shifts.

Suggested Remedy
Proposed changes:

In 802.16e/D5, clause 11.13.18.8:
change “16-2040” to “16, 32, 64, 128, 256, 512, 1024 or 2048”

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

In 802.16e/D6, clause 11.13.18.8:
change “16-2040” to “16, 32, 64, 128, 256, 512, 1024”

Resolution for Recommendation

In 802.16e/D6, clause 11.13.18.8:
change “16-2040” to “16, 32, 64, 128, 256, 512, 1024”
I object to the resolution of Comment 1541 in 80216-05_010.pdf comment resolution database that current CL-MIMO solution that the power cannot be redistributed effectively among streams.

Suggested Remedy
Adopt the resolution text in contribution IEEE C802.16e-05/125 or the latest version.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Rejected

Reason for Group’s Decision/Resolution
Out of scope of the recirc.

Editor's Notes 
Editor's Actions k) done

Editor's Action Items
CTC IR has poor performance or error floor for some block sizes (e.g. 120 byte info size all code rates floor about 1e-3)

**Suggested Remedy**

Contribution C80216e-05_136.doc provides improved CTC channel coding interleaver parameters when supporting H-ARQ. Adopt contribution C80216e-05_136.doc

**Proposed Resolution**

**Recommendation by**

**Reason for Recommendation**

**Resolution of Group**

**Decision of Group:** Rejected

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

Commenter asked to have this comment rejected as he thinks it was resolved in the corrigendum.

**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**

---

<table>
<thead>
<tr>
<th>Document under Review:</th>
<th>P802.16e/D6</th>
<th>Comment Date</th>
<th>2005/04/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ballot Number:</td>
<td>0001010</td>
<td>Comment Date</td>
<td>2005/03/09</td>
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<tr>
<td>Comment #</td>
<td>3455</td>
<td>Comment submitted by:</td>
<td>Mark Cudak, Member</td>
</tr>
<tr>
<td>Comment Type</td>
<td>Technical, Satisfied (was Bi di)</td>
<td>Starting Page #</td>
<td>443</td>
</tr>
<tr>
<td>Starting Line #</td>
<td>63</td>
<td>Fig/Table#</td>
<td></td>
</tr>
<tr>
<td>Section</td>
<td>8.4.9.2.3.1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The document structure of 5.1 and 5.2 substantially violates IEEE layout guidelines. It is "not done" to insert somewhere in the middle of 5.1 the words "informative" and make that by vague implication apply to 5.2.

In the current section 5.2, under method 1 an equivalent second method is snuck in. Given that all methods are equivalent, because the output is the same, this ought to be listed as "method 2".

The spec should not have page after page of informative implementation garbage, which is absolutely unnecessary for even a novice engineer to implement this spec and for which I can think up any number of alternatives, litter this already huge spec of normative language.

Suggested Remedy
Make "Direct Encoding (Informative) " a proper header 5.2, remove the current header 5.2.
Insert "method 2" above "equivalently" and rename the current method 2 to method 3
Bury the newly created 5.2 in a subsubsubsection of an appendix, or by substantial preference, move it to /dev/null
The document structure of 8.4.9.2.5.1 and 8.4.9.2.5.2 substantially violates IEEE layout guidelines. It is "not done" to insert somewhere in the middle of 5.1 the words "informative" and make that by vague implication apply to 8.4.9.2.5.2.

In the current section 8.4.9.2.5.2, under method 1 an equivalent second method is snuck in. Given that all methods are by definition equivalent, because the output is exactly the same, this ought to be listed as "method 2".

The spec should not have page after page of informative implementation garbage (which is absolutely unnecessary for even a novice engineer to implement this spec and for which I can think up any number of alternatives) litter this already huge spec of normative language.

Suggested Remedy

Make "Direct Encoding (Informative)" a proper header 8.4.9.2.5.2, remove the current header 8.4.9.2.5.2.

Insert "method 2" above "equivalently" and rename the current method 2 to method 3

Bury the newly created 8.4.9.2.5.2 in a subsubsubsection of an appendix, or by substantial preference, move it to /dev/null

Proposed Resolution

Change "Method 1, second method equivalent to Method 1, and Method 2" to three distinct methods: Method 1a, Method 1b, and Method 2. Newly renamed "Method 1b" should be inserted on page 449 line 8 above the words "equivalently,..."

Make "Direct Encoding (Informative)" a proper header 8.4.9.2.5.2, remove the current header 8.4.9.2.5.2.

In the change from contribution 134, there's a comment to move the line "Direct Encoding (Informative)". Remove the "(Informative)" because the entire subclause is now informative.

Reason for Recommendation

Resolution of Group: Accepted-Modified

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions: k) done
IEEE does not support informative text within the "normative" part of the document. They usually prefer informative text to appear as a Note within the body or as an annex. I don't think Michelle Turner will let this through.

Editor's Action Items

Document under Review: **P802.16e/D6**

**Comment # 3458**
Comment submitted by: **Mark Cudak**
Member

**Ballot Number: 0001010**

**Starting Page #: 444**
**Starting Line #: 6**

**Comment Date: 2005/03/09**

**Type: Editorial**

Contribution IEEE C802.16e-05/066r3 (2005-01-27) was adopted to complete the definition of the low-density parity-check code (optional) for OFDMA. Several LDPC text changes were not accurately reflected in IEEE P802.16e/D6 (2005-02-18).

**Suggested Remedy**
The editorial issues are corrected in contribution C80216e-05_134.doc.

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

Adopt contribution C80216e-05_134.doc.

**Reason for Recommendation**

Resolution of Group: **Accepted**

Adopt contribution C802.16e-05/134.

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

**Group's Notes**

**Group's Action Items**

**k) done**

**Editor's Notes**

**Editor's Action Items**

**Editor's Questions and Concerns**
Contribution IEEE C802.16e-05/066r3 (2005-01-27) was adopted to complete the definition of the low-density parity-check code (optional) for OFDMA. A few typos/inconsistencies were introduced into the LDPC text.

Suggested Remedy
The LDPC typos/inconsistencies are corrected in contribution C80216e-05_135.doc.

Proposed Resolution
Recommendation: Adopt contribution C802.16e-05/135.

Resolution of Group
Decision of Group: Accepted

Editor's Notes
Editor's Actions k) done
I object to resolution of Comment 1606 in 80216-05_010.pdf comment resolution database that the current LDPC solution that the 5/6 coding rate is missing from the standard.

Suggested Remedy
Adopt the resolution text in contribution IEEE C802.16e-05/126 or the latest version.

Proposed Resolution
Recommended by
Adopt the resolution text in contribution IEEE C802.16e-05/126 or the latest version.

Reason for Recommendation
Resolution of Group Decision of Group: Rejected

Reason for Group’s Decision/Resolution
Vote: 26-25
The performance improvement between 3/4 and 5/6 is too small to justify an extra mode.
Suggested Remedy
change to "... an interger multiple of 24"

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
change to "... an interger multiple of 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
Remove LDPC rate 2/3 B code and LDPC rate 3/4 B code as specified in page 445-446.

Proposed Resolution Recommendation: Accepted
Remove LDPC rate 2/3 B code and LDPC rate 3/4 B code as specified in page 445-446.

Resolution of Group Decision of Group: Rejected

Reason for Recommendation

Reason for Group’s Decision/Resolution
Vote: Unanimous against
As the commenter properly notes, the versions are there for the performance complexity tradeoff flexibility. LDPC rate 2/3 B code and 3/4 B code as options have better performance than A codes, they shall not be removed from the standard. There is no technical reason why B codes are removed. A and B codes have trade-off about implementation aspect.
Code rate 2/3 A is at its best less than .1 dB better than 2/3 B for a few cases, whereas 2/3 B is better in all other cases. From the scheduler's perspective, choosing between the two will be an exercise in futility. In addition, it requires a complete different computation rule to create, which adds unnecessary complexity if we want to avoid storing the entire set of matrices (which is best avoided because of the huge storage requirements).

This additional complexity is by no means justified by the minute achieved gain in those few cases.

**Suggested Remedy**
Delete code rate 2/3 A and the corresponding shift rule.

**Proposed Resolution**
Recommendation: Accepted
Recommendation by
Delete code rate 2/3 A and the corresponding shift rule.

**Reason for Recommendation**

**Resolution of Group**

**Decision of Group:** Rejected

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

**Vote:** 5-8
The rate 2/3 A code has better FER performance than the rate 2/3 B code for a few code block sizes.

**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**
[Identical comments submitted by Nico van Waes and Victor Stolpman.]

Code rate 3/4 A is according to the published results always worse than 3/4 B (not by much, but anyway). Despite the warm and fuzzy feeling of stacking everybody's favorite numbers on top of each other, this type of redundancy for the sake of redundancy has zero technical justification. In fact the additional storage requirements and needless complexity are a good justification to toss it.

Suggested Remedy
Delete code rate 3/4 A

Proposed Resolution Recommendation: Accepted
Delete code rate 3/4 A

Reason for Recommendation

Resolution of Group Decision of Group: Rejected

Reason for Group's Decision/Resolution

Vote: The rate 3/4 A code has a complexity advantage over the rate 3/4 B code (because it is a regular code), and it is desirable to retain the flexibility between processing complexity and performance.

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
Code rate 2/3 A is at its best less than .1 dB better than 2/3 B for a few cases, whereas 2/3 B is better in all other cases.
From the scheduler's perspective, choosing between the two will be an exercise in futility and not something anybody is going to have simultaneously active in burst profiles.
In addition, it requires a complete different computation rule to create, which adds unnecessary complexity if we want to avoid storing the entire expanded matrices (which is best avoided because of the huge storage requirements).
This additional complexity is by no means justified by the minute achieved gain in those few cases.

Suggested Remedy
Delete code rate 2/3 A and the corresponding shift rule.
Comment #3466
Comment submitted by: Kyuhyuk Chung

I object to the implementation in the draft of Comment #2290, because the text about LDPC in IEEE802.16e needs more descriptions.

Suggested Remedy
Adopt the contribution C802.16e-05_168.

Proposed Resolution Recommendation: Accepted
Adopt the contribution C802.16e-05_168.

Reason for Recommendation
Resolution of Group Decision of Group: Accepted
Adopt the contribution C802.16e-05/168.

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
I object to the implementation in the draft of Comment #2290, because the five matrices are not aligned.

Suggested Remedy
Align each row and column in 5 matrices (Rate 1/2, Rate 2/3 A code, Rate 2/3 B code, Rate 3/4 A code, and Rate 3/4 B code).

Proposed Resolution

<table>
<thead>
<tr>
<th>Reason for Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Align each row and column in 5 matrices (Rate 1/2, Rate 2/3 A code, Rate 2/3 B code, Rate 3/4 A code, and Rate 3/4 B code).</td>
</tr>
</tbody>
</table>

| Note, this can be accomplished by using a constant-width font. |

<table>
<thead>
<tr>
<th>Resolution of Group Decision of Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accepted</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group's Notes</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Group's Action Items</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Editor's Notes</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Editor's Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>k) done</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Editor's Questions and Concerns</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Editor's Action Items</th>
</tr>
</thead>
</table>
It is not proper to mark a subclause as informative (see 2005 IEEE Style Guide).

Suggested Remedy
Move this text to an informative Annex.

Proposed Resolution
Recommendation: Move this text to an informative Annex.

Reason for Recommendation

Resolution of Group
Decision of Group: Rejected

Same issue was addressed by comment 3457.

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
I object to the resolution of Comments #2364 from session #36 because the description for the pilot needs more modifications as follows.

In 802.16e specification, DL PUSC and DL band AMC can be used in frequency reuse factor more than 1. In such case, it is desirable to boost the corresponding zone to utilize the power amplifier to its full capacity.

Suggested Remedy

Adopt the suggested text change-3 in C80216e-05_095.

Proposed Resolution Recommendation: Accepted-Modified

Adopt the suggested text in the second option of change-3 in C80216e-05_095.

Reason for Recommendation

Resolution of Group Decision of Group: Rejected

Reason for Group's Decision/Resolution

Vote: 22-28

Zone boosting is an implementation issue, there is no need to specify in the standard.

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
The power control scheme in 8.4.10 requires some corrections and clarifications. For example:

1) Open loop power control mechanism should be divided into two explicit categories - passive open loop and active open loop, where in passive open loop the MSS estimates the path loss but does not update its Offset_SSperSS variable.
2) The open power control mechanism for initial ranging should be made consistent with the mechanism for regular transmission.
3) The units of measurement are not consistent between different power control parameters. They should be given in dbm/subcarrier.

Suggested Remedy

Adopt contribution 802.16e-05/137 "Correction to Power Control for OFDMA PHY".

Could not find change 8 regarding the BS EIRP field in BS EIRP.
I object to the resolution of Comments #2298 from session #36 because the current text include wrong power control description that breaks backward compatibility. The left term (P) is missing in eq. 138a.

Suggested Remedy

[Delete text from pp. 456 line 5 to pp. 457 line 3]
[Delete text from pp. 457 line 19 to pp. 457 line 23]
[Modify the text pp. 457 line 35 in eq. 138a]

\[ P = L + \ldots \]

Proposed Resolution

<table>
<thead>
<tr>
<th>Recommendation: Accepted</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Delete text from pp. 456 line 5 to pp. 457 line 3]</td>
</tr>
<tr>
<td>[Delete text from pp. 457 line 19 to pp. 457 line 23]</td>
</tr>
<tr>
<td>[Modify the text pp. 457 line 35 in eq. 138a]</td>
</tr>
</tbody>
</table>

\[ P = L + \ldots \]

Reason for Recommendation

Resolution of Group

<table>
<thead>
<tr>
<th>Decision of Group: Accepted</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Delete text from pp. 456 line 5 to pp. 457 line 3]</td>
</tr>
<tr>
<td>[Delete text from pp. 457 line 19 to pp. 457 line 23]</td>
</tr>
<tr>
<td>[Modify the text pp. 457 line 35 in eq. 138a]</td>
</tr>
</tbody>
</table>

\[ P = L + \ldots \]

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions

k) done

Editor’s Questions and Concerns

Editor’s Action Items
The current 802.16e SINR reporting mechanism requires the MSS to report a straightforward CINR measurement. This mechanism does not provide the BS with any knowledge on the frequency selectivity of the channel and noise (especially prominent with partially loaded cells and with multipath). This knowledge is important since, contrary to the AWGN channel, in a frequency selective channel there is no 1 to 1 relation between amount of increase in power and amount of improvement in "effective SINR". Furthermore, the relation is dependent on MCS level. This results in larger fade margins, which translates directly to reduction in capacity.

In this contribution we propose a mechanism based on the "Exponential Effective SIR Mapping" (EESM) model that provides the BS with sufficient knowledge on the channel-dependent relationship between power increase, MCS change and improvement in effective SINR.

**Suggested Remedy**

Adopt contribution 802.16e-05/141 "CINR measurements using the EESM method"

**Proposed Resolution**

Adopt contribution 802.16e-05/141r2 "CINR measurements using the EESM method"

Duplicate 8.4 changes in 8.3

**Reason for Recommendation**

Resolution of Group

Decision of Group: Rejected

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

Vote: 30-15

Does not show performance gain over the conventional method.
The proposal introduces a deployment specific parameter, beta, which is not explicitly specified.

**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**
"I object to the current draft for not specifying PHY performance requirement related to mobile handoffs. Without the specifying the requirements, equipments can have dissimilar timing reference points and dissimilar neighbor cell scanning mechanism. It will cause interoperation problems."

**Suggested Remedy**

Adopt the resolution text in contribution IEEE C802.16e-05/033 or the latest version.

**Proposed Resolution**

| Recommendation: Accepted-Modified | Recommendation by | Adopt the resolution text in contribution IEEE C802.16e-05/033r4 |

**Reason for Recommendation**

**Resolution of Group**

| Decision of Group: Accepted-Modified |

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

**Group’s Notes**

**Group's Action Items**

**Editor’s Notes**

| Editor’s Actions | k) done |

**Editor’s Questions and Concerns**

**Editor’s Action Items**
I object to the resolution of comment 1945 in IEEE 802.16-05/010. This comment is about how the term MSS (now MS) has replaced SS in text pulled from the base document. The Decision of the Group was to supersede that comment by comment #71, and the reason for the Group's Decision was that "This comment has been superseded by comment #71 which changes the usage of MSS and SS." However, I cannot find comment #71 listed in IEEE 802.16-05/010 or IEEE 802.16-04/011. Going back to IEEE 802.16-04/69r4, I find comment #71 (which is also technically binding), and the resolution of the group for that comment was "DJ, possibly David Castelow, possibly others to supply a specific list of changes to be made."

If this action item was done, I do not find that all the necessary fixes were made. The title of this amendment is "Part 16: Air Interface for Fixed and Mobile Broadband Wireless Access Systems, Amendment for Physical and Medium Access Control Layers for Combined Fixed and Mobile Operation in Licensed Bands" I think many sections of this document lose sight of the fact that fixed systems must also be able operate.

My Suggested Remedy is an attempt to fix the SS/FS/MS language in section 9. Configuration

Suggested Remedy
On page 461, line 4, change "9.1 MS IP addressing" to "9.1 SS IP addressing"

Proposed Resolution
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

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

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

Reason for Group’s Decision/Resolution

Editor’s Action Items
k) done
The max interval between two consecutive MOB_NBR-ADV messages is 1s, is this too small? That is, too frequently, then too much overhead.

I won't feel comfortable to throw out any numbers here before doing an analysis about the requirement of such an interval vs its costs. I would suggest to remove 1s now and leave it empty like other boxes in this table.

Suggested Remedy
remove 1s.

Proposed Resolution Recommendation: Accepted
Reason for Recommendation remove 1s.
Reason for Group's Decision/Resolution remove 1s.

Group's Notes
Group's Action Items

Editor's Notes Editor's Actions k) done
Editor's Questions and Concerns
Editor's Action Items
I object to the implementation of Comments #2298 from session #36 because T33 for PMC_RSP Timer is used in a previous entry in the same table (Time the BS waits for DREG_REQ).

Suggested Remedy
[Modify the text as follows in 6.3.2.3.57]

On the receipt of the PMC_REQ from SS, BS may send PMC_RSP in T34.

[Modify the table as follows 342a in 10.1]
[Replace T33 with T34 for the entry PMC_RSP Timer]

Proposed Resolution Recommendation: Accepted Recommendation by

On the receipt of the PMC_REQ from SS, BS may send PMC_RSP in T34.

[Modify the table as follows 342a in 10.1]
[Replace T33 with T34 for the entry PMC_RSP Timer]

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

On the receipt of the PMC_REQ from SS, BS may send PMC_RSP in T34.

[Modify the table as follows 342a in 10.1]
[Replace T33 with T34 for the entry PMC_RSP 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
<table>
<thead>
<tr>
<th>Comment Type</th>
<th>Comment</th>
<th>Technical, Non-binding</th>
<th>Starting Page #</th>
<th>466</th>
<th>Starting Line #</th>
<th>29</th>
<th>Fig/Table#</th>
<th>345</th>
<th>Section 10.4</th>
</tr>
</thead>
</table>

Clarification.
Usage of CIDs 0xFFFb-0xFFFFD in MAC PDU's Generic Header does not make sense as there are no connections associated with such CIDs therefore no certain mode of encapsulation. Original intention in contribution #04/468 "Multiple Broadcast Maps for OFDMA PHY" was to use those CIDs in DL-MAP.

Suggested Remedy
Change in table 345

<table>
<thead>
<tr>
<th>Normal mode multicast CID</th>
<th>0xFFFb</th>
<th>Used in DL-MAP to denote bursts for transmission of DL broadcast information to normal mode MSS.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sleep mode multicast CID</td>
<td>0xFFFc</td>
<td>Used in DL-MAP to denote bursts for transmission of DL broadcast information to Sleep mode MSS.</td>
</tr>
<tr>
<td>Idle mode multicast CID</td>
<td>0xFFFFD</td>
<td>Used in DL-MAP to denote bursts for transmission of DL broadcast information to Idle mode MSS.</td>
</tr>
</tbody>
</table>

Proposed Resolution Recommendation: Accepted

Reason for Recommendation
Resolution of Group Decision of Group: Accepted

<table>
<thead>
<tr>
<th>Normal mode multicast CID</th>
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</tr>
</tbody>
</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: P802.16e/D6

Ballot Number: 0001010

Comment # 3478 Comment submitted by: Eyal Bick

Starting Page # 466 Starting Line # 30 Fig/Table# 8.4.9.1

Comment Date 2005/03/09

Remove special randomizer seed for H-ARQ

Special randomizer seed for H-ARQ is no longer needed since constant seed was set in 16h (Cor1D1) for all transmissions.

Suggested Remedy

[Remove section 8.4.9.1 from 802.16e/D5]

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Rejected

Out of scope of 802.16e.
Out of scope of the recirc.
Corrigenda is not officially closed yet, therefore, changes in the corrigenda should not be used as a reason for modification in .16e. Instead, commenter should state the actual technical reason.

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
I object to the resolution of Comments 2194 from session #35 because H-ARQ harmonization still requires some refinements.

**Remove special randomizer seed for H-ARQ**

Special randomizer seed for H-ARQ is no longer needed since constant seed was set in 16h (Cor1D1) for all transmissions.

**Suggested Remedy**

[Remove section 8.4.9.1 from 802.16e/D5]

---

**Proposed Resolution**

**Recommendation:**

**Reason for Recommendation**

Resolution of Group: **Rejected**

Out of scope of 802.16e. Corrigenda is not officially closed yet, therefore, changes in the corrigenda should not be used as a reason for modification in .16e. Instead, commenter should state the actual technical reason.

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

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
I object to the resolution of comment 1945 in IEEE 802.16-05/010. This comment is about how the term MSS (now MS) has replaced SS in text pulled from the base document. The Decision of the Group was to supersede that comment by comment #71, and the reason for the Group's Decision was that "This comment has been superseded by comment #71 which changes the usage of MSS and SS." However, I cannot find comment #71 listed in IEEE 802.16-05/010 or IEEE 802.16-04/011. Going back to IEEE 802.16-04/69r4, I find comment #71 (which is also technically binding), and the resolution of the group for that comment was "DJ, possibly David Castelow, possibly others to supply a specific list of changes to be made."

If this action item was done, I do not find that all the necessary fixes were made. The title of this amendment is "Part 16: Air Interface for Fixed and Mobile Broadband Wireless Access Systems, Amendment for Physical and Medium Access Control Layers for Combined Fixed and Mobile Operation in Licensed Bands" I think many sections of this document lose sight of the fact that fixed systems must also be able operate.

My Suggested Remedy is an attempt to fix the SS/FS/MS language in section 11. TLV Encodings

Suggested Remedy
1) On p. 483, starting line 28, change MS to SS through out section 11.7.6.
2) On p. 483, line 48, change "11.7.8 MS capabilities encodings" to "11.7.8 SS capabilities encodings"
3) On p. 494, line 1, change "11.8.3.7.2 OFDMA MS demodulator" to "11.8.3.7.2 OFDMA SS demodulator"
4) On p. 495, line 31, change "11.8.3.7.3 OFDMA MSS modulator" to "11.8.3.7.3 OFDMA SS modulator"
5) On p. 495, line 61, change "11.8.3.7.5 OFDMA MSS Permutation support" to "11.8.3.7.5 OFDMA SS Permutation support"

Proposed Resolution Recommendation: 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

Reason for Recommendation

Resolution of Group: Accepted-Modified

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
All of the specific instances above were changed. Not every instance throughout document.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16e/D6**

Ballot Number: **0001010**

Comment # **3481**

Comment submitted by: Jonathan Labs

Member

Comment Date: 2005/03/09

Starting Page #: **469**

Starting Line #: **14**

Fig/Table#: 

Section: **11.1.3**

Since 802.16e-2005 is an amendment, the MAC encoding should read "Indicates conformance with IEEE Std 802.16e-2005 and its predecessors"

Suggested Remedy

On page 469, line 14, change

"5: Indicates conformance with IEEE Std 802.16e-2005"

to

"5: Indicates conformance with IEEE Std 802.16e-2005 and its predecessors"

Proposed Resolution

Recommendation: 

Reason for Recommendation

Resolution of Group

Decision of Group: **Rejected**

Reason for Group's Decision/Resolution

It is a function of the spec to maintain backward compatibility

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions: *k) done*

Editor's Questions and Concerns

Editor's Action Items

1) none needed
"The start of ranging code groups" appears in the table twice: in Tables 353a and 351a
Named tables have same title
Table 351a—UCD PHY-specific channel encodings - WirelessMAN-OFDMA
Table 353a—UCD PHY-specific channel encodings - WirelessMAN-OFDMA

Suggested Remedy

Merge tables
Remove one of appearances of "start of ranging code groups"
Renumber TLVs: e.g. Allow AAS Beam Select Messages" & "UpperBoundAAS_PREAMBLE" have the same type 174. "Handover Ranging Codes" & "LowerBoundAAS_PREAMBLE" have the same type 173

Proposed Resolution

Recommended: Accepted-Modified

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Questions and Concerns

Editor's Actions

k) done
For TLV Band AMC Entry Average CINR, change the Type from 173 to 175.

Proposed Resolution: Recommendation by

Reason for Recommendation

Resolution of Group: Decision of Group: Accepted

For TLV Band AMC Entry Average CINR, change the Type from 173 to 175.

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions

(Editor’s k) done

Editor’s Questions and Concerns

Editor’s Action Items
I think Table 351a is supposed to be integrated into Table 353a.

**Suggested Remedy**

Combine Table 351a and Table 353a, and renumber the Types for the TLV's from Table 351a so they do not conflict with those already assigned in Table 353a.

---

**Proposed Resolution**

Combine Table 351a and Table 353a, and renumber the Types for the TLV's from Table 351a so they do not conflict with those already assigned in Table 353a.

---

**Reason for Recommendation**

Combine Table 351a and Table 353a, and renumber the Types for the TLV's from Table 351a so they do not conflict with those already assigned in Table 353a.

---

**Group’s Notes**

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**Editor’s Notes**

---

**Editor’s Action Items**

k) done
I object to the implementation in the draft of Comment #583 because contention based association procedure needs more considerations.

Suggested Remedy
Discuss and adopt the contribution C80216e-05_172 (Enhanced contention based association).

Proposed Resolution
Adopt C80216e-05_172r1.

Reason for Recommendation
Decision of Group: Rejected

Reason for Group’s Decision/Resolution
Vote: 32-19
Degrades the performance of other ranging codes with less improvement of the association.

Editor’s Notes
Editor’s Actions
i) none needed

Editor’s Questions and Concerns
Editor’s Action Items
I object to the resolution of Comments #2298 from session #36 because the current text only includes the table entry for sounding channel without the overriding mechanism. Further, the entries for UL ACK and QPSK 1/3 are accepted in the corrigenda. Thus the entry for the UL ACK and QPSK 1/3 C/N overriding is no more necessary.

Suggested Remedy

[Delete the entry for "Normalized C/N for UL ACK region and QPSK 1/3"]

[Add the new entry for the channel sounding as follows]

Name: Normalized C/N for Channel Sounding
Type: 153
Length: 1 byte
Value: 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-Modified Recommendation by

[Add the new entry for the channel sounding as follows]

Name: Normalized C/N for Channel Sounding
Type: 153
Length: 1 byte
Value: Signed integer for the required C/N (dB) for Channel Sounding. This value shall override C/N for the channel sounding in table 334a.
I noticed the numbering of the table is off here. The reference says it should be Table 356, but it is numbered as Table 357.

Editor's Action Items
Break before Make and Make before Break means HO type which is divided based on logical operation, not based on specific technologies. The HO types in DCD messages should be based on specific technologies and be the actual HO supported by 802.16 system.

Proposed Resolution

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Length</th>
<th>Value (variable Length)</th>
<th>PHY scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>HO type support 50</td>
<td>1</td>
<td></td>
<td>Bit 0: Break before Make</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Bit 1: Make before Break</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Bit 0: HO</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Bit 12: Soft HO</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Bit 23: FBSS HO</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Bit 34-7: reserved</td>
<td></td>
</tr>
</tbody>
</table>

Proposed Resolution Recommendation: Accepted-Modified

Reason for Recommendation

Resolution of Group: Accepted-Modified
<table>
<thead>
<tr>
<th>Name</th>
<th>Type (1 byte)</th>
<th>Length</th>
<th>Value (variable Length)</th>
<th>PHY scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>HO type support</td>
<td>50</td>
<td>1</td>
<td>Bit 0: Break before Make</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Bit 1: Make before Break</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Bit 0: HO</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Bit 12: Soft HO</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Bit 23: FBSS HO</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Bit 34-7: reserved</td>
<td></td>
</tr>
</tbody>
</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**
MSS initiates and decides HHO, but there is no reference for it.
We would like to add two parameters in DCD message for MS to refer when HHO.

Suggested Remedy
Adopt the text proposed in contribution IEEE C802.16e-05/109

Proposed Resolution Recommendation: Accepted-Modified
Adopt C802.16e-05/109r2
Change all occurrences of "HHO" to "HO"

Reason for Recommendation
Adopt C802.16e-05/109r2
Change all occurrences of "HHO" to "HO"
I object to the text change in D6 with regard to the addition of DL channel definition TLV to the Table 358a because Type field is missing in that TLV.

Suggested Remedy
Add the Type value of 24.

Proposed Resolution Recommendation: Accepted
Add the Type value of 24.

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Add the Type value of 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
Threshold used by the MS to drop a serving BS from the active set. When the CINR of a serving BS is lower than $H_{\text{Delete}}$, the MS should send \textit{MOB\_MHO\_REQ} to request dropping this serving BS from the active set. This threshold is used for the MS that is performing SHO/FBSS HO. It is in the unit of dB. If the BS does not support FBSS HO/SHO, this value is not set.
No Type value for Paging Group ID

Suggested Remedy
Add Type Value

Proposed Resolution
Recommendation: Insert the value 24 for Paging Group ID type value.

Reason for Recommendation
Resolution of Group: Accepted

Group's Notes
Group's Action Items
Editior's Notes
Editor's Questions and Concerns
Two TLVs in table 358a are missing a 'type' value:
1) TUSC1 permutation active subchannels bitmap
2) TUSC2 permutation active subchannels bitmap

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>TUSC1 permutation active subchannels bitmap</td>
<td>24</td>
</tr>
<tr>
<td>TUSC2 permutation active subchannels bitmap</td>
<td>25</td>
</tr>
</tbody>
</table>

Proposed Resolution Recommendation: Accepted-Modified

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>TUSC1 permutation active subchannels bitmap</td>
<td>25</td>
</tr>
<tr>
<td>TUSC2 permutation active subchannels bitmap</td>
<td>26</td>
</tr>
</tbody>
</table>

Reason for Recommendation

Resolution of Group: Accepted-Modified

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>TUSC1 permutation active subchannels bitmap</td>
<td>25</td>
</tr>
<tr>
<td>TUSC2 permutation active subchannels bitmap</td>
<td>26</td>
</tr>
</tbody>
</table>
Undo the changes made to table 361, deleting all references to A and B flavors.

Proposed Resolution

Recommendation: **Rejected**

Reason for Recommendation

Resolution of Group: **Rejected**

Reason for Group’s Decision/Resolution

As comment said, it is totally implementation dependent. It cannot be the reason that the value field should not specify which code is used.

There are only so many burst profiles that can be simultaneously active. Setting up so many different flavors of LDPC FEC code types, some of which provide no relevant difference in performance, is hence not only absurd, but downright bad engineering. I'd like to see the first implementation that is having both A and B versions of a code simultaneously active. In practice, the person implementing this stuff will make an arbitrary choice between the two and never enable the other one, making it de facto a "for extra-expensive test purposes and needless implementation cost only" feature.
This table is currently not numbered or titled, but there is a cross-reference to it, so it needs a title and number.
I object to the resolution of Comments 2136 from session #35 - some security refinements are still needed

**PKM optimization flags refinements for HO**

This PKM stage is composed of 2 major phases:

" The authentication phase (EAP/Mutual Authentication)"
" The TEK creation phase

The standard today gives the BS a way to inform the SS that the security phase can be skipped. However, it does not specify which sub-phase. There are situations in which authentication is not needed but TEKs recreation should to be done.

**Suggested Remedy**

Incorporate changes documented in IEEE C802.16e-05/148

**Proposed Resolution**

Incorporate changes documented in IEEE C802.16e-05/148r1

**Reason for Recommendation**

Decision of Group: Accepted-Modified

Incorporate changes documented in IEEE C802.16e-05/148r1

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

**Group's Notes**

**Group's Action Items**

**Editor's Notes**

k) done

**Editor's Questions and Concerns**

**Editor's Action Items**
On page 481, line 13, change the text describing the value of bit #3

Bit #3: Omit Network Address Acquisition management messages during current reentry processing. For an unmanaged MSS, this bit indicates that MSS may or shall not omit reacquiring IP address for IP-based packet data service.

Proposed Resolution: Accepted

On page 481, line 13, change the text describing the value of bit #3

Bit #3: Omit Network Address Acquisition management messages during current reentry processing. For an unmanaged MSS, this bit indicates that MSS may or shall not omit reacquiring IP address for IP-based packet data service.

Reason for Recommendation

Resolution of Group

Decision of Group: Rejected

Reason for Group's Decision/Resolution

Vote: 2-3

The complexity of IP address management is not addressed in this solution.

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
Change placement of Section 11.7.2 "SLP-RSP message encoding" to be Heading 2 section or place it under 11.6.

Proposed Resolution

Accept Recommendation by

Change placement of Section 11.7.2 "SLP-RSP message encoding" to be under 11.6.

Reason for Recommendation

Decision of Group: Accepted

Change placement of Section 11.7.2 "SLP-RSP message encoding" to be under 11.6.

Reason for Group’s Decision/Resolution

Group’s Action Items

k) done

Editor’s Action Items

11.7.3, 11.7.4, 11.7.5, 11.7.6 were all removed as they exist in the baseline document.
The draft document is incomplete because it does not deal with the following problem. In 8.3.10.1.2 Transmitter constellation error and test method the method for calculating RMS error incorrectly deals with subchannelised transmissions.

This has been recognised in OFDMA, but needs fixing for OFDM also.

Suggested Remedy
See contribution for further discussion.

Proposed Resolution Recommendation: **Withdrawn**

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  1) none needed

Editor’s Questions and Concerns

Editor’s Action Items
I object to the implementation in the draft of Comment # 2012 because the draft document P802.16e/D6 does not fully reflect the resolution of the Comment #2012 and #2020.
1) The mode selection feedback header removed already in current spec
2) MSS negotiates the support of mode selection feedback subheader through the SBC-REQ/RSP.

Suggested Remedy
Delete Section 11.7.17 MS feedback support in the REG-REQ/RSP message encoding.

Proposed Resolution Recommendation: Superceded

Reason for Recommendation
Resolution of Group: Superceded

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions 1) none needed

Editor's Questions and Concerns

Editor's Action Items
I object to the text change in D6 in section 11.7.17, because the naming of the subheader and header are mixed up and not consistent with the rest of the document.

Suggested Remedy

Modify "bit #0: Mode Selection Feedback Extended Subheader supported"

Modify "bit #1: Mode Selection Feedback Header Ssupported"

Proposed Resolution

Recommendation: Accepted-Modified

Reason for Recommendation

Resolution of Group: Accepted-Modified

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions: k) done

Editor’s Questions and Concerns

Editor’s Action Items
"Old TEK Parameters" and "New TEK/GTEK Parameters" rows contain wrong reference to Table 370.

**Suggested Remedy**

Change to Table 372

**Proposed Resolution**

Recommendation: Accepted

**Recommendation by**

Change to Table 372

**Reason for Recommendation**

**Resolution of Group**

Decision of Group: Accepted

Change to Table 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**
Sections 11.8.3.7.2 and 11.8.3.7.3 allow the MS and BS to negotiate support of "H-ARQ with SPID=0 only" through TLVs 151 and 152. This is not defined by the standard and seems to add no gain over regular H-ARQ CTC IR, H-ARQ CC IR and H-ARQ Chase. Furthermore, there is no description of which coding mechanism is to be used (CTC, CC or other) in conjunction with this H-ARQ mode, nor is there any support of capability negotiation for this. This mode is apparently incomplete and probably redundant.

**Suggested Remedy**

Remove both references to it:

In 11.8.3.7.2 in the description of TLV 151 make the following change (line 20):
"Bit #7: H-ARQ with SPID=0 only reserved"

Also, in 11.8.3.7.3 in the description of TLV 152 make the following change (line 47):
"Bit #7: H-ARQ with SPID=0 only reserved"

**Proposed Resolution**

Remove both references to it:

In 11.8.3.7.2 in the description of TLV 151 make the following change (line 20):
"Bit #7: H-ARQ with SPID=0 only reserved"

Also, in 11.8.3.7.3 in the description of TLV 152 make the following change (line 47):
"Bit #7: H-ARQ with SPID=0 only reserved"

**Reason for Recommendation**

Resolution of Group: Accepted

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

Remove both references to it:

In 11.8.3.7.2 in the description of TLV 151 make the following change (line 20):
"Bit #7: H-ARQ with SPID=0 only reserved"

Also, in 11.8.3.7.3 in the description of TLV 152 make the following change (line 47):
"Bit #7: H-ARQ with SPID=0 only reserved"

**Editor's Notes**

k) done
Should this read "Reserved; shall be set to zero"?

The standard does not provide any means for the MS to send mobility related PHY parameters to the BS. Important parameters include a mobility indication (can be related to Doppler spread), and indication of change in the distance from BS (changes to round trip delay).

Suggested Remedy

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Rejected

Reason for Group’s Decision/Resolution

No text provided.

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
In the last meeting, the use of short-HMAC tuple in mobility management message was accepted. Thus, a new bit supporting short-HMAC tuple should be added in authorization policy support TLV.

Suggested Remedy
[Modify section 11.8.4 as follows]

11.8.4 Authorization policy support

This field indicates authorization policy used by the MS and BS to negotiate and synchronize. A bit value of 0 indicates "not supported" while 1 indicates "supported".

<table>
<thead>
<tr>
<th>Type</th>
<th>Length</th>
<th>Value</th>
<th>Scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.25</td>
<td>1</td>
<td>Bit #0: RSA</td>
<td>SBC-REQ</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bit #1: EAP</td>
<td>SBC-RSP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bit #2: OMAC supported (if set to 0, HMAC is the default)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bit #3: short-HMAC supported (If set to 0, HMAC is the default)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bit #24-7: Reserved. Set to 0</td>
<td></td>
</tr>
</tbody>
</table>

Proposed Resolution

Resolution of Group: Superceded

See comment 3136

Reason for Group's Decision/Resolution

Editor's Notes

Editor's Actions

I) none needed

Editor's Questions and Concerns
Editor's Action Items
Power save classes capability in sleep mode

The proposal is to define a capability TLV in SBC which defines the number of power save classes supported by the MSS.

Suggested Remedy

[Insert new sub-clause 11.8.x]

11.8.5 Power save classes capability in sleep mode

This parameter define the capability of the MS supporting different power save classe IDs in sleep mode.

<table>
<thead>
<tr>
<th>type</th>
<th>length</th>
<th>value</th>
<th>Scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>[145/146].cst.3.xx</td>
<td>1</td>
<td>[see below]</td>
<td>SBC-REQ / SBC-RSP</td>
</tr>
</tbody>
</table>

bit 0: power save class | supported.
bit 1: power save class | supported.
bit 2: power save class || supported.
bits 3-5: number of power save class instances supported from class | and/or ||
bits 6-8: number of power save class instances supported from class |||

[Change in Section 6.3.19.1, p. 139]

MS shall be capable of supporting at least 4 Power-Saving Classes simultaneously.

Proposed Resolution Recommendation: Accepted-Modified Recommendation by

[Insert new sub-clause 11.8.x]

11.8.5 Power save classes capability in sleep mode

This parameter define the capability of the MS supporting different power save classe IDs in sleep mode.
This parameter define the capability of the MS supporting different power save classe IDs in sleep mode.

<table>
<thead>
<tr>
<th>type</th>
<th>length</th>
<th>value</th>
<th>Scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>[145/146].cst.3.xx</td>
<td>1</td>
<td>[see below ]</td>
<td>SBC-REQ / SBC-RSP</td>
</tr>
</tbody>
</table>

bit 0: power save class | supported (shall be set to 1).
bit 1: power save class || supported.
bit 2: power save class ||| supported.
bits 3-5: number of power save class instances supported from class | and/or ||
bits 6-8: number of power save class instances supported from class |||

[Change in Section 6.3.19.1, p. 139]

MS shall be capable of supporting at least 4 Power Saving Classes simultaneously.

Reason for Recommendation

Resolution of Group Decision of Group: Accepted-Modified

[Insert new sub-clause 11.8.x]

11.8.5 Power save classes capability in sleep mode

This parameter define the capability of the MS supporting different power save classe IDs in sleep mode.

<table>
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<tr>
<th>type</th>
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</tr>
</thead>
<tbody>
<tr>
<td>[145/146].cst.3.xx</td>
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</tr>
</tbody>
</table>

bit 0: power save class | supported (shall be set to 1).
bit 1: power save class || supported.
bit 2: power save class ||| supported.
bits 3-5: number of power save class instances supported from class | and/or ||
bits 6-8: number of power save class instances supported from class |||

[Change in Section 6.3.19.1, p. 139]
MS shall be capable of supporting at least 4 Power Saving Classes simultaneously.
I object to the resolution of Comments #0623 from session #36 because the current text does not consider Band AMC partial usage of subchannel.

In the current spec., the CINR report is carried with REP-RSP MAC message or fast feedback channel (CQICH). However, there are still some ambiguities regarding the frequency reuse factor, whether the loading is reflected on the estimate or not, and the relationship between REP-REQ/RSP and fast feedback channel (CQICH) operation. In this contribution, we propose the clarification to get rid of such ambiguities.

Suggested Remedy
Discuss and adopt C80216e-05_162

Proposed Resolution
Recommendation: Accepted-Modified

Reason for Recommendation
Resolution of Group: Rejected

Reason for Group’s Decision/Resolution
Vote: 1-9
It is not clear as to what the author is trying to accomplish.

Editor’s Notes
Editor’s Action Items
1) none needed

Editor’s Questions and Concerns

Editor’s Action Items
I object to the resolution of Comments #0623 from session #36 because the current text include text duplicate with IEEE16-2004.

1. For the normal subchannel and safety channel, IEEE802.16-2004 already defines the same TLV.
2. For the band AMC, 16d requires 4 bands report and 16e requires 5 bands report. So the tow spec. shall have different TLV for Band AMC.
3. For the band AMC, 16e spec. requires 5 bands report. However, the current TLV can carry only 4 bands report due the short length. The length of 4 bytes shall be changed to 5 bytes.

Suggested Remedy

[Delete entry type 2.4, 2.6]

[Change the length of 2.5 from 4 to 5 bytes]

[Replace type value for band AMC of 2.5 with 2.4]
[Replace type value for sounding of 2.7 with 2.5]
I didn't completely understand this change. Do I completely delete the first and third rows? Then I am returning 2.5 to 5 bytes like it was before. The other two I understand.

Should the new text under the table also be changed if we are completely removing types 2.4 and 2.6?
This parameter was deleted

Suggested Remedy
Change in Table 383

10. Minimum tolerable traffic rate
to
10. reserved

Proposed Resolution Recommendation: Accepted
Change in Table 383

10. Minimum tolerable traffic rate
to
10. reserved

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Change in Table 383

10. Minimum tolerable traffic rate
to
10. reserved

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items
<table>
<thead>
<tr>
<th>Editor's Notes</th>
<th>Editor's Actions</th>
<th>k) done</th>
</tr>
</thead>
</table>

Table 382 needs a title.
Add lines to Table 383
35 Unsolicited grant interval
36 Unsolicited polling interval
37 SN Feedback Enabled
38 H-ARQ Service Flows
39 CID allocation for Active BSs

Change Type value to [145/146].xx accordingly in 11.13.28-32

Proposed Resolution: Accepted
Add lines to Table 383
35 Unsolicited grant interval
36 Unsolicited polling interval
37 SN Feedback Enabled
38 H-ARQ Service Flows
39 CID allocation for Active BSs

Change Type value to [145/146].xx accordingly in 11.13.28-32

Reason for Recommendation

Resolution of Group: Accepted
Add lines to Table 383
35 Unsolicited grant interval
36 Unsolicited polling interval
37 SN Feedback Enabled
38 H-ARQ Service Flows
39 CID allocation for Active BSs

Change Type value to [145/146].xx accordingly in 11.13.28-32

Reason for Group's Decision/Resolution
11.31.31—Should the type be changed to [145/146].38? (It currently reads "44")

Suggested Remedy
Move the whole section to 11.7

Proposed Resolution Recommendation: Accepted
Move the whole section to 11.7

Reason for Recommendation

Resolution of Group: Accepted
Move the whole section to 11.7

Reason for Group's Decision/Resolution

Group's Notes

MTEC, Non-binding

Type

Node submitted by: Vladimir Yanover

Comment # 3510

Document under Review: P802.16e/D6

Ballot Number: 0001010

Comment Date: 2005/03/09

Starting Page # 514 Starting Line # 49 Fig/Table# 11.13.18.9

This section describes capability of MS with respect to support of ACKs of different types. Scope is defined as REG-REQ, REG-RSP, but the section is placed under 11.13 which is "Service flow management encodings"
I object to resolution to comment 1960. Resolution does not explain:

a) how the convergence sublayer is expected to use, e.g., the IP-related fields such as version number (or IPv4 address) when these have been compressed by the application.
b) how the convergence sublayer is supposed to find the contextId, since it uses a special encoding and can be either 1 or 2 bytes long.
c) why it is necessary to define a convergence sublayer type for ECRTP that is distinct from ROHC, i.e., how the classification process by the CS is different.

Suggested Remedy:
Accept contribution C802.16e-05_078r1

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 l) none needed

Editor’s Questions and Concerns

Editor’s Action Items
no value in field "Type" specified. Only place holder .cst.3.17

Suggested Remedy
change in field Type [145/146].cst.3.17 to [145/146].27

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
change in field Type [145/146].cst.3.17 to [145/146].27

Reason for Group’s Decision/Resolution

Group’s Notes
Group’s Action Items

Editor’s Notes Editor’s Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
I object to the resolution of Comments 2152, 2023 from session #35 because refinement in MBS text are still needed.

MBS refinement

As for the major changes and enhancements for the MBS in the last sessions, a capability negotiation and text refinements are needed:
1. MBS security
2. MBS Time diversity
3. MBS MAP

Suggested Remedy
Incorporate changes documented in IEEE C802.16e-05/151

Proposed Resolution Recommendation: Accepted Recommendation by 1
Incorporate changes documented in IEEE C802.16e-05/151r2

Reason for Recommendation

Resolution of Group Decision of Group: Rejected

Reason for Group’s Decision/Resolution

Vote: 5-5
The current multi-BS MBS does not allow negotiation capability between the MS and the BS.

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
This TLV indicates whether or not the MBS service is being requested for the connection that is being setup. A value of 0 indicates Single-BS-MBS is requested and a value of 1 indicates Multi-BS-MBS is requested.
<table>
<thead>
<tr>
<th>Comment</th>
<th>Type</th>
<th>Starting Page</th>
<th>Starting Line</th>
<th>Fig/Table#</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>3515</td>
<td>Editorial</td>
<td>517</td>
<td>34</td>
<td></td>
<td>11.13.21</td>
</tr>
</tbody>
</table>

**Suggested Remedy**

change in field Type: [145/146].rr to [145/146].35

**Proposed Resolution**

Recommendation: Change in field Type: [145/146].rr to [145/146].35

**Reason for Recommendation**

Resolution of Group: Accepted

done

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

change in field Type: [145/146].rr to [145/146].35

**Group’s Notes**

**Group’s Action Items**

**Editor’s Notes**

**Editor’s Actions**

k) done

**Editor’s Questions and Concerns**

**Editor’s Action Items**
in section reference to §6.4.16 is made. This section did not exist.

Suggested Remedy
rework to right reference

Proposed Resolution
Recommendation:  

Reason for Recommendation

Resolution of Group  
Decision of Group: Accepted-Modified  

Change reference to 6.3.18  

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
<table>
<thead>
<tr>
<th>Comment #</th>
<th>Type</th>
<th>Starting Page #</th>
<th>Starting Line #</th>
<th>Fig/Table#</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>3517</td>
<td>Editorial</td>
<td>520</td>
<td>21</td>
<td></td>
<td>11.13.30</td>
</tr>
</tbody>
</table>

[145/146].28 is specified as Type. This is also defined in 11.13.19.1 CS specification in Type

Suggested Remedy
modify [145/146].28 into 145/146].36

Proposed Resolution

Recommendation:

Reason for Recommendation:

Resolution of Group: Accepted
modify [145/146].28 into 145/146].36

Reason for Group’s Decision/Resolution:

Group’s Notes:

Group’s Action Items:

Editor’s Notes:

Editor’s Actions:

Editor’s Questions and Concerns:

Editor’s Action Items:

k) done
The value in field Type 145/146].30 is used in 11.13.23, double usage of that value

Suggested Remedy
modify 145/146].30 into [145/146].37

Proposed Resolution Recommendation: modify 145/146].30 into [145/146].37

Reason for Recommendation
Resolution of Group: Accepted
modify 145/146].30 into [145/146].37

Reason for Group’s Decision/Resolution

Group’s Notes
Group’s Action Items

Editor’s Notes Editor’s Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
In order to create or modify an IMS-based service flow, MSS shall send to BS an authorization token which is used for authorizing the QoS of the service flow. Since there is no way to send the authorization token in current DSA-REQ and DSC-REQ messages, it is necessary to define a TLV as one of the service flow encodings for those messages.

**Suggested Remedy**

On page 521, line 11, add the following

11.13.33 Authorization Token

The value of this field specifies an authorization token which may be used when MSS creates or modifies a service flow by sending DSA-REQ or DSC-REQ message. An authorization token identifies a session and its QoS parameters, and it is used for authorizing the QoS for one or more IP flows generated by IMS-based service creation/modification procedures. The field should not be included in the DSA-REQ or DSC-REQ messages which is sent by BS.

<table>
<thead>
<tr>
<th>Type</th>
<th>Size</th>
<th>Value</th>
<th>Scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>??</td>
<td>Variable</td>
<td>Authorization token which is used for authorizing the QoS for one or more IP flows generated by MSS-initiated IMS-based service flow creation or modification procedures</td>
<td>DSA-REQ</td>
</tr>
</tbody>
</table>

**Proposed Resolution**

On page 521, line 11, add the following

11.13.33 Authorization Token

The value of this field specifies an authorization token which may be used when MSS creates or modifies a service flow by sending DSA-REQ or DSC-REQ message. An authorization token identifies a session and its QoS parameters, and it is used for authorizing the QoS for one or more IP flows generated by IMS-based service creation/modification procedures. The field should not be included in the DSA-REQ or DSC-REQ messages which is sent by BS.

<table>
<thead>
<tr>
<th>Type</th>
<th>Size</th>
<th>Value</th>
<th>Scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>??</td>
<td>Variable</td>
<td>Authorization token which is used for authorizing the QoS for one or more IP flows generated by MSS-initiated IMS-based service flow creation or modification procedures</td>
<td>DSA-REQ</td>
</tr>
</tbody>
</table>
On page 521, line 11, add the following

11.13.33 Authorization Token

The value of this field specifies an authorization token which may be used when MSS creates or modifies a service flow by sending DSA-REQ or DSC-REQ message. An authorization token identifies a session and its QoS parameters, and it is used for authorizing the QoS for one or more IP flows generated by IMS-based service creation/ modification procedures. The field should not be included in the DSA-REQ or DSC-REQ messages which is sent by BS.

<table>
<thead>
<tr>
<th>Type</th>
<th>Size</th>
<th>Value</th>
<th>Scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>??</td>
<td>Variable</td>
<td>Authorization token which is used for authorizing the QoS for one or more IP flows generated by MSS-initiated IMS-based service flow creation or modification procedures</td>
<td>DSA-REQ, DSC-REQ</td>
</tr>
</tbody>
</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
I object to the resolution of Comment #1850, #1859, #1861, #1864 in 80216-05_010.pdf comment resolution because I believe that specific system profiles should be included in the standard for mobility operation.

Suggested Remedy
Adopt contribution C80216e-05_60r2 or the latest revision.

Reason for Recommendation
Resolution of Group: Rejected
Decision of Group: Rejected

Reason for Group's Decision/Resolution
Vote: 48-23
This contribution is incomplete in several ways:
- it only defines a few parameters for the MAC and PHY, but there is a lot more than what's being proposed
- incomplete in terms of frequency bands, parameters, options

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
We propose to include in the text a profile for OFDMA systems with 5 MHz bandwidth. The frame duration shall be 10 ms for the base station and 10 ms and 5 ms (with auto detect) for the subscriber station. The unresolved comment 1855 referred to the need of a 5 MHz profile. Several other comments and contributions recognized the need for additions and changes in the profile section.

Suggested Remedy
Adopt the proposal in IEEE C802.16e-05/154

Proposed Resolution Recommendation: Accepted Recommendation by
Adopt the proposal in IEEE C802.16e-05/154

Reason for Recommendation
Decision of Group: Rejected

Reason for Group's Decision/Resolution
Vote: 6-12
This contribution is incomplete in several ways:
- it only defines a few parameters for the MAC and PHY, but there is a lot more than what's being proposed
- incomplete in terms of frequency bands, parameters, options

Group's Action Items

Editor's Actions 1) none needed

Editor's Questions and Concerns

Editor's Action Items
**AES Key Wrap is not specified in cipherwuites**

**Suggested Remedy**
See contribution IEEE C802.16e-179

**Proposed Resolution**
Recommended: **Accepted-Modified**

**Reason for Recommendation**
Accept contribution IEEE C802.16e-178

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

Accept contribution IEEE C802.16e-05/178

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

**Group’s Notes**

**Editor’s Notes**

**Editor’s Questions and Concerns**

**Editor’s Action Items**

k) done
I object to the resolution of session #35 because accepted comment 807 from DB 80216-04_51r3 was not applied correctly to D6.

In comment 807 in 80216-04_51r3 the following addition was approved. The addition however was not applied (instead the entire section was removed).

Suggested Remedy

I suggest to reinclude the section and add the approved content

8.4.5.4.1 UIUC Allocation

[add the following before "NOTE-The CDMA allocation UIUC provides (among other things)… "]

UIUC = 12 is used for allocations of initial ranging and/or periodic ranging/BW request. A frame may include all types of allocation simultaneously, each with same or different sizes. There may be a maximum of one initial ranging allocation and one periodic ranging/BW request allocation and one initial ranging for paged MSS per frame.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Rejected

Reason for Group’s Decision/Resolution

Out of scope of the recirc.

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
The message, MOB_MSHO-RSP, does not exist.

Suggested Remedy
1. remove line 29 and line 30 on page 539
2. remove line 29 and line 30 on page 540

Proposed Resolution Recommendation: Accepted
1. remove line 29 and line 30 on page 539
2. remove line 29 and line 30 on page 540

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
1. remove line 29 and line 30 on page 539
2. remove line 29 and line 30 on page 540

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done
Another comment deleted the tables with this term in it.

Editor's Questions and Concerns

Editor's Action Items
I object to the resolution of session #35 because accepted comment 2239 from DB 80216-05_001r2 was not applied correctly to D6. Comment 2239 was submitted in 80216-05_001r2, accepted but was not applied to D6.

Add to the table in section "11.1.5 Vendor ID encoding" the following scoped messages:
SBC-REQ (see 6.3.2.3.23)
SBC-RSP (see 6.3.2.3.24)
Editor's Action Items

Document under Review: P802.16e/D6
Ballot Number: 0001010

Comment # 3526
Comment submitted by: Yong Chang

Type: Technical, Non-binding
Starting Page # 999
Starting Line #
Fig/Table# Section

Per decision about AES-CTR enhancement, test vector need to modified

Suggested Remedy
See contribution IEEE C802.16e-178

Proposed Resolution Recommendation: Accepted-Modified Recommendation by
Accept contribution IEEE C802.16e-179r2

Reason for Recommendation

Resolution of Group Decision of Group: Accepted-Modified
Accept contribution IEEE C802.16e-05/179r2

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions

Please check formatting. Unsure of how to set E.1.1.4 up.

Editor’s Questions and Concerns

Editor’s Action Items
I object to the implementation of comment #1083, 1085 and 1202. In the last #35 session, the method to support Collaborative SM of dual antenna SS is accepted in normal map. And normal map extension for HARQ MIMO is also accepted (it isn't inserted yet in spec). Therefore we suggest applying the method to HARQ map for compatibility with the normal map.

Suggested Remedy

[Modify the following sentence of 8.4.5.4.25]

For each single SS sub-burst (MU indicator = 0) matrix and layer information shall be read from Dedicated MIMO UL Control IE, if set by the indicator bit, and be applied to the burst accordingly. For each multi SS sub-burst (MU Indicator= 1), N_layer for this sub-burst shall be set to 2 and the first SS with the first RCID shall use the pilot pattern A for single antenna, the pilot pattern A/B for dual antenna in 8.4.8.1.5 and the first UIUC, whereas the second SS with the second RCID shall use the pilot pattern B for single antenna, the pilot pattern C/D for dual antenna and the second UIUC.

Proposed Resolution

Recommendation:

Resolution of Group: Superceded

See comment 3333
I object to the implementation of comment #1083, 1085, 1202 and 1952. H-ARQ Sub-burst IE format for STC sub-packet combining should be clarified. And BS with 3 or 4 antennas should choose retransmission alternatives and retransmit as the method of this STC sub-packet combining.

Suggested Remedy

*Modify the Table 306l as follow:*  

This IE is used to support the STC subpacket retransmission.

Table 306l MIMO DL STC H-ARQ Sub-burst IE Format

<table>
<thead>
<tr>
<th>MIMO_DL_STC_H-ARQ_Sub-Burst IE {}</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>For (j=0; j&lt;N sub-burst; j++) {}</td>
<td></td>
</tr>
<tr>
<td>Tx count</td>
<td>2</td>
</tr>
<tr>
<td>00: first initial transmission</td>
<td></td>
</tr>
<tr>
<td>01: second odd retransmission</td>
<td></td>
</tr>
<tr>
<td>10: third even retransmission</td>
<td></td>
</tr>
<tr>
<td>11: fourth transmission reserved</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Retransmission alternative {}</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>00: alternative 1</td>
<td></td>
</tr>
<tr>
<td>01: alternative 2</td>
<td></td>
</tr>
<tr>
<td>10: alternative 3</td>
<td></td>
</tr>
<tr>
<td>11: reserved</td>
<td></td>
</tr>
</tbody>
</table>

*This Retransmission alternative field is used to choose one of several alternatives subpacket retransmissions in 8.4.8.9*

Proposed Resolution: Recommendation by

Resolution of Group: Superceded

Reason for Group’s Decision/Resolution

See comment 3333
The location of Extended compact UL-MAP IE types table does not correspond with that of DL-MAP subtypes. DL-MAP Subtypes is located in '6.3.2.3.43.6 Compact DL-MAP IE for extension'. Therefore UL-MAP Subtypes will be also located in '6.3.2.3.43.7.7 Compact UL-MAP IE for extension'.

Proposed Resolution

Move Table 90a and rename 'Table 106a - UL-MAP Subtypes'.

Resolution of Group

Decision of Group: Accepted

Reason for Group's Decision/Resolution

Move Table 90a and rename 'Table 106a - UL-MAP Subtypes'.
I object to the resolution of comment #1952 and #2284 because discussion between the contribution and reply was not enough to evaluate them. In the current specification, the STC retransmission subpacket has a fixed form, however, adaptation of retransmission subpacket according to channel condition can improve the system performance.

**Suggested Remedy**

Adopt the contribution C802.16e-04_509r5

**Proposed Resolution**

Adopt contribution C802.16e-04_509r6

**Reason for Recommendation**

Decision of Group: **Rejected**

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

Vote 1: 40-15 in favor (fails)
Vote 2: 48-24 (fails)
Signalling scheme is incomplete.

**Editor’s Notes**

1) none needed

**Editor’s Questions and Concerns**
I object to the resolution of comment #1956 because feedback in STTD mode is useful and object to the implementation of comment #1227 because enhanced Fast-feedback channel transmits the pilot carriers which are not required for non-coherent detection. It is better to make another Fast-feedback channel on the pilot carriers to save the uplink resources or to provide the more Fast-feedback channels.

Suggested Remedy
Adopt the contribution C80216e-05_039r1

Proposed Resolution Recommendation: Accepted
Adopt the contribution C80216e-05_039r1

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Adopt the contribution C802.16e-05/039r1

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done
All except the last change to 11.8.3.7.9. Another comment had already changed the bit assignment. Please look at it again. It also should be noted that I redrew the two figures. You might want to check them for accuracy.

Editor's Questions and Concerns

Editor's Action Items
I object to the implementation in the draft of Comment #396 (follow-up comment #2191) because Idle Mode MS needs to be notified of DCD/UCD changes.

Suggested Remedy

Adopt the contribution C80216e-05_169 "DCD/UCD changes in Idle Mode"

Reason for Group’s Decision/Resolution

Decision of Group: Superceded

Reason for Recommendation

Resolution of Group

See comment 3200

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions

Editor’s Questions and Concerns

Editor’s Action Items
subcarrier index is used in two different ways:
1) -Nused/2...0...+(Nused/2-1)  
2) k=0...840 starting with k=0 the lowest subcarrier

make explanation in chapter 8.4.9.4.2 that k=0 .. (Nused-1)

**Proposed Resolution**

**Recommendation by**

Reason for Recommendation

Resolution of Group: Rejected

Reason for Group’s Decision/Resolution

Described text does not exist in the document.

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
all over the document SS, MSS or MS are used

Suggested Remedy
This have to be aligned

Proposed Resolution Recommendation: Accepted-Modified

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

Resolution of Group Decision of Group: Accepted-Modified

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

Editor's Action Items k) done
There exists in the document (throughout) some inappropriate editorial mark-up (i.e. underscore, strikethrough) that refers to changes from one version of 802.16e compared to another version of 802.16e, rather than changes to the baseline document. These need to be removed.

Suggested Remedy
Check for and fix inappropriate editorial mark-up, including strike-out and underscores that do not apply to the baseline document.

Proposed Resolution

Reason for Recommendation

Resolution of Group
Decision of Group: Accepted

Check for and fix inappropriate editorial mark-up, including strike-out and underscores that do not apply to the baseline document.

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
Due to a lack of time, some of the accepted editorial formatting suggested by David James was not completed for D6.

Suggested Remedy
Correct table formatting and other editorial issues per the original request from David James.

Proposed Resolution

Reason for Recommendation

Resolution of Group
Decision of Group: Accepted
Correct table formatting and other editorial issues per the original request from David James.

Reason for Group’s Decision/Resolution

Group’s Notes
Group’s Action Items

Editor’s Notes
Editor’s Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
I object the resolution of comment #1937. The concatenation rule is broken for 4 antenna MIMO case. In the current standard, the channel concatenation for FEC is specified based on single antenna case. For MIMO with spatial multiplexing, it is not clear whether it shall follow the same concatenation rule. If it does, then not all required block sizes are defined in the standard. To address the backward compatibility issue, we can apply this to .16e MS only.

**Suggested Remedy**

Adopt contribution IEEE C802.16e-05/082r2.

**Proposed Resolution**

Adopt contribution IEEE C802.16e-05/082r2.
Revise text in the contribution to replace all references to "CTC" with "LDPC".

**Reason for Recommendation**

Adopt contribution IEEE C802.16e-05/082r2.
Revise text in the contribution to replace all references to "CTC" with "LDPC".

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

Adopt contribution IEEE C802.16e-05/082r2.
Revise text in the contribution to replace all references to "CTC" with "LDPC".

**Editor's Notes and Concerns**

k) done
Table 375 Table Value mistakenly set to 127 that has no value specified

Suggested Remedy
Table 375 Table Value should be 128 not 127 to identify 0x80

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

Table 375 Table Value should be 128 not 127 to identify 0x80

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes Editor's Actions k) done
Editor's Questions and Concerns

Editor's Action Items
I disagree with the resolution of comments 85 and 2005.
1) Items are not in alphabetical order.
2) Some items (page 10, lines 9-12) are concepts defined in base standard and abbreviation needed in Corrigendum, not 16e

DAC1

Suggested Remedy

Page 9, Line 20: exchange text of items 3.71 and 3.72 as these are out of order.
Page 9, Lines 48-64, renumber "3.78" to "3.81" by incrementing by 1.
Copy Page 10, Line 7 to page 9, line 47 and replace "3.82" with "3.78".
Page 10, delete lines 9-12.
Delete Page 11, line 15: "FUSC ..."
Delete Page 11, line 19: "HARQ ..."
Delete Page 11, line 26: "PUSC ..."

Proposed Resolution: Recommendation by

Reason for Recommendation

Resolution of Group: Accepted

Page 9, Line 20: exchange text of items 3.71 and 3.72 as these are out of order.
Page 9, Lines 48-64, renumber "3.78" to "3.81" by incrementing by 1.
Copy Page 10, Line 7 to page 9, line 47 and replace "3.82" with "3.78".
Page 10, delete lines 9-12.
Delete Page 11, line 15: "FUSC ..."
Delete Page 11, line 19: "HARQ ..."
Delete Page 11, line 26: "PUSC ..."

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions k) done

Editor's Questions and Concerns
I disagree with the resolution of comments 111 and 2019.

Editorial clarification

Suggested Remedy

Page 13, line 21, replace "to send bandwidth" with "to send a combined bandwidth".

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

Page 13, line 21, replace "to send bandwidth" with "to send a combined bandwidth".

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
I disagree with the resolution of comment 2177 TBD!

Suggested Remedy
Page 14, line 61, Replace "ddd" with "20a".
Also page 14, line 26/27, replace "contain apayment" with "contain a payment".

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Page 14, line 61, Replace "ddd" with "20a".
Also page 14, line 26/27, replace "contain apayment" with "contain a payment".

Reason for Group’s Decision/Resolution

Group’s Notes
Group’s Action Items

Editor’s Notes Editor’s Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
I disagree with the resolution of comment xxx.
CINR is not a measure of UL Tx Power, so either rename or replace description.
Also no units specified.

Suggested Remedy

Page 17, line 19, replace "UL Tx power level" with "CINR".
Page 17, line 21, replace "Tx power" with "CINR".
Style question: should the units be mentioned in the table, or the body, or in both?
Re format columns of table to avoid unnecessary hyphenation (page 17, line 26).

Proposed Resolution

Page 17, line 19, replace "UL Tx power level" with "CINR".
Page 17, line 21, replace "Tx power" with "CINR".
Style question: should the units be mentioned in the table, or the body, or in both?
Re format columns of table to avoid unnecessary hyphenation (page 17, line 26).

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted

Page 17, line 19, replace "UL Tx power level" with "CINR".
Page 17, line 21, replace "Tx power" with "CINR".
Style question: should the units be mentioned in the table, or the body, or in both?
Re format columns of table to avoid unnecessary hyphenation (page 17, line 26).

Editor's Action Items

k) done
I disagree with the resolution of comment xxx.
Improve layout.

Suggested Remedy
Re format columns of table to avoid unnecessary hyphenation (page 17, line 26).
Move Page 18
Page 21, line 54: Change column widths for Figure 21a (should be 20g), and avoid splitting a figure over 2 pages.
Page 22, line 12: Change column widths for Figure 21b (should be 20h).

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Re format columns of table to avoid unnecessary hyphenation (page 17, line 26).
Move Page 18
Page 21, line 54: Change column widths for Figure 21a (should be 20g), and avoid splitting a figure over 2 pages.
Page 22, line 12: Change column widths for Figure 21b (should be 20h).

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
Move rows of Table 7c with names "EC", "HT" and "Type" to top of table to match order in Figure 20c.
No units explicit in descriptions of "UL-TX-POWER" and "UL-HEADROOM"

Suggested Remedy
Make explicit unit is 1dB steps.
Replace page 18, line 26, "EIRP" with "EIRP in 1 dB steps."
Replace page 18, line 27, "to 63." with "to 63 in 1 dB steps."

Proposed Resolution Recommendation: Accepted
Make explicit unit is 1dB steps.
Replace page 18, line 26, "EIRP" with "EIRP in 1 dB steps."
Replace page 18, line 27, "to 63." with "to 63 in 1 dB steps."

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Make explicit unit is 1dB steps.
Replace page 18, line 26, "EIRP" with "EIRP in 1 dB steps."
Replace page 18, line 27, "to 63." with "to 63 in 1 dB steps."

Editor’s Actions k) done
6.3.2.1.4.3 follows other parts of 6.3.2.1.4 so does not need its own instruction.

Suggested Remedy
Add subclause "6.3.2.1.4.3" to list at page 18, line 43.
Delete instruction, page 21, line 42.

Proposed Resolution Recommendation: Accepted
Add subclause "6.3.2.1.4.3" to list at page 18, line 43.
Delete editorial instruction, page 21, line 42.

Resolutions of Group Decision of Group: Accepted
Add subclause "6.3.2.1.4.3" to list at page 18, line 43.
Delete editorial instruction, page 21, line 42.

Also changed "subclause" to "subclauses" in editorial instruction.
Reference to Table ought to be to Figure, and it ought to be two figures.

Suggested Remedy
Page 18, line 51, Replace "Table 20d." with "Figure 20d and Figure 20e."
Page 19, line 25, replace "a) Feedback" with "Figure 20d -- Feedback"
Page 19, line 52, replace "b) Feedback" with "Figure 20e -- Feedback"
Delete Page 19, line 53.
Renumber figures:
Page 21, line 4: replace "20e below." with "20f."
Page 21, line 19, replace "20e" with "20f."
Page 21, line 49, replace "20d" with "20g."
Page 21, line 50, replace "20e" with "20h."
Page 22, line 8, replace "21a" with "20g."
Page 22, line 26, replace "21b" with "20h."

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Page 18, line 51, Replace "Table 20d." with "Figure 20d and Figure 20e."
Page 19, line 25, replace "a) Feedback" with "Figure 20d -- Feedback"
Page 19, line 52, replace "b) Feedback" with "Figure 20e -- Feedback"
Delete Page 19, line 53.
Renumber figures:
Page 21, line 4: replace "20e below." with "20f."
Page 21, line 19, replace "20e" with "20f."
Page 21, line 49, replace "20d" with "20g."
Page 21, line 50, replace "20e" with "20h."
Page 22, line 8, replace "21a" with "20g."
Page 22, line 26, replace "21b" with "20h."

Reason for Group’s Decision/Resolution

Group’s Notes
This also created a renumbering need in 6.3.2.1.6. That figure is now labeled as Figure 21a. Cross-reference below has been changed.

I disagree with the resolution of comments because the various headers are incompatible with requirements on headers. The first byte of the minifeedback header can take on the value "0xFX", disallowed by base standard (see .16e/D6 page 14 line 50-52). Either delete section 6.3.2.1.4.2 or delete last three rows of Table 7d (page 20, lines 54-62).

Deleted section 6.3.2.1.4.2

Suggested Remedy
Delete section 6.3.2.1.4.2

Proposed Resolution Recommendation: Accepted-Duplicate

Reason for Recommendation

Resolution of Group Decision of Group: Accepted-Duplicate

See comment 3066

Reason for Group's Decision/Resolution

Waiting for resolution of 3066
Typos

Suggested Remedy
Page 21, line 25
Re-label paragraphs g) to k) as a) to e)
Page 21, line 25, missing full-stop.
Page 21, line 30, replace "Table 7b" with "Table 7d".
Page 21, line 39, replace "Min" with "Mini".

Proposed Resolution

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
Validity must be specific, but proximate is unnecessary.

Suggested Remedy
page 23, line 44, delete "proximate".

Proposed Resolution Recommendation: Accepted-Modified
page 23, line 44, replace "proximate" with "estimated".

Reason for Recommendation
Resolution of Group Decision of Group: Accepted-Modified
page 23, line 44, replace "proximate" with "estimated".

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

Editor's Notes Editor's Actions k) done
Editor's Questions and Concerns
Editor's Action Items
No Table number for Table at page 24, line 31.

Suggested Remedy
Page 24, line 31, add "Table 7f -- Bandwidth control and uplink sleep control header"
Page 25, line 45, replace "7f" with "7g".
Page 26, line 4, replace "Table 7f" with "Table 7g".

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Page 24, line 31, add "Table 7f -- Bandwidth control and uplink sleep control header"
Page 25, line 45, replace "7f" with "7g".
Page 26, line 4, replace "Table 7f" with "Table 7g".

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes Editor’s Actions k) done

Editor's Questions and Concerns

Editor's Action Items
Mismatch between Table 7f and Figure 21c. SDU_SN(18) in Figure but 3 separate 6 bit fields in Table 7f.

Suggested Remedy
Specify ordering by changing Figure 21c to make explicit three 6-bit fields marked "SDU SN 1 (6)", "SDU SN 2 (6)", "SDU SN 3 (6)".

Proposed Resolution Recommendation: Accepted
Recommendation by
Specify ordering by changing Figure 21c to make explicit three 6-bit fields marked "SDU SN 1 (6)", "SDU SN 2 (6)", "SDU SN 3 (6)".

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Specify ordering by changing Figure 21c to make explicit three 6-bit fields marked "SDU SN 1 (6)", "SDU SN 2 (6)", "SDU SN 3 (6)".

Reason for Group’s Decision/Resolution

Group’s Notes
Group’s Action Items

Editor’s Notes Editor’s Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
The requirement at page 26, line 51:
*If the Mesh subheader is indicated, it shall precede all other subheaders.*
is incompatible with the requirement at page 28, line 6:
*The Extended Subheader Field subheader is specified in Table 13a. The Extended Subheader Field, when used, shall always appear immediately after the GMH and before all other subheaders, as described in 6.3.2.2.*
Also, what is a GMH? (Actually used in 802.16-2004, so this becomes a corrigendum issue).

**Suggested Remedy**
State that extended subheaders cannot be used in MESH mode.

**Proposed Resolution**
**Recommendation:** Accepted
State that extended subheaders cannot be used in MESH mode.

**Reason for Recommendation**

**Resolution of Group**
**Decision of Group:** Accepted
State that extended subheaders cannot be used in MESH mode.

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

Editor's Action Items
The location of the Fast UL feedback subheader suggests it is an "extended subheader", but it does not appear in table 13b or 13c.

Suggested Remedy
Move section elsewhere, or add to table 13b or 13c.

Proposed Resolution

Resolution of Group

Decision of Group: **Superceded**

See 3092

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes

Editor's Actions

Editor's Questions and Concerns

Editor's Action Items
There is no table 99a, mentioned at page 30, line 11 and line 15. Do you mean Table 299a?

Suggested Remedy
Fix table reference.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted
Fix table reference.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items
If section 6.3.2.2.8 defines an extended subheader, it would be better made part of 6.3.2.2.7. Better still, to reduce the extreme nesting, make the following relabellings:

6.3.2.2.7.1 => 6.3.2.2.8
6.3.2.2.7.2 => 6.3.2.2.9
6.3.2.2.7.3 => 6.3.2.2.10
6.3.2.2.7.4 => 6.3.2.2.11
6.3.2.2.8 => 6.3.2.2.12

and add a line of text at page 28, line 13, that states that the various subheaders are described in subsequent sections (as well as updating the references in Tables 13b and 13c).

Proposed Resolution Recommendation by

Resolution of Group Decision of Group: Accepted

Reason for Recommendation

reduce the extreme nesting, make the following relabellings:

6.3.2.2.7.1 => 6.3.2.2.8
6.3.2.2.7.2 => 6.3.2.2.9
6.3.2.2.7.3 => 6.3.2.2.10
6.3.2.2.7.4 => 6.3.2.2.11
6.3.2.2.8 => 6.3.2.2.12

and add a line of text at page 28, line 13, that states that the various subheaders are described in subsequent sections (as well as updating the references in Tables 13b and 13c).

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes Editor's Actions k) done

I did everything but add the line that was suggested. It seemed out of place at the end of 6.3.2.2.12.

Editor's Questions and Concerns

Editor's Action Items
Suggested Remedy
Replace "AAA" with "251c"
Also, on page 223, line 7, provide a reference to definition of the DL-MAP IE.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

Replace "AAA" with "251c"
Also, on page 223, line 7, provide a reference to definition of the DL-MAP IE.

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes Editor's Actions c) instructions unclear
I took care of the reference to Table 251c, but I did not know what should be added to the definition of DL-MAP IE.

Editor's Questions and Concerns

Editor's Action Items
<table>
<thead>
<tr>
<th>Comment #</th>
<th>Type</th>
<th>Suggested Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>3558</td>
<td>Editorial</td>
<td>Page 223, line 33, Replace &quot;vlue&quot; with &quot;value&quot;.</td>
</tr>
</tbody>
</table>

**Proposed Resolution**
Page 223, line 33, Replace "vlue" with "value".

**Resolution of Group**
Decision of Group: Accepted
Page 223, line 33, Replace "vlue" with "value".

**Editor’s Notes**
Editor’s Action Items:
- k) done

**Group’s Notes**

**Group’s Action Items**

**Editor’s Questions and Concerns**

**Editor’s Action Items**
For Table 298j, and many, many other tables, there are no continuation headers when the tables spill onto second (third) pages.

Suggested Remedy

Make sure tables have continuation titles.

Proposed Resolution Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group Decision of Group: Accepted

Make sure tables have continuation titles.

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes Editor’s Actions k) done

Editor’s Questions and Concerns

Editor’s Action Items
If an equation has been deleted, does its replacement need be called 115a?

Suggested Remedy
Rename equation as 115

Proposed Resolution

Recommended by

Reason for Recommendation

Resolution of Group

Decision of Group: Accepted-Modified

Indicated equation is not deleted; remove the mark-up (for clarity). Add an editorial instruction to "insert the following equation". This will show that a new equation is added without that equation looking like it has a strikeout line through it.

Reason for Group’s Decision/Resolution

Group’s Notes

Group’s Action Items

Editor’s Notes

Editor’s Actions

k) done

Editor’s Questions and Concerns

Editor’s Action Items