Comment by: Mathilde Benveniste **Membership Status:** Member **Date:** 7/9/2010

Comment # 005 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

Comment **Type** General **Part of Dis** ☒ **Satisfied** ☐ **Page** 808 **Line** 1 **Fig/Table#** **Subclause** 16.6

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

Suggested Remedy

Facilitate reduction of end-to-end latency.

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

Reason for Group's Decision/Resolution

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

Group's Notes

Clause 16.6: AAI Support for Relay

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

Comment by: Nancy Bravin **Membership Status:** **Date:** 27-Aug-2010

Comment # B001 **Document under Review:** P802.16m/D8 **Ballot ID:** sb_16m

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

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

Suggested Remedy

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

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

Resolved by comment B187:

Adopt the text proposal in C80216m-10/1136r4

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.5; Other Mutli-BS MIMO

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

Comment by: Nancy Bravin **Membership Status:** **Date:** 10/16/2010

Comment # C001 **Document under Review:** P80216m/D9 **Ballot ID:** sb_16m

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

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

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

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

Group's Notes

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

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

Comment by: Naftali Chayat **Membership Status:** Member **Date:** 7/9/2010

Comment # 605 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 41 **Line** 22 **Fig/Table#** **Subclause** 11.1.3

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

Suggested Remedy

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

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

P41, L21 change the sentence to read:

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

Reason for Group's Decision/Resolution

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

Group's Notes

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

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

Comment by: Naftali Chayat **Membership Status:** Member **Date:** 7/9/2010

Comment # 606 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

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

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

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

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

Group's Notes

16.2.21 Interference Mitigation Mechanism

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

Comment by: Naftali Chayat **Membership Status:** Member **Date:** 7/9/2010

Comment # 607 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

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

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

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

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

Group's Notes

Clause 16.3: AAI PHY

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

2010/10/12 IEEE 802.16-10/0040r3

Comment by: Naftali Chayat **Membership Status:** Member **Date:** 7/9/2010

Comment # 608 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

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

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

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

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

Group's Notes

Clause 16.3: AAI PHY

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

Comment by: Carl Eklund **Membership Status:** Member **Date:** 7/9/2010

Comment # 308 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

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

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

Suggested Remedy

delete line 20

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

same resolution as comment #8
Remove statement in line 20

Reason for Group's Decision/Resolution

Group's Notes

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

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

Comment by: Carl Eklund **Membership Status:** Member **Date:** 7/9/2010

Comment # 309 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

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

GPCS needed for backwards compatibility

Suggested Remedy

delete line 22

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

same resolution as comment #6
delete line22

Reason for Group's Decision/Resolution

Group's Notes

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

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

Comment by: Carl Eklund **Membership Status:** Member **Date:** 7/9/2010

Comment # 311 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

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

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

Suggested Remedy

Delete the AMS Battery Level Report header

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

Vote: 4-11-0.
Comment is rejected.

Reason for Group's Decision/Resolution

Battery level report is beneficial for power saving

Group's Notes

16.2.2.1 MAC header formats

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

Comment by: Carl Eklund **Membership Status:** Member **Date:** 7/9/2010

Comment # 310 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 69 **Line** 61 **Fig/Table#** **Subclause**

The ASN.1 message definition must be made normative

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

No specific remedy is proposed.

Group's Notes

16.2.3 MAC Control messages

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

Comment by: Dan Gal **Membership Status:** **Date:**

Comment # A207 **Document under Review:** P802.16m/D7 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 43 **Line** 28 **Fig/Table#** **Subclause** 16.2.1.2.3

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

Suggested Remedy

Change the text of this sub-clause to:
"An MSID* (24bits) shall provide the DID functionality and uniquely identify the AMS within a Paging Group. If the AMS changes Paging Group, a fresh MSID* may be allocated during the Location Update procedure."

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

Reason for Group's Decision/Resolution

The DID can save significant message overhead.

Group's Notes

Clause 16.2.1, MAC: Addressing

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

Comment by: Dan Gal **Membership Status:** **Date:** 10/25/2010

Comment # C082 **Document under Review:** P80216m/D9 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 58 **Line** 1 **Fig/Table#** **Subclause** 16.2.1.2.3

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

Suggested Remedy

Change to:

16.2.1.2.3 Deregistration Identifier (DID)

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

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

Vote: 4-14-1

Reason for Group's Decision/Resolution

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

Group's Notes

Clause 16.2.1; MAC Addressing

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

Comment by: Dan Gal **Membership Status:** Member **Date:** 7/9/2010

Comment # 035 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 75 **Line** 22 **Fig/Table#** **Subclause** Table 679

Eliminate DID, replace with MSID

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

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

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

Group's Notes

16.2.3 MAC Control messages

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

Comment by: Dan Gal **Membership Status:** Member **Date:** 7/9/2010

Comment # 034 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 81 **Line** 42 **Fig/Table#** **Subclause** 16.2.3.2

The table entry "Deregistration Identifier (DID)" refers to section 16.2.1.2.3 that another SB comment recommends deleting. Here is the rationale:
Adding - in this 16m amendment - a 12bit DID, makes the current WiMAX network implementations (consistent with IEEE 802.16-2009) of Paging Controller and ASN-GW (that use a 48bit MSID), incompatible with this new DID identifier. The complexity of implementation and the adverse impact on inter-working of "16m" mobiles with current systems based on IEEE-Std-802.16-2009 (and prior versions) must be avoided. Therefore, we propose that the DID identifier be substituted with a 24bit MSID.

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

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

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

Group's Notes

16.2.3 MAC Control messages

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

Comment by: Dan Gal **Membership Status:** Member **Date:** 7/9/2010

Comment # 611 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

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

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

Suggested Remedy

add the required fields to the AAI_SON-ADV message definition

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

Reason for Group's Decision/Resolution

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

Group's Notes

Clause 16.4: AAI Femto

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

Comment by: Dan Gal **Membership Status:** Member **Date:** 7/9/2010

Comment # 444 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

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

opposition to using DID

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

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

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

Group's Notes

Annex P

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

Comment by: Reinhard Gloger **Membership Status:** Member **Date:** 7/9/2010

Comment # 374 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

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

Don`t limit scope to IP CS only

Suggested Remedy

Delete

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

same resolution as comment #8
delete line 20

Reason for Group's Decision/Resolution

Group's Notes

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

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

Comment by: Reinhard Gloger **Membership Status:** Member **Date:** 7/9/2010

Comment # 375 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

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

don't break backward compatibility with GPCS

Suggested Remedy

Delete

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

same resolution as comment #6
delete line 22

Reason for Group's Decision/Resolution

Group's Notes

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

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

Comment by: Mariana Goldhamer **Membership Status:** Member **Date:** 7/9/2010

Comment # 159 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 34 **Line** 50 **Fig/Table#** **Subclause** 8.4.14.4

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

Suggested Remedy

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

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

Insert the following new clause:

16.3.15 Receiver requirements

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

Reason for Group's Decision/Resolution

Group's Notes

Clause 8.4: WirelessMAN OFDMA PHY

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

Comment by: Mariana Goldhamer **Membership Status:** Member **Date:** 7/9/2010

Comment # 158 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 34 **Line** 50 **Fig/Table#** **Subclause** 8.4.14.3.2

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

Suggested Remedy

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

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

Insert the following new clause:

16.3.15 Receiver requirements

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

Reason for Group's Decision/Resolution

Group's Notes

Clause 8.4: WirelessMAN OFDMA PHY

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

Comment by: Mariana Goldhamer **Membership Status:** Member **Date:** 7/9/2010

Comment # 157 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

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

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

Suggested Remedy

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

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

Insert the following new clause:

16.3.15 Receiver requirements

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

Reason for Group's Decision/Resolution

Group's Notes

Clause 8.4: WirelessMAN OFDMA PHY

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

Comment by: Mariana Goldhamer **Membership Status:** Member **Date:** 7/9/2010

Comment # 152 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

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

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

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

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

Group's Notes

Clause 16.3: AAI PHY

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

Comment by: Mariana Goldhamer **Membership Status:** Member **Date:** 7/9/2010

Comment # 154 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

Comment **Type** General **Part of Dis** ☒ **Satisfied** ☐ **Page** 447 **Line** 31 **Fig/Table#** **Subclause** 16.3.3.5.1

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

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

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

Group's Notes

Clause 16.3: AAI PHY

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

Comment by: Mariana Goldhamer **Membership Status:** Member **Date:** 7/9/2010

Comment # 153 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 448 **Line** 40 **Fig/Table#** **Subclause** 16.3.3.5.2

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

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

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

Group's Notes

Clause 16.3: AAI PHY

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

Comment by: Mariana Goldhamer **Membership Status:** Member **Date:** 7/9/2010

Comment # 155 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 788 **Line** 13 **Fig/Table#** **Subclause** 16.4

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

Suggested Remedy

Delete "Femto ABSs operate in licensed spectrum and"

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

Reason for Group's Decision/Resolution

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

Group's Notes

Clause 16.4: AAI Femto

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

Comment by: Mariana Goldhamer **Membership Status:** Member **Date:** 7/9/2010

Comment # 156 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 790 **Line** 45 **Fig/Table#** **Subclause** 16.4.6

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

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

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

Clause 16.4.11 states:

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

Group's Notes

Clause 16.4: AAI Femto

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

Comment by: Mariana Goldhamer **Membership Status:** Member **Date:** 7/9/2010

Comment # 165 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

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

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

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

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

Group's Notes

Clause 16.5: AAI Multi-BS MIMO

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

Comment by: Mariana Goldhamer **Membership Status:** Member **Date:** 7/9/2010

Comment # 164 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

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

The title of this clause is too specific

Suggested Remedy

Change to "Multi-BS cooperation"

GroupResolution **Decision of Group:** Disagree

Reason for Group's Decision/Resolution

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

Group's Notes

Clause 16.5: AAI Multi-BS MIMO

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

2010/10/12 IEEE 802.16-10/0040r3

Comment by: Mariana Goldhamer **Membership Status:** Member **Date:** 7/9/2010

Comment # 163 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

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

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

Suggested Remedy

Provide a solution to avoid the time separation

GroupResolution **Decision of Group:** Disagree

Reason for Group's Decision/Resolution

ARS and ABS Access zones are time aligned.

Group's Notes

Clause 16.6: AAI Support for Relay

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

Comment by: Mariana Goldhamer **Membership Status:** Member **Date:** 7/9/2010

Comment # 161 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

Comment **Type** Editorial **Part of Dis** ☒ **Satisfied** ☐ **Page** 828 **Line** 51 **Fig/Table#** **Subclause** 16.6.3.2.1

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

Suggested Remedy

Replace with 16.3.3

GroupResolution **Decision of Group:** Agree

Replace with 16.3.3

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.6: AAI Support for Relay

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

2010/10/12 IEEE 802.16-10/0040r3

Comment by: Mariana Goldhamer **Membership Status:** Member **Date:** 7/9/2010

Comment # 160 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 830 **Line** 38 **Fig/Table#** **Subclause** 16.6.3.2.2

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

Suggested Remedy

Provide a solution to avoid the time separation

GroupResolution **Decision of Group:** Disagree

Reason for Group's Decision/Resolution

ARS and ABS Access zones are time aligned.

Group's Notes

Clause 16.6: AAI Support for Relay

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

Comment by: Mariana Goldhamer **Membership Status:** Member **Date:** 7/9/2010

Comment # 162 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

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

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

Suggested Remedy

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

Reason for Group's Decision/Resolution

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

Group's Notes

General Comment

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

Comment by: Michael Gundlach **Membership Status:** Member **Date:** 7/9/2010

Comment # 135 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

Comment **Type** General **Part of Dis** ☒ **Satisfied** ☐ **Page** 11 **Line** 19 **Fig/Table#** **Subclause** 5.2

There is no reason for the restrictions made here.

Suggested Remedy

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

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

use resolution from comment #8:
Remove statement in line 20

Reason for Group's Decision/Resolution

Group's Notes

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

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

Comment by: Michael Gundlach **Membership Status:** Member **Date:** 9/8/2010

Comment # B10205 **Document under Review:** P802.16m/D8 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 886 **Line** 17 **Fig/Table#** **Subclause** 16,7,2

The word "Femto" in this clause makes no sense

Suggested Remedy

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

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

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

Sec 16.7.2 Page 886, Line 17

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

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.7; Other SON

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

Comment by: Michael Gundlach **Membership Status:** **Date:** 10/22/2010

Comment # C004 **Document under Review:** P80216m/D9 **Ballot ID:** sb_16m

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

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

Suggested Remedy

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

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

Section 16.4.5.2, Page 890, Line 39

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

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.4; Other Femto

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

Comment by: Michael Gundlach **Membership Status:** **Date:** 10/22/2010

Comment # C005 **Document under Review:** P80216m/D9 **Ballot ID:** sb_16m

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

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

Suggested Remedy

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

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

Section 16.4.6, Page 890, Line 48

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

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.4; Other Femto

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

Comment by: Michael Gundlach **Membership Status:** Member **Date:** 9/8/2010

Comment # B10214 **Document under Review:** P802.16m/D8 **Ballot ID:** sb_16m

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

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

Suggested Remedy

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

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

Resolved by Comment #B10213:

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

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.8; Other LBS

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

Comment by: Michael Gundlach **Membership Status:** **Date:** 10/22/2010

Comment # C012 **Document under Review:** P80216m/D9 **Ballot ID:** sb_16m

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

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

Suggested Remedy

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

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

Section 16.4.9, Page 897, Line 12

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

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.4; Other Femto

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

Comment by: Michael Gundlach **Membership Status:** **Date:** 10/22/2010

Comment # C013 **Document under Review:** P80216m/D9 **Ballot ID:** sb_16m

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

description needs to be replaced by requirement

Suggested Remedy

replace "uses" by "shall use"

GroupResolution **Decision of Group:** Agree

replace "uses" by "shall use"

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.6; Other Relay

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

Comment by: Michael Gundlach **Membership Status:** **Date:** 10/22/2010

Comment # C014 **Document under Review:** P80216m/D9 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 911 **Line** 64 **Fig/Table#** **Subclause** 16.6.2.4

An ARS is operating as distributed security mode.

Suggested Remedy

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

GroupResolution **Decision of Group:** Agree

Replace
"An ARS is operating as distributed security mode."
with
"An ARS shall operate in distributed security mode."

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.6; Other Relay

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

Comment by: Michael Gundlach **Membership Status:** **Date:** 10/22/2010

Comment # C015 **Document under Review:** P80216m/D9 **Ballot ID:** sb_16m

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

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

Suggested Remedy

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

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

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

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

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

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.6; Other Relay

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

Comment by: Michael Gundlach **Membership Status:** **Date:** 10/22/2010

Comment # C017 **Document under Review:** P80216m/D9 **Ballot ID:** sb_16m

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

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

Suggested Remedy

modify

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

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

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

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.6; Other Relay

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

2010/10/12 IEEE 802.16-10/0059 **IEEE 802.16-10/0040r3**

Comment by: Zion Hadad **Membership Status:** Member **Date:** 7/9/2010

Comment # 032 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

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

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

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

No remedy available for the group to consider.

Group's Notes

General Comment

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

2010/10/12 **IEEE 802.16-10/0040r3**

Comment by: Junghoon Jee **Membership Status:** **Date:** 7-Sep-2010

Comment # B008 **Document under Review:** P802.16m/D8 **Ballot ID:** sb_16m

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

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

Suggested Remedy

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

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

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

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.2.3; MAC Control Messages; L2 Transfer message

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

2010/10/12 IEEE 802.16-10/0059 **IEEE 802.16-10/0040r3**

Comment by: Junghoon Jee **Membership Status:** **Date:** 7-Sep-2010

Comment # **B009** **Document under Review:** **P802.16m/D8** **Ballot ID:** **sb_16m**

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

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

Suggested Remedy

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

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

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

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.2.3; MAC Control Messages; L2 Transfer message

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

2010/10/12 **IEEE 802.16-10/0040r3**

Comment by: Junghoon Jee **Membership Status:** **Date:** 10/20/2010

Comment # **C003** **Document under Review:** **P80216m/D9** **Ballot ID:** **sb_16m**

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

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

Suggested Remedy

Apply the changes by referring the attached file, "L2_XFER_16m.docx".

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

Reason for Group's Decision/Resolution

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

Group's Notes

Clause 16.2.3; MAC Control Messages; L2-Transfer

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

Comment by: Junghoon Jee **Membership Status:** **Date:** 10/18/2010

Comment # C002 **Document under Review:** P80216m/D9 **Ballot ID:** sb_16m

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

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

Suggested Remedy

Apply the changes by referring the attached file, "L2_XFER_16m".

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

Reason for Group's Decision/Resolution

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

Group's Notes

Clause 16.2.3; MAC Control Messages; L2-Transfer

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

2010/10/12 IEEE 802.16-10/0040r3

Comment by: Junghoon Jee **Membership Status:** **Date:** 6-Sep-2010

Comment # B004 **Document under Review:** P802.16m/D8 **Ballot ID:** sb_16m

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

Do not need capital letter for 'Payload'.

Suggested Remedy

s/Payload/payload

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

Replace "Payload" with "payload"

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.2.6; MAC HO procedures

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

Comment by: Junghoon Jee **Membership Status:** **Date:** 6-Sep-2010

Comment # B005 **Document under Review:** P802.16m/D8 **Ballot ID:** sb_16m

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

Do not need a capital letter for 'Information'.

Suggested Remedy

s/RAN Information/RAN information

GroupResolution **Decision of Group:** Agree

Replace "RAN Information" with "RAN information"

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.2.6; MAC HO procedures

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

2010/10/12 IEEE 802.16-10/0040r3

Comment by: Junghoon Jee **Membership Status:** **Date:** 6-Sep-2010

Comment # B007 **Document under Review:** P802.16m/D8 **Ballot ID:** sb_16m

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

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

Suggested Remedy

s/BSID/PoA(Point of Attachment) identifier

GroupResolution **Decision of Group:** Principle

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

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.2.6; MAC HO procedures

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

Comment by: Junghoon Jee **Membership Status:** **Date:** 6-Sep-2010

Comment # B006 **Document under Review:** P802.16m/D8 **Ballot ID:** sb_16m

Comment **Type** Editorial **Part of Dis** ☒ **Satisfied** ☐ **Page** 326 **Line** 47 **Fig/Table#** **Subclause** 16.2.6.5.2.1.1

Do not need a capital letter for 'Information'.

Suggested Remedy

s/RAP Information/RAP information

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

Replace "RAP Information" with "RAP information"

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.2.6; MAC HO procedures

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

Comment by: Junghoon Jee **Membership Status:** **Date:** 7-Sep-2010

Comment # B011 **Document under Review:** P802.16m/D8 **Ballot ID:** sb_16m

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

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

Suggested Remedy

s/shall/may
So the amended sentence would be the following.
"AMS may initiate other RAT discovery using scanning procedure. The AMS may negotiate scanning procedure before scanning commencement."

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

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

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.2.6; MAC HO procedures

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

2010/10/12 IEEE 802.16-10/0059 **IEEE 802.16-10/0040r3**

Comment by: Junghoon Jee **Membership Status:** **Date:** 7-Sep-2010

Comment # **B013** **Document under Review:** **P802.16m/D8** **Ballot ID:** **sb_16m**

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

Error in the naming, AAI-L2-XFER

Suggested Remedy

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

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

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

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.2.6; MAC HO procedures

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

2010/10/12 **IEEE 802.16-10/0040r3**

Comment by: Junghoon Jee **Membership Status:** **Date:** 7-Sep-2010

Comment # **B014** **Document under Review:** **P802.16m/D8** **Ballot ID:** **sb_16m**

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

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

Suggested Remedy

Merge steps 3 and 6 and amend the texts accordingly.

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

Reason for Group's Decision/Resolution

lack of proposed text

Group's Notes

Clause 16.2.6; MAC HO procedures

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

Comment by: Junghoon Jee **Membership Status:** **Date:** 8-Sep-2010

Comment # B091 **Document under Review:** P802.16m/D8 **Ballot ID:** sb_16m

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

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

Suggested Remedy

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

GroupResolution **Decision of Group:** Disagree

Reason for Group's Decision/Resolution

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

Group's Notes

Clause 16.2.6; MAC HO procedures

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

2010/10/12 IEEE 802.16-10/0040r3

Comment by: Junghoon Jee **Membership Status:** **Date:** 7-Sep-2010

Comment # B020 **Document under Review:** P802.16m/D8 **Ballot ID:** sb_16m

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

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

Suggested Remedy

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

GroupResolution **Decision of Group:** Disagree

Reason for Group's Decision/Resolution

no proposed text for the group to consider

Group's Notes

Clause 16.2.6; MAC HO procedures

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

Comment by: Junghoon Jee **Membership Status:** **Date:** 7-Sep-2010

Comment # B015 **Document under Review:** P802.16m/D8 **Ballot ID:** sb_16m

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

The term of "single radio" is not clear.

Suggested Remedy

Change "single radio case" to "When AMS performs single-radio operation" and add the definition of "single-radio operation" by referring the IEEE Std 802.21-2008.
FYI. The single-radio operation definition from the IEEE Std 802.21-2008 is the following.
"In this mode, a dual radio device can receive and transmit on only one radio at
a time. This is usually the mode of operation when radio frequencies of the two radios are close to each other (e.g., in IMT 2000 bands). Since only one radio can be active at a time in these types of devices, the source radio uses the back-end connection of the source network with the target network to prepare the target network for handover while maintaining the client side connections. Once the target preparation is complete the device switches from source radio to target radio. Since all the target preparation has been completed a priori, the target radio quickly establishes connectivity with the target network and all the connections are then transferred from source network to target network."

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

Reason for Group's Decision/Resolution

incomplete remedy

Group's Notes

Clause 16.2.6; MAC HO procedures

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

Comment by: Junghoon Jee **Membership Status:** **Date:** 7-Sep-2010

Comment # B018 **Document under Review:** P802.16m/D8 **Ballot ID:** sb_16m

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

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

Suggested Remedy

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

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

Modify texst in page 328 line 59 as following:
The device <del>turns on the other radios and </del>configures measurement reporting for target RATs.

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

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.2.6; MAC HO procedures

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

Comment by: Junghoon Jee **Membership Status:** **Date:** 7-Sep-2010

Comment # B018 **Document under Review:** P802.16m/D8 **Ballot ID:** sb_16m

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

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

Suggested Remedy

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

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

Modify texst in page 328 line 59 as following:
The device <del>turns on the other radios and </del>configures measurement reporting for target RATs.

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

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.2.6; MAC HO procedures

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

Comment by: Junghoon Jee **Membership Status:** **Date:** 7-Sep-2010

Comment # B017 **Document under Review:** P802.16m/D8 **Ballot ID:** sb_16m

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

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

Suggested Remedy

Change the step 10) like the following.
10) The AMS conducts measurements and report the results.

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

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

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.2.6; MAC HO procedures

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

Comment by: Junghoon Jee **Membership Status:** **Date:** 7-Sep-2010

Comment # B019 **Document under Review:** P802.16m/D8 **Ballot ID:** sb_16m

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

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

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

Vote: 0, 3, 0
original text is correct

Group's Notes

Clause 16.2.6; MAC HO procedures

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

Comment by: Junghoon Jee **Membership Status:** **Date:** 8-Sep-2010

Comment # B085 **Document under Review:** P802.16m/D8 **Ballot ID:** sb_16m

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

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

Suggested Remedy

s/"are needed"/"may be needed".
Therefore, the amended texts would be the following.
"For single radio AMSs, measurement gaps may be needed to allow..."

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

s/"are needed"/"may be needed".
Therefore, the amended texts would be the following.
"For single radio AMSs, measurement gaps may be needed to allow..."

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.2.6; MAC HO procedures

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

Comment by: Junghoon Jee **Membership Status:** **Date:** 8-Sep-2010

Comment # B088 **Document under Review:** P802.16m/D8 **Ballot ID:** sb_16m

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

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

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

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

Group's Notes

Clause 16.2.6; MAC HO procedures

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

Comment by: Junghoon Jee **Membership Status:** **Date:** 7-Sep-2010

Comment # B021 **Document under Review:** P802.16m/D8 **Ballot ID:** sb_16m

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

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

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

proposed remedy is incomplete

Group's Notes

Clause 16.2.6; MAC HO procedures

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

Comment by: Junghoon Jee **Membership Status:** **Date:** 7-Sep-2010

Comment # B022 **Document under Review:** P802.16m/D8 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 330 **Line** 27 **Fig/Table#** **Subclause** 16.2.6.5.2.3.2

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

Suggested Remedy

s/RAT/"radio interface"

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

s/RAT/"radio access technology"

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.2.6; MAC HO procedures

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

2010/10/12 IEEE 802.16-10/0040r3

Comment by: Junghoon Jee **Membership Status:** **Date:** 7-Sep-2010

Comment # B023 **Document under Review:** P802.16m/D8 **Ballot ID:** sb_16m

Comment **Type** Editorial **Part of Dis** ☒ **Satisfied** ☐ **Page** 330 **Line** 32 **Fig/Table#** **Subclause** 16.2.6.5.2.3.2

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

Suggested Remedy

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

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

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

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.2.6; MAC HO procedures

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

Comment by: Junghoon Jee **Membership Status:** **Date:** 7-Sep-2010

Comment # B024 **Document under Review:** P802.16m/D8 **Ballot ID:** sb_16m

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

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

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

Vote: 0, 2, 0
ABS shall control any HO, to some extent. The text suggest MS can do whatever it wants at whatever time.

Group's Notes

Clause 16.2.6; MAC HO procedures

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

Comment by: Junghoon Jee **Membership Status:** **Date:** 10/25/2010

Comment # C096 **Document under Review:** P80216m/D9 **Ballot ID:** sb_16m

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

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

Suggested Remedy

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

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

Modify texts in page 365 line 56 as following :
8) In the single radio case, the AMS negotiates with the AAI ABS about scan intervals <ins> by exchanging AAI-SCN-REQ and AAI-SCN-RSP </ins> so that it can evaluate the link connections at target RATs.

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.2.6; MAC HO procedures

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

Comment by: Junghoon Jee **Membership Status:** **Date:** 10/25/2010

Comment # C097 **Document under Review:** P80216m/D9 **Ballot ID:** sb_16m

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

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

Suggested Remedy

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

GroupResolution **Decision of Group:** Agree

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

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.2.6; MAC HO procedures

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

2010/10/12 IEEE 802.16-10/0040r3

Comment by: Junghoon Jee **Membership Status:** **Date:** 10/25/2010

Comment # C095 **Document under Review:** P80216m/D9 **Ballot ID:** sb_16m

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

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

Suggested Remedy

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

GroupResolution **Decision of Group:** Disagree

Reason for Group's Decision/Resolution

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

Group's Notes

Clause 16.2.6; MAC HO procedures

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

Comment by: Junghoon Jee **Membership Status:** **Date:** 10/25/2010

Comment # C094 **Document under Review:** P80216m/D9 **Ballot ID:** sb_16m

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

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

Suggested Remedy

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

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

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

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.2.6; MAC HO procedures

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

Comment by: Junghoon Jee **Membership Status:** **Date:** 10/25/2010

Comment # C084 **Document under Review:** P80216m/D9 **Ballot ID:** sb_16m

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

AAI-L2-XFER does not need to directly encapsulate other RAT information because the MIH frame with the subtype, '7' already contains that information.
Apply the changes by referring the contribution, "C80216m-10_1339".

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

Vote:
In favor: 3
Opposed: 7
Abstain: 0

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

Group's Notes

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

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

Comment by: Brian Kiernan **Membership Status:** **Date:** 1-Sep-2010

Comment # B002 **Document under Review:** P802.16m/D8 **Ballot ID:** sb_16m

Comment **Type** General **Part of Dis** ☒ **Satisfied** ☐ **Page** 883 **Line** 60 **Fig/Table#** **Subclause** 16.12

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

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

no specific remedy povided

Group's Notes

Clause 16.12; General NEW

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

Comment by: Jonathan Labs **Membership Status:** **Date:**

Comment # A290 **Document under Review:** P802.16m/D7 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** **Line** **Fig/Table#** **Subclause** 6.3.2.3.23

[Re: Maintenance Change Request 0042 in IEEE 802.16maint-09/0007r9]
[Re: IEEE L802.16-10/0070r1, Annex B]
There are already WiMAX deployments and mobiles having no support for NDnS. So any implementation must have this "backward compatibility" provisions.
The standard does not contain a capability exchange for NDnS or guidance for this issue.

Suggested Remedy

[Insert the following change language text on page 19 of P802.16m/D7 after line 60:]:
[Modify the paragraph in section 6.3.2.3.23 on page 131 in 802.16-2009 as indicated]
6.3.2.3.23 SBC-REQ (SS basic capability request) message
An SS shall generate SBC-REQ messages including the following parameter:
Basic CID (in the MAC header)
The connection identifier in the MAC header is the Basic CID for this SS, as assigned in the RNG-RSP message.
All other parameters are coded as TLV tuples.
The Basic Capabilities Request contains the SS Capabilities Encodings (11.8) that are necessary to acquire NSP information and for effective communication with the SS during the remainder of the initialization protocols. NSP information is solicited in the SBC-REQ message when the SBC-REQ includes the SIQ TLV (11.8.9) with bit bit 0 set to 1.
<ins>The SS shall include the SIQ TLV in the Basic Capability Request if the SS received the NSP Change Count TLV as part of the DCD and</ins> ~~The following parameter shall be included in the Basic Capability Request~~ if the SS ~~is intended~~ <ins>intends</ins> to solicit NSP information:
Service Information Query (see 11.8.9)
The following parameter shall be included in the Basic Capabilities..

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

[Insert the following change language text on page 19 of P802.16m/D7 after line 60:]:
[Modify the paragraph in section 6.3.2.3.23 on page 131 in 802.16-2009 as indicated]
6.3.2.3.23 SBC-REQ (SS basic capability request) message
An SS shall generate SBC-REQ messages including the following parameter:
Basic CID (in the MAC header)
The connection identifier in the MAC header is the Basic CID for this SS, as assigned in the RNG-RSP message.
All other parameters are coded as TLV tuples.
The Basic Capabilities Request contains the SS Capabilities Encodings (11.8) that are necessary to acquire NSP information and for effective communication with the SS during the remainder of the initialization protocols. NSP information is solicited in the SBC-REQ message when the SBC-REQ includes the SIQ TLV (11.8.9) with bit bit 0 set to 1.

<ins>The SS shall include the SIQ TLV in the Basic Capability Request if the SS received the NSP Change Count TLV as part of the DCD and</ins> ~~The following parameter shall be included in the Basic Capability Request~~ if the SS ~~is intended~~ <ins>intends</ins> to solicit NSP information:
Service Information Query (see 11.8.9)
The following parameter shall be included in the Basic Capabilities..

Reason for Group's Decision/Resolution

Group's Notes
Clause 6, MAINTENANCE: MAC common part sublayer

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

2010/10/12 **IEEE 802.16-10/0040r3**

Comment by: Jonathan Labs **Membership Status:** **Date:**

Comment # **A288** **Document under Review:** **P802.16m/D7** **Ballot ID:** **sb_16m**

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

[Re: Maintenance Change Request 0029 in IEEE 802.16maint-09/0007r9]
[Re: IEEE L802.16-10/0034, Annex D]
See problem statement in IEEE C802.16m-10/1065 on PHSI in an MS-initiated DSA REQ/DSC-REQ message

Suggested Remedy
Adopt contribution CIEEE 802.16m-10/1065

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

Adopt contribution CIEEE 802.16m-10/1065

Reason for Group's Decision/Resolution

Group's Notes
Clause 5, MAC: Service Specific CS

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

Comment by: Jonathan Labs **Membership Status:** **Date:**

Comment # A292 **Document under Review:** P802.16m/D7 **Ballot ID:** sb_16m

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

[Re: Maintenance Change Request 0044 in IEEE 802.16maint-09/0007r9]
[Re: IEEE L802.16-10/0070r1, Annex D]
In IEEE 802.16-2009, HARQ which brings benefits to extend downlink/uplink coverage can be applied for management messages as well as data. For coverage extension, HARQ is required for RNG-REQ, SBC-REQ and BRH messages.
However, HARQ can be used to transmit the management message only after exchanging the SBC-REQ/RSP messages because HARQ parameters are negotiated through the SBC-REQ/RSP messages.
Moreover, if the MS wants to receive uplink resources using existing HARQ UL-MAP IEs, it requires basic CID. But, during network (re)entry, the MS does not have any CID.
Even further, BS cannot distinguish between HARQ-applied burst and HARQ-non-applied bursts unless it allocates uplink resources using different MAP IE (i.e., using normal UL-MAP IE or HARQ UL-MAP IE).

Suggested Remedy

Adopt contribution IEEE C802.16m-10/1067

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

Adopt contribution IEEE C802.16m-10/1081

Reason for Group's Decision/Resolution

Group's Notes

Clause 6, MAINTENANCE: MAC common part sublayer

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

Comment by: Jonathan Labs **Membership Status:** **Date:**

Comment # A287 **Document under Review:** P802.16m/D7 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 19 **Line** 14 **Fig/Table#** **Subclause** 6.3.2.3.40

[Re: Maintenance Change Request 0028 in IEEE 802.16maint-09/0007r9]
[Re: IEEE L802.16-10/0034, Annex C]
New PSC during Sleep mode may lead to IO problems.
Possible interoperability Issue:
The BS shall not send a MOB_SLP-RSP message with a different PSC ID than the MS requested in MOB_SLP-REQ message with Definition=1.
MOB_SLP-REQ and --RSP can also contain more than one PSC. If the MS for example asks for a PSC with Id 1 and 2 and the BS response contains Id 3 and 4 then it might not be clear for the MS how to match with the PSC parameters.

Suggested Remedy

[Insert the following text on page 19 of P802.16m/D7 at line 14:]:
Power_Saving_Class_ID
Assigned power saving class identifier. The ID shall be unique within the group of power saving classes ~~associated with~~ <ins>defined</ins> ~~the MS~~ <ins>by the MOB_SLP-REQ/MOB_SLP-RSP transaction. The MS and BS shall use the same Power Saving Class ID during the MOB_SLP-REQ/MOB_SLP-RSP transaction</ins>. This ID may be used in further MOB_SLP-REQ/RSP messages for activation/deactivation of power saving class.

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

[Insert the following text on page 19 of P802.16m/D7 at line 14:]:
Power_Saving_Class_ID
Assigned power saving class identifier. The ID shall be unique within the group of power saving classes ~~associated with~~ <ins>defined</ins> ~~the MS~~ <ins>by the MOB_SLP-REQ/MOB_SLP-RSP transaction. The MS and BS shall use the same Power Saving Class ID during the MOB_SLP-REQ/MOB_SLP-RSP transaction</ins>. This ID may be used in further MOB_SLP-REQ/RSP messages for activation/deactivation of power saving class.

Reason for Group's Decision/Resolution

Group's Notes

Clause 6, MAINTENANCE: MAC common part sublayer

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

Comment by: Jonathan Labs **Membership Status:** **Date:**

Comment # A285 **Document under Review:** P802.16m/D7 **Ballot ID:** sb_16m

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

[Re: Maintenance Change Request 0026 in IEEE 802.16maint-09/0007r9]
[Re: IEEE L802.16-10/0034, Annex A]
802.16-2009 requires that the BS shall include Physical Parameters Supported in the SBC-RSP if found in the SBC-REQ. However, Physical Parameters Supported includes a number of TLVs and the standard is not clear on whether SBC-RSP shall include each TLV found in SBC-REQ. This introduces ambiguity on interpretation when TLV 204 OFDMA Parameters Sets is included in SBC-REQ.
In addition, 802.16-2009 requires that the MS shall include Physical Parameters Supported if the MS is not intended to solicit NSP information. Since Physical Parameters Supported includes both TLV 204 which defines sets of parameters and a number of individual TLVs, the standard is not clear on when TLV 204 shall be included and when individual TLVs shall be included.
These different interpretations of the standard lead to potential IOT problem. For example, the network entry procedure may fail as the MS may reject SBC-RSP if it does not include TLV 204.
Since TLV 204 is designed in a way that the parameter sets cover most of the implementation cases, it is desired to include TLV 204 in SBC-REQ/RSP when possible instead of each individual TLV in order to reduce overhead.

Suggested Remedy

Adopt contribution IEEE C802.16m-10/1064

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

Adopt contribution IEEE C802.16m-10/1064

Reason for Group's Decision/Resolution

Group's Notes

Clause 6, MAINTENANCE: MAC common part sublayer

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

Comment by: Jonathan Labs **Membership Status:** **Date:**

Comment # A289 **Document under Review:** P802.16m/D7 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 22 **Line** 34 **Fig/Table#** **Subclause** 6.3.2.3.47

[Re: Maintenance Change Request 0041 in IEEE 802.16maint-09/0007r9]
[Re: IEEE L802.16-10/0070r1, Annex A]
Currently the IEEE802.16 standard draft does not limit the BS to send MOB-BSHO_REQ message to the MS for initiating handover to a new candidate target BS without any scanning report.
If the BS sends MOB-BSHO_REQ to the MS without any scan reports, this can cause possible performance degradation on the MS side, since the new target BS that has been selected by the previous serving BS without scan report can have worse channel conditions that the serving BS.

Suggested Remedy

[Insert the following change language text on page 22 of P802.16m/D7 after line 34:]:
[Modify the paragraph in section 6.3.2.3.47 on page 221 in 802.16-2009 as indicated]
6.3.2.3.47 MOB_BSHO-REQ (BS HO request) message
The BS may transmit a MOB_BSHO-REQ message when it wants to initiate an HO. ~~An MS receiving this message may scan recommended neighbor BSs in this message.~~ <ins> When the BS indicates one or more possible target BSs in the recommended neighbor BS list of the MOB_BSHO-REQ message, the BS should not include a neighbor BS if the BS did not receive at least one MOB_SCN-REP message that includes the up-to-date scanning results of the neighbor BS. The determination of up-to-date is left to vendors' implementation and is out of scope of this standard. </ins>The message shall be transmitted on the Basic CID. See Table 150.

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

[Insert the following change language text on page 22 of P802.16m/D7 after line 34:]:
[Modify the paragraph in section 6.3.2.3.47 on page 221 in 802.16-2009 as indicated]
6.3.2.3.47 MOB_BSHO-REQ (BS HO request) message
The BS may transmit a MOB_BSHO-REQ message when it wants to initiate an HO. ~~<del>An MS receiving this message may scan recommended neighbor BSs in this message.</del>~~ <ins> If the BS indicates one or more possible target BSs in the recommended neighbor BS list of the MOB_BSHO-REQ message, the BS should not include a neighbor BS if the BS did not receive at least one MOB_SCN-REP message that includes the up-to-date scanning results of the neighbor BS. The determination of up-to-date is left to vendors' implementation and is out of scope of this standard. </ins>The message shall be transmitted on the Basic CID. See Table 150.

Reason for Group's Decision/Resolution

Group's Notes

Clause 6, MAINTENANCE: MAC common part sublayer

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

Comment by: Jonathan Labs **Membership Status:** **Date:**

Comment # A291 **Document under Review:** P802.16m/D7 **Ballot ID:** sb_16m

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

[Re: Maintenance Change Request 0043 in IEEE 802.16maint-09/0007r9]
[Re: IEEE L802.16-10/0070r1, Annex C]
The purpose of this CR is to provide needed clarifications into the current release of the IEEE 802.16 standard with respect to sounding region TLV which is sent via UCD. Currently the definition of the region via TLV is missing information in compare to the definition via the map IE. The misalignment should be fixed by adding the missing information to the TLV in the UCD

Suggested Remedy

Adopt contribution IEEE C802.16m-10/1066

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

Adopt contribution IEEE C802.16m-10/1066

Reason for Group's Decision/Resolution

Group's Notes

Clause 11, MAINTENANCE: TLV encodings

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

Comment by: Jonathan Labs **Membership Status:** **Date:**

Comment # A293 **Document under Review:** P802.16m/D7 **Ballot ID:** sb_16m

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

[Re: IEEE L802.16-10/0070r1, Annex E]
In case a BS use Preamble Index Override or Ranging Abort Timer in RNG-RSP message, the BS need to be sure the MS supports the feature. If the MS does not support the parameters, it will simply discard the parameters.

Suggested Remedy

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

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

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

Reason for Group's Decision/Resolution

Group's Notes

Clause 11, MAINTENANCE: TLV encodings

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

Comment by: Jonathan Labs **Membership Status:** **Date:** 10/25/2010

Comment # C056 **Document under Review:** P80216m/D9 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 44 **Line** 51 **Fig/Table#** **Subclause** 8.4.5.6.1

[Re: CR 0048, IEEE 802.16main-09/0007r10/ L802.16-10/0088r1, Annex C]
The standard lists the Sector ID as part of the compressed map. The intention behind is that the MS can easily identify that the decoded compressed map belongs to the current BS respective sector.
Unfortunately the std is not demanding the Sector ID to be unique within a coverage area.

Suggested Remedy

Insert the following change language on page 44, line 51:
[Change 8.4.5.6.1, "Compressed DL-MAP" on page 906 as indicated:]
...
Operator ID
This field holds the 8 LSBs of the 24 MSBs of the 48-bit Base Station ID parameter.
Sector ID
This field holds the 8 LSBs of the 48-bit Base Station ID parameter. <insert>Assignment of unique values for Sector ID for all BSs that are within interference coverage areas of each other ensures that the sectors are unambiguously identifiable by the MS.</insert>

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

Insert the following change language on page 44, line 51:
[Change 8.4.5.6.1, "Compressed DL-MAP" on page 906 as indicated:]
...
Operator ID
This field holds the 8 LSBs of the 24 MSBs of the 48-bit Base Station ID parameter.
Sector ID
This field holds the 8 LSBs of the 48-bit Base Station ID parameter. <insert>Assignment of unique values for Sector ID for all BSs that are within interference coverage areas of each other ensures that the sectors are unambiguously identifiable by the MS.</insert>

Reason for Group's Decision/Resolution

Group's Notes

Clause 8; MAINTENANCE

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

Comment by: Jonathan Labs **Membership Status:** **Date:** 10/25/2010

Comment # C055 **Document under Review:** P80216m/D9 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 49 **Line** 31 **Fig/Table#** **Subclause** 11.3.1

[Re: CR 0047, IEEE 802.16main-09/0007r10/ L802.16-10/0088r1, Annex B]
Currently, an MS that performs HO from a SBS with a sounding region defined via UCD (TLV 213) to a TBS with no sounding region at all, has no way to be informed that the TBS doesn't have sounding region defined in the UL sub-frame. In that case, according to the standard, the MS assumes that the above TLV exists also at the TBS, resulting MS possibly transmitting at wrong allocations.

Suggested Remedy

Modify the following change language in section 11.3.1 on page 49, line 31:
[Modify the contents of Table 571 as indicated:]
Table 571--UCS PHY-specific channel encodings-WirelessmanOFDMA

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

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

Modify the following change language in section 11.3.1 on page 49, line 31:
[Modify the contents of Table 571 as indicated:]
Table 571--UCS PHY-specific channel encodings-WirelessmanOFDMA

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

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

Reason for Group's Decision/Resolution

Group's Notes

Clause 11; MAINTENANCE

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

Comment by: Jonathan Labs **Membership Status:** **Date:** 10/25/2010

Comment # C054 **Document under Review:** P80216m/D9 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 52 **Line** 28 **Fig/Table#** **Subclause** 11.8.3.5.10

[Re: CR 0046, IEEE 802.16main-09/0007r10/ L802.16-10/0088r1, Annex A]
If there is no capability negotiation for persistent scheduling then this feature can not be deployed in the NW because it would cause interoperability problems for legacy MS that are not able to decode the Persistent HARQ UL and DL MAP IE.

Suggested Remedy

Insert the following change language on page 52, line 28:
[Change 11.8.3.5.10 "OFDMA MAP capability" on page 1233 as indicated:]
Bit 0: HARQ MAP Capability
Bit 1: Extended HARQ IE capability
Bit 2: Sub MAP capability for first zone
Bit 3: Sub MAP capability for other zones
Bit 4: DL region definition support
<insert>Bit 5: Persistent scheduling in UL
Bit 6: Persistent scheduling in DL</insert>
Bit<delete>s 5-</delete>7: Reserved

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

Insert the following change language on page 52, line 28:
[Change 11.8.3.5.10 "OFDMA MAP capability" on page 1233 as indicated:]
Bit 0: HARQ MAP Capability
Bit 1: Extended HARQ IE capability
Bit 2: Sub MAP capability for first zone
Bit 3: Sub MAP capability for other zones
Bit 4: DL region definition support
<insert>Bit 5: Persistent scheduling in UL
Bit 6: Persistent scheduling in DL</insert>
Bit<delete>s 5-</delete>7: Reserved

Reason for Group's Decision/Resolution

Group's Notes

Clause 11, MAINTENANCE

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

2010/10/12

Comment by: Maximilian Riegel **Membership Status:** Member **Date:** 7/9/2010

Comment # **009** **Document under Review:** **P802.16m/D6** **Ballot ID:** **sb_16m**

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 11 **Line** 15 **Fig/Table#** **Subclause** 5.2

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

Suggested Remedy

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

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

edit P11 L17:

The packet CS is used for transport for all packet-based protocols ~~as defined in 11.13.18.3~~.

Reason for Group's Decision/Resolution

Group's Notes

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

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

Comment by: Maximilian Riegel **Membership Status:** **Date:**

Comment # A003 **Document under Review:** P802.16m/D7 **Ballot ID:** sb_16m

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

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

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

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

Group's Notes

Clause 5, MAC: Service Specific CS

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

Comment by: Maximilian Riegel **Membership Status:** Member **Date:** 7/9/2010

Comment # 008 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

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

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

Suggested Remedy

Remove statement in line 20

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

Remove statement in line 20

Reason for Group's Decision/Resolution

Group's Notes

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

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

Comment by: Maximilian Riegel **Membership Status:** Member **Date:** 7/9/2010

Comment # 006 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

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

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

Suggested Remedy

Remove sentence.

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

Remove sentence.

Reason for Group's Decision/Resolution

Group's Notes

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

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

Comment by: Maximilian Riegel **Membership Status:** **Date:**

Comment # A004 **Document under Review:** P802.16m/D7 **Ballot ID:** sb_16m

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

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

Suggested Remedy

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

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

Resolved by comment #160.

Resolution:

P 14 L29:
For AMS and ABS, the <ins>Packet Classification Rule</ins> parameters <ins>(Table 740)</ins>may be used in IP classification ~~rules~~.

Reason for Group's Decision/Resolution

Group's Notes

Clause 5, MAC: Service Specific CS

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

Comment by: Maximilian Riegel **Membership Status:** **Date:**

Comment # A005 **Document under Review:** P802.16m/D7 **Ballot ID:** sb_16m

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

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

Suggested Remedy

Remove whole section 5.2.6
Remove page 11, line 30 -50

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

Reason for Group's Decision/Resolution

removal of this section leaves not method for handling CS muxing

Group's Notes

Clause 5, MAC: Service Specific CS

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

Comment by: Maximilian Riegel **Membership Status:** Member **Date:** 7/9/2010

Comment # 007 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

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

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

Suggested Remedy

Remove section 5.2.6
Remove page 11, line 37 -53

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

Vote: 4-5-0

Reason for Group's Decision/Resolution

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

Group's Notes

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

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

Comment by: Maximilian Riegel **Membership Status:** **Date:** 10/25/2010

Comment # C058 **Document under Review:** P80216m/D9 **Ballot ID:** sb_16m

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

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

Suggested Remedy

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

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

Vote: 4-3-1

Reason for Group's Decision/Resolution

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

Group's Notes

Clause 5; MAC CS

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

Comment by: Maximilian Riegel **Membership Status:** **Date:** 10/25/2010

Comment # C057 **Document under Review:** P80216m/D9 **Ballot ID:** sb_16m

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

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

Suggested Remedy

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

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

Vote: 4-3-1

Reason for Group's Decision/Resolution

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

Group's Notes

Clause 5; MAC CS

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

Comment by: Peretz Shekalim **Membership Status:** Member **Date:** 7/9/2010

Comment # 031 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

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

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

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

No remedy available for the group to consider.

Group's Notes

General Comment

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

2010/10/12 IEEE 802.16-10/0040r3

Comment by: Lei Wang **Membership Status:** Member **Date:** 7/9/2010

Comment # 600 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

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

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

Suggested Remedy

either clarify "the parameters" or delete the sentence.

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

Reason for Group's Decision/Resolution

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

Group's Notes

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

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

Comment by: Lei Wang **Membership Status:** **Date:**

Comment # A059 **Document under Review:** P802.16m/D7 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 66 **Line** 24 **Fig/Table#** **Subclause** 16.2.3

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

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

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

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

this comment has no remedy

Group's Notes

Clause 16.2.3, MAC: MAC Control messages

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

Comment by: Lei Wang **Membership Status:** **Date:** 8-Sep-2010

Comment # B166 **Document under Review:** P802.16m/D8 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 77 **Line** 43 **Fig/Table#** **Subclause** 16.2.3

This is a follow-up comment to comment A059 in 802.16-10/0045r2.
For the MAC control messages, the current table format does not properly specify the all the needed information, e.g., the information about location of the information fields regarding the loops and if-condition statements is not shown in the current 16m MAC message specification table format.
In order to properly specify the 16m MAC control messages, people participated in the the MAC message format discussion during session #68.5 agreed to use a new table format as shown in contribution C80216m-10_1060r3 or its latest version, where the 16e-style pseudo c-code to specify the MAC control messages, before converting them to ASN.1 code in the Annex section.

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

no specific remedy is available

Group's Notes

Clause 16.2.3; MAC Control Messages

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

Comment by: Lei Wang **Membership Status:** Member **Date:** 7/9/2010

Comment # 582 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 215 **Line** 31 **Fig/Table#** **Subclause** 16.2.3.52

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

Suggested Remedy

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

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

Resolved by comment #339.

Resolution:

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

Reason for Group's Decision/Resolution

Group's Notes

16.2.3 MAC Control messages

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

Comment by: Lei Wang **Membership Status:** **Date:**

Comment # A049 **Document under Review:** P802.16m/D7 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 217 **Line** 37 **Fig/Table#** **Subclause** 16.2.3.52

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

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

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

Group's Notes

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

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

Comment by: Lei Wang **Membership Status:** Member **Date:** 7/9/2010

Comment # 580 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 220 **Line** 20 **Fig/Table#** **Subclause** 16.2.3.56

Why does the AAI_MC-ADV have to be periodically broadcasted?
As shown in Section 16.2.8, the AAI_MC-ADV is needed at the MC operation initialization which is after the AMS enters the "operational" status. Therefore, it would be much efficiently for the ABS to unicast the AAI_MC-ADV message to the AMS who needs it either in a unsolicited way or upon requested from the AMS. Having said this, the ABS can broadcast it, not shall.
Note that periodic broadcasting is very expensive, particularly, with a potentially huge message with all the system configuration info, e.g., AAI_SCD, SFH SPs, etc. for each of the carriers.

Suggested Remedy

Make the following changes:
1. on page 220, change the paragraph in line 20 as follows:
The MC ABS shall periodically broadcast AAI_MC-ADV message is transmitted by the ABS to for the reception by all AMSs in an unicast manner and/or broadcast manner.
2. on page 307, change the paragraph in line 57 as follows:
The ABS will broadcast the SFH on each carrier with the format defined in 16.3.6.2.1. The ABS shall also provide the AMS with basic radio configuration for all available carriers in the ABS through the AAI_MC-ADV message. This message is periodically broadcast by the ABS, which includes the multicarrier mode and the configurations supported by the ABS. It can be broadcasted by the ABS for the reception by all the AMSs and it can also be unicasted by the ABS for the reception by a specific AMS with or without receiving a request from the AMS. The multicarrier configuration information is relevant to and shall be used by all AMSs in any of multicarrier modes or in single carrier mode.

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

Reason for Group's Decision/Resolution

Unicasting the AAI_MC-ADV message leads to more signaling overhead because it shall be transmistted to every AMSs whenever system information is upadted.

Group's Notes

16.2.3 MAC Control messages (Multicarrier)

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

Comment by: Lei Wang **Membership Status:** **Date:**

Comment # A048 **Document under Review:** P802.16m/D7 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 222 **Line** 20 **Fig/Table#** **Subclause** 16.2.3.56

Why does the AAI_MC-ADV have to be periodically broadcasted?
As shown in Section 16.2.8, the AAI_MC-ADV is needed at the MC operation initialization which is after the AMS enters the "operational" status. Therefore, it would be much efficiently for the ABS to unicast the AAI_MC-ADV message to the AMS who needs it either in a unsolicited way or upon requested from the AMS. Having said this, the ABS can broadcast it, not shall.
Note that periodic broadcasting is very expensive, particularly, with a potentially huge message with all the system configuration info, e.g., AAI_SCD, SFH SPs, etc. for each of the carriers.

Suggested Remedy

Make the following changes:
1. on page 222, change the paragraph in line 20 as follows:
The ABS which supports multiple RF carriers shall <ins> transmit </ins> <del> periodically broadcast </del> AAI_MC-ADV message <del> for the reception by all AMSs</del> <ins> to AMSs in an unicast manner and/or broadcast manner </ins>.
2. on page 309, change the paragraph in line 64 as follows:
The ABS will broadcast the SFH on each carrier with the format defined in 16.3.6.2.1. The ABS shall also provide the AMS with basic radio configuration for all available carriers in the ABS through the AAI_MC-ADV message. This message<del> is periodically broadcast by the ABS, which </del>includes the multicarrier mode and the configurations supported by the ABS. <ins>It can be broadcasted by the ABS for the reception by all the AMSs and it can also be unicasted by the ABS for the reception by a specific AMS with or without receiving a request from the AMS.</ins> ~~The multicarrier configuration information is relevant to and shall be used by all AMSs in any of multicarrier modes or in single carrier mode.~~

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

Reason for Group's Decision/Resolution

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

Group's Notes

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

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

Comment by: Lei Wang **Membership Status:** **Date:** 10/25/2010

Comment # C067 **Document under Review:** P80216m/D9 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 278 **Line** 27 **Fig/Table#** **Subclause** 16.2.3.59

Not satisfied with the resolution to the comment #B172 in commentary database 80216-10_0047r3. The trigger conditions for sending unsolicited AAI-E-MBS-RSP need to be spcified, but it is not a "stopper" of allowing such a usage. In addition, the trigger conditions for the AAI-E-MAB-REQ are not specified in the current 16m spec.
The following is a follow-up comment to the comment #B172:
Based on 16m/D9, the AAI-E-MBS-RSP can only be sent as a response to a received AAI-E-MBS-REQ, which means only AMS can initiate carrier switching operation. Why cannot the ABS initiate it? Actually, do we think that the ABS may need more control on this carrier switching operation considering the scheduler is inside ABS.

Suggested Remedy

make the following changes:
1. page 278, line 27, change the paragraph as follows:
The AAI-E-MBS-RSP message shall be transmitted by the ABS <ins>either </ins> in response to an AAI-EMBS-REP message sent by the AMS <ins> or in an unsolicited manner </ins>.
2. page 278, line 51, insert the following row in Table 753:
Field Size Value/Notes Conditions
(bits)
Report Mode 2 Indicates the AMS starts/changes/ends E-MBS
0b00: AMS requests ABS to assign a carrier
switching start time
0b01: AMS updates E-MBS connection Bitmap
0b10:AMS ends E-MBS carrier switching
0b11: reserved </ins>

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

Reason for Group's Decision/Resolution

Vote:
In favor: 0
Opposed: 6

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

Group's Notes

IEEE 802.16-10/0059

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

Editor's Notes	Editor's Actions

Comment by: Lei Wang **Membership Status:** Member **Date:** 7/9/2010

Comment # 542 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 301 **Line** 64 **Fig/Table#** **Subclause** 16.2.7

The sentence in line 64 on page 301 raises a very basic issue for 16m UL PA allocations, i.e., a 16m PA allocation is per-connection, or per flow. We all understand that the PA is designed for the connections with periodic traffic patterns with relatively fixed payload sizes. The traffic patterns are application specific, i.e., service flow specific. Therefore, there are good reasons for the UL PA allocations for some specific service flows.
However, there is critical problem with UL PA allocation, i.e., the current 16m UL PA allocation mechanism does not support per-connection allocation, as there is no indications to tell the AMS which connection or flow a UL PA allocation is intended for.
In addition, although there are good reasons to have UL PA allocations for certain flows, it may not be a good idea to remove all the flexibility of the AMS to use UL PA allocations for other flows, e.g., use the leftover resources; or transmit other urgent data for control or other services, e.g., emergency services.
Therefore, we would propose:
a) to fix the problem of lack of indications of the intended flow info for UL PA allocations; and
b) to add a clarification allowing the AMS to use the UL PA allocations for other flows in some cases, e.g. use the leftover resources, or transmit other urgent data for other flows.
In this way, we can maximize the effectiveness of UL PA allocations while also keeping the flexibility of AMS's usage of the given UL allocations.

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

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

Group's Notes

16.2.7 Persistent Scheduling in the Advanced Air Interface

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

Comment by: Lei Wang **Membership Status:** **Date:**

Comment # A033 **Document under Review:** P802.16m/D7 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 303 **Line** 61 **Fig/Table#** **Subclause** 16.2.7

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

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

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

Therefore, we would propose:

a) to fix the problem of lack of indications of the intended flow info for UL PA allocations; and

b) to add a clarification allowing the AMS to use the UL PA allocations for other flows in some cases, e.g. use the leftover resources, or transmit other urgent data for other flows.

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

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

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

Group's Notes

Clause 16.2.7, MAC: Persistent Scheduling

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

Comment by: Lei Wang **Membership Status:** **Date:**

Comment # A050 **Document under Review:** P802.16m/D7 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 306 **Line** 22 **Fig/Table#** **Subclause** 16.2.8.1

I completely don't agree with the resolution given to comment #582 in 80216-10_0040r2. I don't think the reason given for "disgree" really address this comment. I re-submit this comment.
I think there is a problem with the mechanisms described in the paragraph in line 22 on page 304, i.e., transmitting an AAI_SCD message on an unpaired DL carrier to specify where in the primary UL carrier the feedback region is.
Note that the concept of primary carrier is per AMS, and different AMS may have different fully configured carriers as their primary carriers. If an unpaired DL carrier is activated for two AMSs, AMS-1 and AMS-2, and those two AMSs have different UL primary carriers, e.g., UL-fc1 and UL-fc2, respectively, then an AAI_SCD message transmitted on the unpaired DL carrier will be received by AMS-1 and AMS-2, but it means differently to the two AMSs, i.e., the same feedback region specification actually means on two regions on two different fully configured UL carriers. This will make fast feedback channel and HARQ feedback channel mapping very complicated.
One simple way to solve this problem is to put a constraint on the AMSs who can use an unpaired DL carrier for DL unicast traffic shall have the same UL primary carrier.

Suggested Remedy

Change the paragraph in line 22 on page 304 as follows:
If a partially configured carrier is used for DL unicast traffic, the required UL feedback channels are provided by the primary carrier. <ins> All the AMSs that uses the same DL-only secondary carrier for DL unicast traffic shall use the same fully configured UL carrier as primary UL carrier. </ins> In multicarrier aggregation, the UL control channels corresponding to the secondary partially configured carriers i.e., DL only secondary carriers shall be located in distinct non-overlapping control regions in the UL of the primary carrier. The UL control regions for the DL only secondary carriers are behind the UL control region for the primary carrier. The location information of the UL control channels for the DL only secondary carriers are informed through the AAI_SCD message which are transmitted on the secondary carriers. The AMS shall use the UL control channels on the primary carrier to feedback HARQ ACK/NACK and channel quality measurements corresponding to transmission over DL only secondary carrier. Only the FDD primary carriers may be used to provide UL feedback channels for DL partially configured carriers. A partially configured carrier may be optimized and used for E-MBS services only in which case it would not need UL feedback channel support on primary carrier.

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

Reason for Group's Decision/Resolution

For distributing control channels over multiple carriers, the region can be defined at different carriers.
The primary carrier can be different for various AMSs.

Group's Notes

Clause 16.2.8, MAC: Multicarrier operation

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

2010/10/12

Comment by: Lei Wang **Membership Status:** **Date:**

Comment # **A051** **Document under Review:** **P802.16m/D7** **Ballot ID:** **sb_16m**

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 315 **Line** 15 **Fig/Table#** **Subclause** 16.2.8.2.9.2.2

One MC specific HO procedure allows the AMS performs network re-entry to the target ABS on one carrier and maintains normal communication with the serving ABS on another carrier. This seems a very good utilization of an AMS's capability of concurrently processing multiple radio carriers.
However, the current spec limits the utilization of such an AMS's capability to HO related optimizations, including scanning and network re-entry. Such a limitation seems unnecessary, and there are some obvious benefits and advantages to allow an AMS with the capability of concurrently processing multiple radio carriers to connect to multiple ABSs for normal communications, e.g., connect to both a Femto ABS and an overlay Macro ABS simultaneously to get best service from both.

Suggested Remedy

make the following changes:
1. change the sentence in line 15 on page 315 as follows:
In this case, Disconnect_time should be long enough that network reentry procedure to target ABS can be completed prior to the expiration of Disconnect_time <ins> or the Disconnect_time should not be used. </ins>
2. change the paragraph in line 38 on page 316 as follows:
From AMS point of view, if network entry is completed (see 16.2.6), the AMS<ins>may </ins> ~~shall~~ stop communicating with the serving ABS. Then, the AMS may send UL data or BW-REQ message to the target ABS.

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

Reason for Group's Decision/Resolution

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

Group's Notes

Clause 16.2.8, MAC: Multicarrier operation

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

Comment by: Lei Wang **Membership Status:** Member **Date:** 7/9/2010

Comment # 594 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 317 **Line** 11 **Fig/Table#** **Subclause** 16.2.8.2.11

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

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

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

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

Vote:
In favor: 1
Opposed: 3
Abstain:

Group's Notes

16.2.8 Multicarrier operation

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

Comment by: Lei Wang **Membership Status:** Member **Date:** 7/9/2010

Comment # 595 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 318 **Line** 8 **Fig/Table#** **Subclause** 16.2.8.2.11.2

what happens if the AMS could not conduct the primary change as instructed by the ABS even it correctly received and ack-ed the AAI_CM-CMD message? There are reasons similar to HO failure that triggers this error condition.
The two primary carrier change cases as shown in Figure 424 and 425 have no means to handle such an error condition. Well, in the case of Figure 424, it actually causes disconnection of the AMS from the ABS, as there is no AAI_CM-IND message for triggering the actual primary carrier change.
we suggest the following to handle this problem:
1. use AAI_CM-IND sent on the target carrier to indicate a success of primary carrier change at AMS. only after receiving an AAI_CM-IND sent on the target carrier, the ABS can use the target carrier as the new primary carrier for control channels;
2. use AAI_CM-IND sent on the serving carrier at the action time to indicate a failure of primary carrier change.

Suggested Remedy

make the following changes:
1. in Figure 424 on page 319, add a line at the action time from AMS's T-carrier to ABS's T-carrier with the caption of "AAI_CM-IND";
2. change the paragraph in line 25 on page 318 as follows:
If the AMS supports carrier aggregation mode and the target carrier is one of the active secondary carriers of the AMS, the AMS may receive data and control signal on the target carrier immediately after switching. Otherwise, the AMS first reconfigures its hardware setting (e.g. RF center frequency) and switches to target carrier. If Ranging indicator in the AAI_CM-CMD message is set to '1', the AMS shall perform the periodic ranging procedure with the target carrier. After successfully completing this action, the AMS shall transmit an AAI_CM-IND message on the target carrier to notify its readiness of the target carrier to the ABS; otherwise the AMS shall transmit an AAI_CM-IND on the serving carrier to indicate a failure of the primary carrier change. If Ranging indicator in the AAI_CM-CMD message is set to '0', at the action time, the AMS shall transmit an AAI_CM-IND message to the ABS on the target carrier if it is ready to use the target carrier as its new primary carrier; otherwise it shall transmit the AAI_CM-IND message on its serving carrier. The ABS shall use the target carrier as the primary carrier may transmit data and control signal after the AAI_CM-IND message is received on the target carrier from the AMS through the target primary carrier. Given that a common MAC manages both serving and target primary carriers, network reentry procedures at the target primary carrier is not required. The ABS may direct an AMS to change the primary carrier without scanning. For the multi-carrier supported AMS, the logical carrier indices of the serving and target primary carrier are swapped after the primary carrier change.
3. insert the following new paragraph in line 39 on page 318:
At the action time of the primary carrier change as instructed by the ABS in a received AAI_CM-CMD message, if the AMS is not ready to use the target carrier as the new primary carrier, i.e., a failure of primary carrier change, the AMS shall send an AAI_CM-IND message on the serving primary carrier. When receiving an AAI_CM-IND message on the serving carrier at or after the action time, the ABS considers the corresponding primary carrier change procedure is failed and it shall keep using the serving carrier as the primary carrier for the AMS.

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

Reason for Group's Decision/Resolution

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

Group's Notes

16.2.8 Multicarrier operation

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

2010/10/12 **IEEE 802.16-10/0040r3**

Comment by: Lei Wang **Membership Status:** Member **Date:** 7/9/2010

Comment # **593** **Document under Review:** **P802.16m/D6** **Ballot ID:** **sb_16m**

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 319 **Line** 36 **Fig/Table#** **Subclause** 16.2.8.2.11.2

There are couple of issues with the Figure 425 on page 319, e.g.,
1. at the AMS side, the Common MAC box is missing;
2. at the AMS side, the S-carrier and T-carrier shall be shown.

Suggested Remedy

make the following changes in Figure 425 on page 319:
1. add the box at the AMS side with Common MAC with S-carrier and T-carrier i.e., (the same box at the ABS side);
2. show that all the messages before the action time are on S-carrier between the ABS and the AMS; also show that all the interactions after the action time are on T-carrier between the ABS and the AMS.

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

Reason for Group's Decision/Resolution

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

Group's Notes

16.2.8 Multicarrier operation

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

Comment by: Lei Wang **Membership Status:** Member **Date:** 7/9/2010

Comment # 597 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 320 **Line** 1 **Fig/Table#** **Subclause** 16.2.8.2.11.3

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

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

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

Group's Notes

16.2.8 Multicarrier operation

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

Comment by: Lei Wang **Membership Status:** **Date:**

Comment # A053 **Document under Review:** P802.16m/D7 **Ballot ID:** sb_16m

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

I don't agree with the reasons given to the comment resolution to comment #595 in 80216-10_0040r2.
What happens if the AMS could not conduct the primary change as instructed by the ABS even it correctly received and ack-ed the AAI_CM-CMD message? There are reasons similar to HO failure that triggers this error condition.
The two primary carrier change cases as shown in Figure 422 and 423 have no means to handle such an error condition. Well, in the case of Figure 422, it actually causes disconnection of the AMS from the ABS, as there is no AAI_CM-IND message for triggering the actual primary carrier change.
we suggest the following to handle this problem:
1. use AAI_CM-IND sent on the target carrier to indicate a success of primary carrier change at AMS. only after receiving an AAI_CM-IND sent on the target carrier, the ABS can use the target carrier as the new primary carrier for control channels;
2. use AAI_CM-IND sent on the serving carrier at the action time to indicate a failure of primary carrier change.

Suggested Remedy

make the following changes:
1. in Figure 422 on page 321, add a line at the action time from AMS's T-carrier to ABS's T-carrier with the caption of "AAI_CM-IND";
2. change the paragraph in line 44 on page 320 as follows:
If the AMS supports carrier aggregation mode and the target carrier is one of the active secondary carriers of the AMS, the AMS may receive data and control signal on the target carrier immediately after switching. Otherwise, the AMS first reconfigures its hardware setting (e.g. RF center frequency) and switches to target carrier. If Ranging indicator in the AAI_CM-CMD message is set to '1', the AMS shall perform the periodic ranging procedure with the target carrier. After successfully completing this action, the AMS shall transmit an AAI_CM-IND message on the target carrier to notify its readiness of the target carrier to the ABS; <ins> otherwise the AMS shall transmit an AAI_CM-IND on the serving carrier to indicate a failure of the primary carrier change. If Ranging indicator in the AAI_CM-CMD message is set to '0', at the action time, the AMS shall transmit an AAI_CM-IND message to the ABS on the target carrier if it is ready to use the target carrier as its new primary carrier; otherwise it shall transmit the AAI_CM-IND message on its serving carrier. The ABS shall use the target carrier as the primary carrier </ins> <del>may transmit data and control signal </del> after the AAI_CM-IND message is received from the AMS through the target primary carrier. Given that a common MAC manages both serving and target primary carriers, network reentry procedures at the target primary carrier is not required. The ABS may direct an AMS to change the primary carrier without scanning.
3. insert the following new paragraph in line 56 on page 320:
At the action time of the primary carrier change as instructed by the ABS in a received AAI_CM-CMD message, if the AMS is not ready to use the target carrier as the new primary carrier, i.e., a failure of primary carrier change, the AMS shall send an AAI_CM-IND message on the serving primary carrier. When receiving an AAI_CM-IND message on the serving carrier at or after the action time, the ABS considers the corresponding primary carrier change procedure is failed and it shall keep using the serving carrier as the primary carrier for the AMS.

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

Reason for Group's Decision/Resolution

The proposed remedy is incomplete.

Group's Notes

Clause 16.2.8, MAC: Multicarrier operation

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

Comment by: Lei Wang **Membership Status:** **Date:** 8-Sep-2010

Comment # B152 **Document under Review:** P802.16m/D8 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 330 **Line** 61 **Fig/Table#** **Subclause** 16.2.7

I disagree with the comment resolution given to comment A033 in 802.16-10/0045r2.
The sentence in line 61 on page 330 raises a very basic issue for 16m UL PA allocations, i.e., a 16m PA allocation is per-connection, or per flow. We all understand that the PA is designed for the connections with periodic traffic patterns with relatively fixed payload sizes. The traffic patterns are application specific, i.e., service flow specific. Therefore, there are good reasons for the UL PA allocations for some specific service flows.
However, there is critical problem with UL PA allocation, i.e., the current 16m UL PA allocation mechanism does not support per-connection allocation, as there is no indications to tell the AMS which connection or flow a UL PA allocation is intended for.
In addition, although there are good reasons to have UL PA allocations for certain flows, it may not be a good idea to remove all the flexibility of the AMS to use UL PA allocations for other flows, e.g., use the leftover resources; or transmit other urgent data for control or other services, e.g., emergency services.
Therefore, we would propose:
a) to fix the problem of lack of indications of the intended flow info for UL PA allocations; and
b) to add a clarification allowing the AMS to use the UL PA allocations for other flows in some cases, e.g. use the leftover resources, or transmit other urgent data for other flows.
In this way, we can maximize the effectiveness of UL PA allocations while also keeping the flexibility of AMS's usage of the given UL allocations.

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

Does not consider VoIP via A-MAP IE.

Group's Notes

Clause 16.2.7; MAC Persistent Scheduling

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

Comment by: Lei Wang **Membership Status:** Member **Date:** 7/9/2010

Comment # 570 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 339 **Line** 50 **Fig/Table#** **Subclause** 16.2.12.8

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

Suggested Remedy

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

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

Vote: 1-2-0.

Reason for Group's Decision/Resolution

ARQ connection is not delay sensitive.

Group's Notes

16.2.12 Quality of Service (QoS)

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

Comment by: Lei Wang **Membership Status:** Member **Date:** 7/9/2010

Comment # 543 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 378 **Line** 52 **Fig/Table#** **Subclause** 16.2.15.3

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

Suggested Remedy

make the following changes:
1. change the paragraph in line 52 on page 378 as follows:
Ranging channel and ranging preamble codes for initial ranging are specified in 16.3.9.2.4. Each combination of a ranging channel and a ranging preamble code indicates a ranging opportunity.
2. change sentence in line 5 on page 379 as follows:
The AMS shall send the selected ranging preamble code to the ABS in the selected ranging channel opportunity.

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

Reason for Group's Decision/Resolution

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

Group's Notes

16.2.15 Network Entry and Initialization

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

Comment by: Lei Wang **Membership Status:** Member **Date:** 7/9/2010

Comment # 569 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 383 **Line** 30 **Fig/Table#** **Subclause** 16.2.16

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

Suggested Remedy

Insert the following new bullet in line 30 on page 383:
f) After responding to a periodic ranging request with a ranging status of "success" in the AAI_RNG-ACK message, the ABS shall provide a unicast UL allocation through a CDMA allocation A-MAP assignment IE to the AMS who sent the periodic ranging request. The AMS shall send its STID information in an AAI_RNG-CFM message to the ABS.

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

vote: 2-3-0

Reason for Group's Decision/Resolution

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

Group's Notes

16.2.16 Periodic Ranging

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

Comment by: Lei Wang **Membership Status:** Member **Date:** 7/9/2010

Comment # 568 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 383 **Line** 30 **Fig/Table#** **Subclause** 16.2.16

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

Suggested Remedy

Insert the following new bullet in line 30 on page 383:
e) Upon receiving a HARQ ACK for an UL data burst of the AMS, the AMS shall reset the Periodic Ranging timer.

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

Vote: 1-6-0

Reason for Group's Decision/Resolution

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

Group's Notes

16.2.16 Periodic Ranging

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

Comment by: Lei Wang **Membership Status:** **Date:**

Comment # A061 **Document under Review:** P802.16m/D7 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 415 **Line** 59 **Fig/Table#** **Subclause** 16.2.20

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

Suggested Remedy

delete the sentence in line 59 on page 415, i.e.,
<del>The process of determining whether a CLC class meets the CLC limits for Type I, II, and III classes is specified in 16.2.12. </del>

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

Resolved by comment #10128.

Resolution:

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

Reason for Group's Decision/Resolution

Group's Notes

Clause 16.2.22, MAC: MAC Control Reliability

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

Comment by: Lei Wang **Membership Status:** Member **Date:** 7/9/2010

Comment # 562 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 423 **Line** 64 **Fig/Table#** **Subclause** 16.2.26.1

There are multiple questions/issues around the usage of AAI_RNG-RSP message in subsection 16.2.26.1, e.g.,
1. is the 1-bit "Ranging Request bit" field the only information needed to be included in the AAI_RNG-RSP for this coverage loss detection usage? if so, why do we need such a complicated message to carry 1-bit information? if not, then what are the other field that are needed?
2. the unsolicited AAI_RNG-RSP usage is not specified in the definition of AAI_RNG-RSP in section 16.2.3.2, where it actually says AAI_RNG-RSP shall be sent as a response to AAI_RNG-REQ;
3. when the ABS invites the AMS to do periodic ranging, the ABS actually knows the AMS's ID. If the ABS can keep the knowledge of the AMS's ID info during this coverage loss detection required periodic ranging process, then the steps for AMS to send its ID info after a successful periodic ranging can be saved.

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

There is specific remedy proposed for the group to consider.

Group's Notes

16.2.26 Coverage loss

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

Comment by: Lei Wang **Membership Status:** Member **Date:** 7/9/2010

Comment # 549 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 432 **Line** 35 **Fig/Table#** **Subclause** 16.3.3.1

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

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

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

Group's Notes

Clause 16.3: AAI PHY

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

Comment by: Lei Wang **Membership Status:** **Date:**

Comment # A038 **Document under Review:** P802.16m/D7 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 433 **Line** 47 **Fig/Table#** **Subclause** 16.2.26.1

There are multiple questions/issues around the usage of AAI_RNG-RSP message in subsection 16.2.26.1, e.g.,
1. is the 1-bit "Ranging Request bit" field the only information needed to be included in the AAI_RNG-RSP for this coverage loss detection usage? if so, why do we need such a complicated message to carry 1-bit information? if not, then what are the other field that are needed?
2. the unsolicited AAI_RNG-RSP usage is not specified in the definition of AAI_RNG-RSP in section 16.2.3.2, where it actually says AAI_RNG-RSP shall be sent as a response to AAI_RNG-REQ;
3. when the ABS invites the AMS to do periodic ranging, the ABS actually knows the AMS's ID. If the ABS can keep the knowledge of the AMS's ID info during this coverage loss detection required periodic ranging process, then the steps for AMS to send its ID info after a successful periodic ranging can be saved.

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

using signaling header for state change opens security risk.

vote: 1 for, 3 against, 0 abstain

Group's Notes

Clause 16.2.26, MAC: Coverage Detection and Recovery

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

Comment by: Lei Wang **Membership Status:** **Date:** 8-Sep-2010

Comment # B156 **Document under Review:** P802.16m/D8 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 464 **Line** 47 **Fig/Table#** **Subclause** 16.2.26.1

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

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

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

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

Vote: 0, 6, 0

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

Group's Notes

Clause 16.2.26; MAC Coverage Loss Detection and Recovery

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

Comment by: Lei Wang **Membership Status:** **Date:** 10/25/2010

Comment # C062 **Document under Review:** P80216m/D9 **Ballot ID:** sb_16m

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

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

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

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

Suggested Remedy

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

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

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

Vote: 1-2-0

Reason for Group's Decision/Resolution

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

Group's Notes

Clause 16.2.16; MAC Periodic Ranging

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

Comment by: Lei Wang **Membership Status:** **Date:** 10/25/2010

Comment # C061 **Document under Review:** P80216m/D9 **Ballot ID:** sb_16m

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

Not satisfied with the comment resolution given to comment B158 in 80216-10_0047r3, which was a follow-up comment to the comment A041 in 802.16-10/0045r2.
Again, the point of this series of comments is about the periodic ranging design, i.e., when the AMS has active UL data communication and the UL is nicely synchronized with the ABS, the ABS does not need to send any UL Tx parameter adjustments to the AMS. However, in this case, the periodic ranging timer is still running at the AMS, then when timeouts, it will trigger the AMS to conduct periodic ranging, which is totally not necessary.
Due to the mandatory HARQ for UL unicast data burst, the ACK to the UL bursts of the AMS is certainly a good indication of UL condition. So, we suggest the AMS reset the Periodic Ranging timer upon receiving a HARQ ACK for the AMS's UL transmission.
One of the reply comments to comment B158 mentioned that "If we ad"opt the above suggested remedy, it implies that HARQ ACK is always delivered to MAC layer upon receiving HARQ ACK., it eventually results in performance degradation."
Note that HARQ ACK will be delivery to MAC layer as the scheduler is at MAC layer which is the module that the HARQ channel ID can be used for a new burst.

Suggested Remedy

Insert the following new bullet after line 7 on page 468:
e) Upon receiving a HARQ ACK for an UL data burst of the AMS, the AMS shall reset the Periodic Ranging timer.

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

Vote: 1-4-0

Reason for Group's Decision/Resolution

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

Group's Notes

Clause 16.2.16; MAC Periodic Ranging

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

Comment by: Lei Wang **Membership Status:** Member **Date:** 7/9/2010

Comment # 551 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 470 **Line** 16 **Fig/Table#** **Subclause** 16.3.5.3.1

The parameter DCASi is actually one pararmeter, not a series of parameters with subscript i, as specified in line 63 page 470 and Table 840.
It is misleading to use the notation DCASi with i as subscript, as comparing to all the other parameter names with subscript.

Suggested Remedy

Throughout the entire 16m/D6 document, change DCASi to DCASI.

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

Reason for Group's Decision/Resolution

DCASi indicates the size per partition, with 'i' indicating which partition.

Group's Notes

Clause 16.3: AAI PHY

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

Comment by: Lei Wang **Membership Status:** **Date:**

Comment # A035 **Document under Review:** P802.16m/D7 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 480 **Line** 63 **Fig/Table#** **Subclause** 16.3.4.3.1

Based on the paragraph in line 63 on page 480 and Table 837, for FPi (i>0, FPCT !=2), only one value for DCASi is explicitly signaled for all i > 0.
Therefore, It is misleading to use the notation DCASi with i as subscript in Table 837, as comparing to all the other parameter names with subscript.

Suggested Remedy

Make the following changes:
1. in line 63 page 480, before "in the SFH....", insert the text "called DCASI,"
2. in line 55, page 552, Table 837, change "DCASi" to "DCASI"

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

Reason for Group's Decision/Resolution

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

Group's Notes

Clause 16.3.4, PHY: Downlink physical structure

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

Comment by: Lei Wang **Membership Status:** **Date:**

Comment # A034 **Document under Review:** P802.16m/D7 **Ballot ID:** sb_16m

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

The long TTI burst vs. the use of assignment A-MAP IE needs to be clarified.
I am confused by the resolution given to comment #547 in 80216-10_0040r2 regarding the long TTI burst allocation vs. assignment A-MAP. I am copying the "reason" box below from 80216-10_0040r2 for comment #547:
"A-MAP region includes not only assignment A-MAP but also NUS A-MAP, HF-A-MAP, PC-A-MAP. And a long TTI burst can be signaled through an assignment A-MAP in all subframes. "
Note that the 2nd sentence above is totally unclear and incorrect about the A-MAP use for a long TTI allocation. First, it uses "can" i.e., the unclear part. Second, it says "an assignment A-MAP in all subframes" for a long TTI burst., which won't work for FDD system at all, i.e., the incorrect part.
We suggest that, for a long TTI burst, only one assignment A-MAP IE is used and it should be in the A-MAP of the first subframe of the long TTI burst's A-MAP relevance.

Suggested Remedy

change the paragraph in line 1 on page 538 as follows:
A-MAP regions shall be present in all DL AAI subframes. When default TTI is used, DL data allocations corresponding to an A-MAP region can occupy resources in any frequency partition within the AAI subframe where the A-MAP region is located. UL data allocations corresponding to an A-MAP region can occupy resources in any frequency partition within the UL AAI subframe according to A-MAP relevance and HARQ timing defined in 16.2.14.2.2. <ins> A long TTI data burst allocation is signaled by an A-MAP that corresponds to the first subframe of the long TTI data burst. </ins>

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

Reason for Group's Decision/Resolution

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

Group's Notes

Clause 16.3.5, PHY: Downlink control structure

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

Comment by: Lei Wang **Membership Status:** Member **Date:** 7/9/2010

Comment # 572 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 585 **Line** 22 **Fig/Table#** **Subclause** 16.3.6.5.2.4.7

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

Suggested Remedy

make the following changes:
1. insert a new row in line 22 page 585 in Table 858 as follows:
Syntax Size (bits) Notes
ISizeOffset 5 Offset used to compute burst size index
2. in line 24 page 585, change the size field of the "Reserved" row from 20 to 15.

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

Reason for Group's Decision/Resolution

BW REQ Hdr is fixed size, we don't need $I_{sizeoffset}$

Group's Notes

Clause 16.3: AAI PHY

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

Comment by: Lei Wang **Membership Status:** Member **Date:** 7/9/2010

Comment # 574 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 585 **Line** 24 **Fig/Table#** **Subclause** 16.3.6.5.2.4.7

With the 16m UL synchronous HARQ retransmission mechanism, before reaching the max number of HARQ retransmissions but still not successful, the ABS can change or stop the UL allocations for the synchronous UL HARQ retransmissions by sending a basic UL allocation IE with the same ACID by with AI_SN not-toggled or toggled, respectively.
However, the above mentioned mechanisms do not apply to the unicast UL allocations anonymously allocated by CDMA allocation IE or BR-ACK IE, because there is no ACID or AI_SN fields in such unicast UL allocations, and the AMS of the UL allocation is identified by RAID or the used random access channel and random access preamble.
We propose to introduce a 1-bit flag in the CDMA allocation A-MAP IE to indicate a stop of UL HARQ retransmissions.

Suggested Remedy

make the following changes:
1. replace the "Reserved" row in line 24 page 585 in Table 858 by the following two rows:
Syntax Size (bits) Notes
ReTx Stop Indicator 1 when set to 1, indicate to stop the
UL HARQ retransmissions
Reserved 20 19 Reserved bits
2. in line 6 page 586, change the "Reserved" as follow:
Syntax Size (bits) Notes
ReTx Stop Indicator 1 when set to 1, indicate to stop the
UL HARQ retransmissions
Reserved 1 Reserved bits
3. change the paragraph in line 30 on page 586 as follows:
The maximum number of the HARQ retransmission is set to the default value defined in 16.2.14.2. HARQ retransmission control information cannot be changed during retransmission process. If the AMS receives a CDMA Allocation A-MAP IE with the ReTx Stop Indicator set to 1, it shall stop the HARQ retransmissions of the UL data burst allocated to the RAID.

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

Reason for Group's Decision/Resolution

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

Group's Notes

Clause 16.3: AAI PHY

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

Comment by: Lei Wang **Membership Status:** **Date:** 10/25/2010

Comment # C060 **Document under Review:** P80216m/D9 **Ballot ID:** sb_16m

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

Not satisfied with the comment resolution given to comment B155 in 80216-10_0047r3, which was a follow-up comment A036 in 802.16-10/0045r2, about allocation granularity in the 20MHz system bandwidth.
For convenience, the reason for rejecting B155 is copied below
"Want to keep the reserved bit. Incomplete remedy (only considers one IE)."
Note that 1) I don't think it is appropriate to say "Want to keep the reserved bit " without giving any reasons; 2) the suggested remedy was about one IE and there are other IEs that need to be addressed too. However, let's discuss and address the key points of this identified issue based on one IE first. If a conclusion is reached, then it should be straightforward to change the other IEs that have the same issue.
Again, as pointed out by comment A036 in 802.16-10/0045r2, there were some serious doubts about the correctness of the original analysis, e.g., conclusions based on 1/6 < 31/1422.
In addition, we think Sacrificing the allocation granularity seems not a good design choice, particularly at steps as big as 8 LRUs. Even with code-matching schemes, the offset of the required size to the nearest allowed S value can be up to 4 LRUs. This makes the ratio of the offset to the assigned size is greater than majority of the code steps based on the nominal MCS table given in Table 927, on page 825 in 16m/D9.
We would recommend reconsidering the RI field encoding issue, particularly for the 20MHz system bandwidth, instead of sacrificing the allocation granularity, looking for some other alternatives, e.g., change the RI field from 11 bits to 12 bits by using the 1 reserved bit, and/or consider the constraints of the allocations to remove those ones that do not need to be signaled by the assignment A-MAP IEs, e.g., the control channel occupied resources, and/or allocations spanning over multiple frequency partitions, etc.

Suggested Remedy

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

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

Reason for Group's Decision/Resolution

Vote:
In favor: 0
Opposed: 3

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

Group's Notes

Clause 16.3.5; PHY Downlink control structure

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

Comment by: Lei Wang **Membership Status:** **Date:** 10/25/2010

Comment # C063 **Document under Review:** P80216m/D9 **Ballot ID:** sb_16m

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

Not satisfied with the comment resolution given to comment B160 in 80216-10_0047r3, which was a follow-up comment to the comment A045 in 802.16-10/0045r2.
The reason given to a rejection to comment B160 is "Still not clear how the ABS determines BW size to be assigned to a specific user and/or connection as a response to the BR code received"
Note that the only thing that needs to be specified is the minimum size of the allocation, i.e., no need to specify how ABS to determine a specific size as it is a scheduler issue. Well, the minimum allocation size for a received contention-based BW REQ is the size of BR header, and it has been specified in the BW request procedure.
For convenience, here's a copy of comment B160:
All the reply commenters and also "disagree" reason given in the comment resolution said almost the same thing, i.e., without knowing STID, how does the ABS know how much bandwidth the AMS is requesting. Well, as clearly stated in comment A045, depending on the traffic load, the ABS does not have to just allocate the size for the AMS to send a BR header. in other words, the 3-step BR procedure shall not only apply to the BR with a short message. Note that in 16e where there is no such short message thing for the OFDMA-system contentioned-based BR reqeust, BR procedure can be 3-step or 5-step, although it is not clearly named as 3-step /5-step, because it did not mandate the allocation size for the CDMA-allocation-IE.
Again, the key point of this comment is not to limit the 3-step BR only to the BR with short message.
Here's a re-submission of comment A045:
When using a CDMA allocation IE to allocate UL resource in response to a received contention-based bandwidth request, the allocation size don't have to be just for a BW REQ header. Depending on the traffic load, the ABS may allocate different sizes of data bursts, i.e., don't have to be a fixed size for sending BW REQ header. Therefore, the Isizeoffset is needed.

Suggested Remedy

make the following changes:
1. insert a new row in line 39 page 676 in Table 851 as follows:
Syntax Size (bits) Notes
<ins> ISizeOffset 5 Offset used to compute burst size index </ins>
2. in line 41 page 676, change the size field of the "Reserved" row from 20 to 15.

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

Reason for Group's Decision/Resolution

Vote:
In favor: 0

Opposed: 2

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

Group's Notes

Clause 16.3.5; PHY Downlink control structure

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

2010/10/12

IEEE 802.16-10/0040r3

Comment by: Lei Wang **Membership Status:** Member **Date:** 7/9/2010

Comment # **577** **Document under Review:** **P802.16m/D6** **Ballot ID:** **sb_16m**

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

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

Suggested Remedy

Change the text in line 57 page 709 to line 10 page 710 as follows:
The information for ranging time resource allocation is indicated by the S-SFH in a regular allocation. The information of the NS-RCH allocation consists of the ranging configuration with AAI subframe-offset (OSF) for ranging resource allocation in the time domain. The information for ranging frequency resource allocation, i.e., the subband index for ranging resource allocation is determined by the IDcell and the allocated number of subbands in the UL primary frequency partition YSB,PP YSB according to the Equation (283), where IDcell is defined in 16.3.6.1.2 and YSB is defined in 16.3.6.5.2.4.3 with exception of is the number of allocated subband CRUs in 16.3.8.3.
ISB = mode (IDCell, YSB,PP YSB) (283)
where ISB denotes the subband index (0, to YSB,PP YSB-1) for ranging resource allocation among YSB,PP YSB subbands.

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

Reason for Group's Decision/Resolution

There is no primary frequency partition in the UL.

Group's Notes

Clause 16.3: AAI PHY

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

Comment by: Lei Wang **Membership Status:** Member **Date:** 7/9/2010

Comment # 578 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 713 **Line** 6 **Fig/Table#** **Subclause** 16.3.9.2.4.2

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

Suggested Remedy

change the text in line 59 page 712 to line 48 page 713 (except Table 925) as follows:
The information of the S-RCH allocation consists of the ranging configuration with AAI subframe-offset (OSF) for ranging resource allocation in the time domain where OSF is same AAI subframe-offset of the NS-RCH defined in 16.3.9.2.4.1. The information for ranging frequency resource allocation, i.e., the subband index for ranging resource allocation is determined by the IDcell and the allocated number of subbands in the UL primary frequency partition YSB,PP YSB according to the Equation (286) where IDcell is defined in 16.3.6.1.2 and YSB is defined in 16.3.6.5.2.4.3with exception of is the number of allocated subband CRUs in 16.3.8.3.
ISB, s = mod(IDcell+1, YSB,PP YSB) (286)
where ISB, s denotes the subband index (0, to YSB,PP YSB-1) for ranging resource allocation among YSB,PP YSB subbands.

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

Reason for Group's Decision/Resolution

There is no primary frequency partition in the UL.

Group's Notes

Clause 16.3: AAI PHY

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

Comment by: Lei Wang **Membership Status:** Member **Date:** 7/9/2010

Comment # 598 **Document under Review:** P802.16m/D6 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 790 **Line** 14 **Fig/Table#** **Subclause** 16.4.5.1

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

Suggested Remedy

change the paragraph in line 14 on page 790 as follows:
For a Femto ABS that uses air interface connection with the overlaid Macro ABS for exchanging control messages, the Femto ABS shall perform the following additional initialization procedure during the Femto ABS initialization procedure.

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

Reason for Group's Decision/Resolution

Allowing data messages increases complexity.

Group's Notes

Clause 16.4: AAI Femto

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

Comment by: Lei Wang **Membership Status:** **Date:** 10/25/2010

Comment # C065 **Document under Review:** P80216m/D9 **Ballot ID:** sb_16m

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 890 **Line** 15 **Fig/Table#** **Subclause** 16.4.5.1

Not satisfied with the resolution to the comment #B164 in 80216-10_0047r3. The following text was given as the reason to disagree with comment #B164:
"Since the number of AMSs and the traffic of the AMSs will keep on varying and hence a proper signaling mechanism has to be in place for allocating appropriate resources on the air interface between the Femto and the Macro. This will lead to increased complexity and overhead.
Moreover Femto has wired backhaul connection which it is encouraged to use."
Note that 1) the comment B164 was not questioning the air interface between Femto and Macro; 2) regarding the complexity and overhead issue, the comment B164 has stated pretty clearly, i.e., considering the existence of an air interface between Femto and Macro, removing the restriction of "control messages" only does not increase complexity and overhead; and 3) the comment B164 does not discourage the use of wired backhaul for Femto.
Just for the convenience, the comment B164 is copied below:
***** comment B164 on 16m/D8:
Not satisfied with the comment resolution given to comment A055 in 802.16-10/0045r2. The following text is given as the "reason" to disagree with comment A055:
"To limit complexity and to avoid limiting the duplication of functionality of Relay and Femto. "
Note that we are talking about there is already an air link connection between the Femto ABS and the Macro ABS; then why more complexity? Regarding Femto vs. relay, I think there are two points that should be pointed out: one is that there is no reason (neither technical nor practical) to draw a solid line between Femto and relay; the other is the air interface between the Femto ABS and the Macro ABS does not have to be the same as the air interface between the Femto ABS and its subscriber stations.
Therefor, When a Femto ABS is connected to an overlaid Macro ABS through the Femto ABS's air interface, Why is the wireless connection between Femto ABS and Macro ABS limited to control message only?

Suggested Remedy

change the paragraph in line 15 on page 890 as follows:
For a Femto ABS that uses air interface connection with the overlaid Macro ABS <del> for exchanging control messages </del>, the Femto ABS shall perform the following additional initialization procedure during the Femto ABS initialization procedure.

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

Reason for Group's Decision/Resolution

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

Group's Notes

IEEE 802.16-10/0059

Clause 16.4; Other Femto

Editor's Notes

Editor's Actions

Comment by: Lei Wang **Membership Status:** **Date:** 10/25/2010

Comment # C066 **Document under Review:** P80216m/D9 **Ballot ID:** sb_16m

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

Not satisfied with the resolution to the comment #B170 in 80216-10_0047r3.
Based on answers given to the questions listed in the comment #B170, the issues are now narrowed down to one question, i.e., why do we need two modes for carrier switching for E-MBS as there is much difference between mode-0 and mode-1. Even allowing the bitmap being repeated in both DSx and AAI-EMBS-RSP, the one in DSx is really optional and the one in AAI-EMBS-RSP is really needed.

Suggested Remedy

combine the two modes of carrier switching for E-MBS by making the following changes:
1. Change the paragraph in line 51 page 952 as follows:
</del> A Carrier Switching Mode is included in AAI-DSA-REQ/RSP and AAI-DSC-REQ messages. </del> If Carrier Switching Mode is <ins> used </ins> </del> 0b0 </del>, the AMS's availability in the primary carrier is indicated using Unicast Available Interval bitmap transmitted in the <ins> AAI-E-MBS-REP/RSP messages, and optionally in the </ins> AAI-DSA-REQ, AAI-DSC-REQ messages </del> to add and change the Unicast Available Interval.</del>
2. change the sentence in line 58 page 952 as follows:
When Carrier Switching Mode is <ins> used </ins> </del> 0b0 </del>, <ins> a </ins> Unicast Available Interval Bitmap is <ins> used </ins> </del>included in AAI-DSA-REQ/RSP message for carrier switching mode</del> to indicate the duration in which the AMS is available in the primary carrier for Unicast and duration the AMS is in the secondary carrier to receive E-MBS.
3. change the sentence in line 7 page 953 as follows:
Whenever the AMS adds E-MBS content, the AMS shall discontinue carrier switching, return to the primary carrier. The ABS shall re-allocate the Unicast Available Interval </del> using AAI-DSA transaction. AAI-DSC transaction is also used to</del> <ins> and also </ins>update the Unicast Available Interval Bitmap.
4. change the sentence in line 13 page 953 as follows:
</del> When Carrier Switching Mode is 0b1 , an</del> <ins> An </ins>AMS transmits the AAI-E-MBS-REP message to the ABS to inform the ABS which E-MBS service(s) the AMS intends to receive.

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

Reason for Group's Decision/Resolution

Vote:
In favor: 0
Opposed: 2

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

of the unicast available interval is necessary, e.g. AAI-DSC message

Group's Notes

Clause 16.9; Other eMBS

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

2010/10/12

IEEE 802.16-10/0040r3

Comment by: Vladimir Yanover **Membership Status:** **Date:** 10/25/2010

Comment # **C050** **Document under Review:** **P80216m/D9** **Ballot ID:** **sb_16m**

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** **Line** **Fig/Table#** **Subclause**

According to the contribution IEEE C802.16m-10/1328 "Inefficiency related to DID management and randomization of Paging Offset"

Suggested Remedy

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

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

Vote: 4-14-1

Reason for Group's Decision/Resolution

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

Group's Notes

Clause 16.2.1; MAC Addressing

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

Comment by: Vladimir Yanover **Membership Status:** **Date:** 10/25/2010

Comment # C034 **Document under Review:** P80216m/D9 **Ballot ID:** sb_16m

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

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

Suggested Remedy

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

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

Vote: 0-2-0

Reason for Group's Decision/Resolution

No proposed text to include in the standard

Group's Notes

Clause 16.2.17; MAC Sleep Mode

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

Comment by: Vladimir Yanover **Membership Status:** **Date:** 10/25/2010

Comment # C035 **Document under Review:** P80216m/D9 **Ballot ID:** sb_16m

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

The following sentence is talking about specific AMS:
1. "At the beginning of the paging listening interval, the AMS shall scan and synchronize ... etc.".
In this case meaning of "THE paging listening interval" is clear: it is the interval mentioned in previous paragraph. But the next sentence appears in a wrong context:
2. (p.485. line 10) "The ABS shall transmit the PGID-Info at a predetermined location in the paging listening interval in order to advertise the paging group(s) that is supported by the ABS. The PGID-Info shall be transmitted by the ABS regardless of whether or not there any notifications for AMSs. ".
What is "THE paging listening interval" in the second sentence? There are many AMSs near the ABS having different listening intervals; normally the ABS does not know about their presence.
So first of all the language of the second sentence should be clarified.
In my view, the only possible interpretation of the second sentence is that the ABS must transmit (the same) PGID_Info message in ANY paging listening interval ever assigned to ANY mobile in ANY paging group supported by the ABS. This requirement in fact enforces the ABS to transmit the PGID-Info message in all possible listening intervals. For example, if paging cycle = 64 SFs, and the ABS supports several paging groups (tens of thousands of mobiles), with high probability all offsets 0..2047 will be occupied by listening intevals, therefore the ABS will be mandated to transmit the PGID_Info in every frame. Obviously the air interface will be overloaded with PGID_Info transmissions.

Suggested Remedy

Clarify the language of the sentence p.485. line 10. Make sure that new language does not enforce the ABS to transmission of PGID-Info every SF

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

Wed AM: deferred

Reason for Group's Decision/Resolution

No text available to include.

Group's Notes

Clause 16.2.18; MAC Idle Mode

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