| Comment by: | Paul Piggin | Membership Status: | Member | Date: ? |

| Comment # 0041 | Document under Review: P802.16j/D1 | Ballot ID: 28 |

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 4   **Line** 45   **Fig/Table#**   **Subclause** 3.97

Whereas the definition of the R-RTG seems to be general enough to allow for an gap between two relay zones (in case there is more than one tier of RSs) , this definition only mentions RSRTG between an access zone and a relay zone.

Suggested Remedy

Either limit the number of hops to 1 consistently throughout the document, or modify this definition as follows:

3.97 RS receive/transmit transition gap (RSRTG): A gap between the last sample of the uplink burst in the an UL access or relay zone and the first sample of the subsequent uplink burst in the subsequent UL relay zone at the antenna port of the relay station (RS). This gap allows time for the relay station (RS) to switch from receive to transmit mode.

GroupResolution   **Decision of Group:**   **Superceded**

by #28

Reason for Group's Decision/Resolution

Group's Notes
No objection

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

Comment by:	Mike Hart	Membership Status:	Member	Date: 9/10/2007

Comment # **0028**   **Document under Review:** **P802.16j/D1**   **Ballot ID:** **28**

Comment   **Type** Technical   **Part of Dis** ☐   **Satisfied** ☐   **Page** 4   **Line**   **Fig/Table#**   **Subclause** 3.97

This definition is not inline with the current frame structure. Suggest to change it to something similar to that used for SSRTG.

Suggested Remedy

Modify 3.97 as indicated:

3.97 RS receive/transmit transition gap (RSRTG): ~~A gap between the last sample of the uplink burst in the UL access zone and the first sample of the subsequent uplink burst in the UL relay zone at the antenna port of the relay station (RS). This gap allows time for the relay station (RS) to switch from receive to transmit mode.~~ <u>The minimum receive-to-transmit turnaround gap required at an RS. RSRTG is measured from the time of the last sample of the received burst to the first sample of the transmitted burst at the antenna port of the SS.</u>

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

Modify 3.97 as indicated:

3.97 RS receive/transmit transition gap (RSRTG): ~~A gap between the last sample of the uplink burst in the UL access zone and the first sample of the subsequent uplink burst in the UL relay zone at the antenna port of the relay station (RS). This gap allows time for the relay station (RS) to switch from receive to transmit mode.~~ <u>The minimum receive-to-transmit turnaround gap required at an RS. RSRTG is measured from the time of the last sample of the received burst to the first sample of the transmitted burst at the antenna port of the RS.</u>

Reason for Group's Decision/Resolution

Group's Notes
No objection

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

| Comment by: | Paul Piggin | Membership Status: | Member | Date: ? |

| Comment # 0042 | Document under Review: P802.16j/D1 | Ballot ID: 28 |

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 4   **Line** 51   **Fig/Table#**   **Subclause** 3.98

Whereas the definition of the R-TTG seems to be general enough to allow for a gap between two relay zones (in case there is more than one tier of RSs) , this definition only mentions RSTTG between an access zone and a relay zone.

Suggested Remedy

Either limit the number of hops to 1 consistently throughout the document, or modify this definition as follows:

3.98 RS transmit/receive transition gap (RSTTG): A gap between the last sample of the downlink burst in
~~the~~ a DL access or relay zone and the first sample of the subsequent downlink burst in the subsequent DL relay zone at the
antenna port of the relay station (RS). This gap allows time for the relay station (RS) to switch from transmit
to receive mode.

GroupResolution   **Decision of Group:**   **Superceded**

by #29

Reason for Group's Decision/Resolution

Group's Notes
No objection

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

| <u>Comment by:</u> | Mike Hart | <u>Membership Status:</u> | Member | <u>Date:</u> 9/10/2007 |

<u>Comment #</u> **0029**   <u>Document under Review:</u> **P802.16j/D1**   <u>Ballot ID:</u> **28**

<u>Comment</u>   <u>Type</u> Technical   <u>Part of Dis</u> ☐ Satisfied ☐   <u>Page</u> 4   <u>Line</u>   <u>Fig/Table#</u>   <u>Subclause</u> 3.98

This definition is not inline with the current frame structure. Suggest to change it to something similar to that used for SSTTG.

Suggested Remedy

Change 3.98 as indicated:

3.98 RS transmit/receive transition gap (RSTTG): ~~A gap between the last sample of the downlink burst in the DL access zone and the first sample of the subsequent downlink burst in the DL relay zone at the antenna port of the relay station (RS). This gap allows time for the relay station (RS) to switch from transmit to receive mode.~~ <u>The minimum transmit-to-receive turnaround gap required at an RS. RSTTG is measured from the time of the last sample of the transmitted burst to the first sample of the received burst at the antenna port of the RS.</u>

GroupResolution   <u>Decision of Group:</u>   **Accepted**

Reason for Group's Decision/Resolution

Group's Notes
No objection

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

| Comment by: | Paul Piggin | Membership Status: | Member | Date: ? |

Comment # **0050**　　　　　　**Document under Review:** **P802.16j/D1**　　　　　**Ballot ID:** **28**

Comment　　　**Type** Technical　　**Part of Dis** ☒ **Satisfied** ☐　　**Page** 5　　**Line** 3　　**Fig/Table#**　　**Subclause** 3.99

Since a relay station has multiple interfaces, RTD is ambiguous.

Suggested Remedy

Clarify that the RTD is the round trip delay between the RS and its superordinate station, by adding the following sentence to the end of the definition:

RTD is the round trip delay between the RS and its superordinate station.

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

Adopt the proposed comment and insert the following into subclause 3:

Round trip delay (RTD) - the round trip delay time between communicating stations (i.e. such as between an RS and its superordinate station).

Reason for Group's Decision/Resolution

Note: This comment provides a general definition for RTD and also clarifies its interpretation in terms of R-RTG.

Group's Notes
No objection

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

| Comment by: | Lei Wang | Membership Status: | Member | Date: 9/8/2007 |

| Comment # 0061 | Document under Review: P802.16j/D1 | Ballot ID: 28 |

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐   **Page** 5   **Line** 26   **Fig/Table#**   **Subclause**

The document is far from being complete. There are missing definition, missing message encoding, missing descriptions, stale cross references, etc. Although it is normal to have a few such errors in a document, the number of such errors in this document makes it very difficult to read. Examples of this incompleteness are provided below. The document should have been verified for completeness before submitting it to the WG, since it is very difficult for someone outside the TG to propose remedies, not knowing what who the contributor was and what his or her intentions were. It is also impossible to verify the technical validity of the document in its current incoherent state.

Suggested Remedy

Fix the following problems:

Page 5, line 27: Missing definition body
Page 38, line 5: There is no section 24 (stale x-ref); correct reference is probably 11.22, but this TLV does not show how it is interpreted, and is incorrect. The length is not 1 bit.
Page 57, line 3-17: the encoding of the "Fraction GPS time" is not specified.
Page 78, line 29: the definition of DL_Burst_Transmit_IE is missing. Reference 8.4.5.3.29 is incorrect.

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

To solve problem 3:
Modify the notes field as indicated in Table 183o:
"Fraction GPS time for frame-start DL preamble of current frame ~~in unit of 1 micro second~~, where fraction GPS time is defined as: [equation] <u>The value is uniformly quantized to 16 bits.</u>"

Problem 1: Superceded by #54;
Problem 2: Superceded by #332 and #314;
Problem 4: Superceded by #503

Reason for Group's Decision/Resolution

Group's Notes

No objection

| **Comment by:** | Lei   Wang | **Membership Status:** | Member | **Date:** 9/8/2007 |

Comment # **0100**   **Document under Review:** **P802.16j/D1**   **Ballot ID:** **28**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 7   **Line** 19   **Fig/Table#**   **Subclause** 6.3.2

Nowhere does the document specify how the CRC of a Relay MAC PDU is computed.

Suggested Remedy

Add to the end of the paragraph: Refer to section 6.3.3.5 for the CRC calculation.

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

Add to the end of the paragraph: Refer to section 6.3.3.5.2 for the CRC calculation.

Reason for Group's Decision/Resolution

Group's Notes
No objection

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

| **Comment by:** | Erik Colban | **Membership Status:** | Member | **Date:** | ? |

Comment # 0129   **Document under Review:** **P802.16j/D1**   **Ballot ID:** **28**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 10   **Line**   **Fig/Table#**   **Subclause** 6.3.2.1.2.2.2.1

It is unclear whether this section applies to centralized scheduling mode only

Suggested Remedy

Add a sentence at the beginning of this section: The subclause applies MR systems with centralized scheduling only.

GroupResolution   **Decision of Group:** **Superceded**

by #134

Reason for Group's Decision/Resolution

Group's Notes
No objection

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

| Comment by: | Kenneth Stanwood | Membership Status: | Member | Date: | 9/7/2007 |

Comment # 0133   **Document under Review:** P802.16j/D1   **Ballot ID:** 28

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 10   **Line** 45   **Fig/Table#**   **Subclause** 6.3.2.1.2.2.2.1

It is unclear which mode of operation this section applies to. (This is a general problem with the document, as it specifies various modes of operation). Logically, this section seems to make sense to centralized scheduling. The matter is further complicated by the fact that bandwidth requests have two modes of operation, centralized and distributed, and that the document does not specify clearly how these two modes of operation related to centralized and distributed scheduling.

Suggested Remedy

In this particular case, add a sentence in the beginning of this section: "This section applies only to MR operation in centralized scheduling mode."

However, the document needs to be thoroughly reworked to bring clarity around the different modes of operation, before the next WG Letter Ballot re-circulation.

GroupResolution   **Decision of Group:** **Superceded**

by #134

Reason for Group's Decision/Resolution

Group's Notes
No objection

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

Comment by: Mike   Hart   **Membership Status:**   Member   **Date:** 9/10/2007

Comment # **0134**   **Document under Review:** **P802.16j/D1**   **Ballot ID:** **28**

Comment   **Type** Technical   **Part of Dis** ☐ **Satisfied** ☐   **Page** 10   **Line** 47   **Fig/Table#**   **Subclause** 6.3.2.1.2.2.2.1

RS BR may be sent only by an RS operating in a centralised scheduling mode.

Suggested Remedy

Modify 6.3.2.1.2.2.2.1 as indicated:

6.3.2.1.2.2.2.1 RS bandwidth request header (RS BR)

The RS BR header may be sent by ~~the~~ a non transparent RS operating in centralized scheduling mode to the MR-BS to request bandwidth on~~for~~ its access link for the purposes of transmitting messages composed by the RS (such as ~~as~~ RNG-RSP, MOB_NBR-ADV, DCD and UCD). This header shall not be transmitted by an RS operating in distributed scheduling mode. The RS BR header is illustrated in Figure 35b.

GroupResolution   **Decision of Group:**   **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

No objection

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

| Comment by: | YUEFENG ZHOU | Membership Status: | member | Date: | 9/9/2007 |

| Comment # | 0194 | Document under Review: | P802.16j/D1 | Ballot ID: | 28 |

Comment **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 16   **Line** 44   **Fig/Table#**   **Subclause** 6.3.2.1.3

There is no usage for so called "DL MAC control header".

Suggested Remedy

Suggest the original author to specify where to use this header. Otherwise it has to be deleted.

GroupResolution   **Decision of Group:** **Superceded**

by #186

Reason for Group's Decision/Resolution

Group's Notes
No objection

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

| **Comment by:** | Mike   Hart | **Membership Status:** | Member | **Date:** | 9/10/2007 |

Comment # **0186**   **Document under Review:** **P802.16j/D1**   **Ballot ID:** **28**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☒   **Page** 16   **Line**   **Fig/Table#**   **Subclause** 6.3.2.1.3

There is no usage of the DL MAC control header, so delete it.

Suggested Remedy

Delete 6.3.2.1.3.

GroupResolution   **Decision of Group:**   **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

No objection

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

| **Comment by:** | Lei   Wang | **Membership Status:** | Member | **Date:** | 9/8/2007 |

Comment # **0193**   **Document under Review:** **P802.16j/D1**   **Ballot ID:** **28**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 16   **Line** 42   **Fig/Table#**   **Subclause** 6.3.2.1.3

The header in this section cannot be used in the MAC PDU between MS and BS or RS, due to backward compatibility to the same HT=1 and EC=0 encoding header type defined in the published 802.16 specs, see Figure 19a in 802.16-2005 docuemtn.

Suggested Remedy

Remove sectcion 6.3.2.1.3

GroupResolution   **Decision of Group:**   **Superceded**

by #186

Reason for Group's Decision/Resolution

Group's Notes

No objection

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

Comment by:	Lei Wang	**Membership Status:** Member	**Date:** 9/8/2007
Comment # 0198	**Document under Review:** P802.16j/D1		**Ballot ID:** 28

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 17   **Line** 45   **Fig/Table#**   **Subclause** 6.3.2.2.8

The subheader order shall be clearly specified, otherwise there will be problematic to decode a MAC PDU with multiple subhearders present.

Furthermore, Lines 39-42 can be deleted.

Suggested Remedy

make the following changes:
1. Delete lines 39-42

2. in line 45 page 17, insert the following text:

Four types of subheaders may be present in a Relay MAC PDU: Fragmentation subhearder, Packing subheader, QoS subheader, and Alllocation subheader. The Packing and Fragmentation subheaders are mutually exclusive and shall not both be present within the same MAC PDU. When multiple subheaders are present in the same Relay MAC PDU, they shall be ordered as follows: QoS subheader, allocation subheader, and fragmentation or Packing subheader.

Extended Subheaders may also be present in a Relay MAC PDU. When presented, The extended subheader shall always appear immediately after the Generic MAC header, and before all other subheaders. All extended subheaders are not encrypted.

3. Delete the last sentence in line 31 page 18, i.e.,

~~The Allocation subheader shall be the last subheader before the payload:~~

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

in line 45 page 17, insert the following text:
Four types of subheaders may be present in a Relay MAC PDU: Fragmentation subheader, Packing subheader, QoS subheader, and Alllocation subheader. The Packing and Fragmentation subheaders are mutually exclusive and shall not both be present within the same MAC PDU. When multiple subheaders are present in the same Relay MAC PDU, they shall be ordered as follows: QoS subheader, Fragmentation or Packing subheader and Allocation subheader.

Extended subheaders may also be present in a Relay MAC PDU. When presented, the extended subheader shall always appear immediately after the Relay MAC header, and before all other subheaders. All extended subheaders are not encrypted.

Delete the last sentence in line 31 page 18, i.e.,

~~The Allocation subheader shall be the last subheader before the payload.~~

Reason for Group's Decision/Resolution

Allocation subheader needs to be last, so order is slightly revised from original comment

Group's Notes

No objection

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

Comment by:	YUEFENG ZHOU	**Membership Status:** member		**Date:** 9/9/2007

Comment # 0220   **Document under Review:** **P802.16j/D1**   **Ballot ID:** **28**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 20   **Line** 22   **Fig/Table#** 38   **Subclause** 6.32384115

In legacy IEEE802.16e, BS can directly measure the uplink CQI for each MS to facilitate the radio resource control and scheduling. However, based on current 16j draft, the MR-BS could not measure the CQI in UL access zone for the MS connecting to RS in centralized scheduling. Some mechanisms are needed to fix this issue.
MR-BS may send a request to the subordinate RS to measure and report the CINR value of the MS connecting to the RS.

Suggested Remedy

Accept the proposed text in the latest version of C80216j-07_502

GroupResolution   **Decision of Group:**   **Rejected**

Adopt C802.16j-07/502r4

Reason for Group's Decision/Resolution

Centralized scheduling with more than 2 hops may be useful in special applications. The proposed contribution would imply a restriction that would prevent this case from being supported.

Group's Notes
TG vote
In favour of accepting: 6
Against: 10

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

| **Comment by:** | Chengjie Xie | **Membership Status:** | Member | **Date:** 9/9/2007 |

Comment # 0298　　　　　　　　　**Document under Review:** P802.16h/D1　　　　　　**Ballot ID:** 28

Comment　　**Type** Technical　　**Part of Dis** ☒ **Satisfied** ☐　　**Page** 30　　**Line** 33　　**Fig/Table#** Tabl　　**Subclause** 6.3.2.3.56

According to the function description of PLI Count in section 6.3.24.6.1, the PLI Count filed is used to calculate RS paging retry count, which is decrease to zeros at the same time with the controlling MR-BS. However, the PLI Count is defined as "This field is used for indicating the RS how many MOB_PAG-ADV messages have already been sent over the access link during the current PLI." in section 6.3.2.3.56 Table 174 (page 30, line33).

Based on the current 16e, a BS shall broadcast at least one, but may broadcast more than one BS Broadcast Paging messages during the MS Paging Listening Interval. So, the PLI Count shall be defined as "how many PLI has been elapsed since the first time MR-BS sending out the MOB_PAG-ADV message".

Suggested Remedy

Replace the following text in the whole draft document
"This field is used for indicating the RS how many MOB_PAG-ADV messages have already been sent over the access link during the current PLI."
To:
"This field is used for indicating the RS how many PLI of its superordinate station has been elapsed"

Modify the fifth paragraph of the section 6.3.24.6.1
In order to let MR-BS wait reasonable time for paging response, each RS's shall calculate a paging retry count which is decreased to zero at the closest PLI with its superordinate station, a "PLI Count" indication field may be included in the MOB_PAG-ADV message transmitted in the relay link, which is described in 6.3.2.3.56. This field is used for indicating the subordinate RS how many PLI of its superordinate station has been elapsed. The RS will determine its own paging retry count according to the "PLI Count" and the "Paging Retry Count" of MR-BS defined in Table 342.

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

Adopt 07/532r2.doc

Reason for Group's Decision/Resolution

Group's Notes
No objection

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

Comment by:	Zhibin Lin	**Membership Status:** Member	**Date:** 9/7/2007

Comment # 0358   **Document under Review:** **P802.16j/D1**   **Ballot ID:** 28

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 42   **Line** 3   **Fig/Table#** Tabl   **Subclause** 6.3.2.3.73

The RS_Config-REQ message may be transmitted by an MR-BS for the purpose of RS configuration. And the RS-CD message can also be unicast to a RS during initial network entry to inform the configuration parameter to this RS. Both of them are defined for the RS configuration, RS-CD and RS_Config-REQ/RCM. These messages have the similar functionality, which is confusing.

Suggested Remedy

Merge or clearly classify the RS-CD and RS_Config-REQ/RCM.

GroupResolution   **Decision of Group:**   **Superceded**

by #385

Reason for Group's Decision/Resolution

Group's Notes
No objection

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

Comment by:	Chion Mary		**Membership Status:**	Member	**Date:** 9/10/2007

Comment # 1048   **Document under Review:** **P802.16j/D1**   **Ballot ID:** **28**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 999   **Line**   **Fig/Table#**   **Subclause** 11.7.28

There are many basic features are optional and I wasn't able to find capability indcations for many of them. The ones I have identified:

1. Path management
2. Transmission using station CID - MPDU based or burst based
3. Tunnel QoS
4. Different HARQ modes

Don't know if I missed any, suggest to discuss and provide a complete list

Suggested Remedy

Modify 11.7.28 to accomodate the features list..

GroupResolution   **Decision of Group:**   **Superceded**

by #385

Reason for Group's Decision/Resolution

Group's Notes
No objection

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

| **Comment by:** | Adrian Boariu | **Membership Status:** Member | **Date:** 9/8/2007 |

| **Comment #** 0385 | **Document under Review:** P802.16j/D1 | **Ballot ID:** 28 |

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☒ **Page** 52 **Line** 3 **Fig/Table#** **Subclause** 6.3.2.3.73

RS_CD message needs some clarifications

Suggested Remedy

Adopt C80216j-07_487 or its latest version

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

Adopt C80216j-07_545r3

Reason for Group's Decision/Resolution

Group's Notes
No objection

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

Comment by:	Chengjie Xie	**Membership Status:**	Member	**Date:** 9/9/2007

Comment # **0382**   **Document under Review:** **P802.16h/D1**   **Ballot ID:** **28**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 50   **Line** 20   **Fig/Table#** Tabl   **Subclause** 6.3.2.3.70

In the latest 802.16e specification (P80216Rev2_D0b), the Start Frame field in MOB_SCN-RSP message has been changed from 4bits to 8bits. For coherence with 802.16e, the corresponding 802.16j specification should be modified.

Suggested Remedy

To modify the Start Frame field in MOB_SCN-RSP message in "6.3.2.3.70 MS scanning inform (MS_SCN-INF) message" of P80216j_D1 to 8bits.

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

To modify the Start Frame field in MOB_SCN-RSP message in "6.3.2.3.70 MS scanning inform (MS_SCN-INF) message" of P80216j_D1 to 8bits and remove the 4 padding bits.

Reason for Group's Decision/Resolution

Group's Notes
No objection

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

| Comment by: | Shulan Feng | Membership Status: Member | Date: 9/7/2007 |

| Comment # 0428 | Document under Review: P802.16j/D1 | Ballot ID: 28 |

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 106   **Line** 29   **Fig/Table#** Tabl   **Subclause** 6.39163563

During the path selection procedure performed prior to "RS operation parameter configuration", the MR-BS shall determine the path and the RS shall perform network re-entry provided the preamble index assigned in the RS_Path-REQ message is different from that of the current access station.

However, according to the current specification, when the RS performs network re-entry, the delay is long since it needs to perform contention-based initial ranging to the new access station. During this RS network re-entry procedure, MSes which will access the network via this RS also suffer long delay in entry procedure.

This contribution provides a proposal for speeding up the RS network re-entry procedure by ranging to the new access station in non-contention-based manner. The proposal is: in the path selection procedure, the MR-BS may inform the RS of the dedicated ranging parameters of the new access station, so that the RS can use the dedicated ranging parameters for faster ranging in non-contention-based manner.

Suggested Remedy

Modify the following paragraph page 106, line 29:

During this operation, the MR-BS shall determine the path (i.e. access station) of this RS based on the reported neighbour station measurements and other information such as path loading. The MR-BS shall send the RS_Path-REQ message to the RS to indicate the preamble index of the selected access station.The RS shall respond with the MR_Generic-ACK message. If the access station indicated in the RS_Path-REQ message is not the access station the RS currently attaches to, the RS shall perform network re-entry as described in 6.3.9.

As follows:

During this operation, the MR-BS shall determine the path (i.e. access station) of this RS based on the reported neighbour station measurements and other information such as path loading. The MR-BS may obtain parameters (i.e. Rendezvous time, CDMA code, and Transmission opportunity offset) from its recommended new access station. The MR-BS shall send the RS_Path-REQ message to the RS to indicate the preamble index of the selected access station, and optional parameters (i.e. Rendezvous time, CDMA code, and Transmission opportunity offset).The RS shall respond with the MR_Generic-ACK message. If the access station indicated in the RS_Path-REQ message is not the access station the RS currently attaches to, the RS shall perform network re-entry as described in 6.3.9.

GroupResolution   **Decision of Group:**   **Rejected**

Reason for Group's Decision/Resolution

No solution is provided for the actual issue raised in the comment.
The solution provided in the remedy is not consistent with the original comment.

Group's Notes

No objection.

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

Comment by:	Chion Mary	Membership Status:	Member	Date: 9/10/2007

Comment # 0489   **Document under Review:** **P802.16j/D1**   **Ballot ID:** 28

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 78   **Line**   **Fig/Table#**   **Subclause** 6.3.3.8

Fragmentation subheader was introduced as one of the subheader used for relay MAC PDU. This means that fragmentation is allowed over the tunnel packet mode. However, additional text should be added to further define the behaviour of fragmentation in relay network.

Suggested Remedy

Add the following new subclause:

6.3.3.8.3 Fragmentation over Relay Link

When tunnel packet mode is enabled, fragmentation over relay link shall be supported by both MR-BS and RS. For tunnel burst mode and transmission using station CID, fragementation over relay link shall not be used.

Fragmentation over relay link is a process by which a relay MPDU (or MAC management message) is divided into one or more relay MPDUs. When fragmentation is performed, the station at the ingress of the tunnel shall fragment the relay MPDU while station at egress of the tunnel shall reassemble the relay MPDU. Intermediate RSs along the tunnel shall forward fragmentated relay MPDUs without any further processing.

GroupResolution   **Decision of Group:**   **Rejected**

Add the following new subclause:

6.3.3.8.3 Fragmentation over Relay Link

When tunnel packet mode is enabled, fragmentation over relay link shall be supported by both MR-BS and RS. For tunnel burst mode and transmission using station CID, fragementation over relay link shall not be used.

Fragmentation over relay link is a process by which a relay MPDU (or MAC management message) is divided into one or more relay MPDUs. When fragmentation is performed, the station at the ingress of the tunnel shall fragment the relay MPDU while station at egress of the tunnel shall reassemble the relay MPDU. Intermediate RSs along the tunnel shall forward fragmentated relay MPDUs without any further processing.

Reason for Group's Decision/Resolution

fragment packets based on the link capacity.

Group's Notes
TG vote
In favor of accepting the resolution:4
Against: 16

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

2008/08/21   IEEE 802.16-07/045r5

| <u>Comment by:</u> | Chion Mary | <u>Membership Status:</u> Member | <u>Date:</u> 9/10/2007 |

| <u>Comment #</u> 0490 | <u>Document under Review:</u> P802.16j/D1 | <u>Ballot ID:</u> 28 |

<u>Comment</u>   <u>Type</u> Technical   <u>Part of Dis</u> ☒ <u>Satisfied</u> ☐   <u>Page</u> 78   <u>Line</u>   <u>Fig/Table#</u>   <u>Subclause</u> 6.3.4.6.4

Since the introduction of fragmentation subheader in relay MAC PDU, ARQ over relay link is also supported using tunnel packet mode. ARQ operation for MR network should be defined to defferentiate the different modes of ARQ operation, i.e. end to end ARQ (MR-BS to MS as in 16e), tunnel end to end (MR-BS and access RS) or hop by hop for tunnel ARQ.

Suggested Remedy
Need to clarify ARQ operation in section 6.3.4.6.4

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

[Insert in 6.3.4.6.4:]
In MR networks, ARQ operation is only performed between MR-BS and MS.

Reason for Group's Decision/Resolution

Group's Notes
No objection

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

2008/08/21   **IEEE 802.16-07/045r5**

| **Comment by:** | Kenneth Stanwood | | **Membership Status:** | Member | | **Date:** 9/7/2007 |

Comment # 0518   **Document under Review:** P802.16j/D1   **Ballot ID:** 28

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 79   **Line** 30   **Fig/Table#**   **Subclause** 6.3.6.7

This section specifies centralized distributed bandwidth request and allocation mechanisms but it is not clear how the choice between the two options related to centralized and distributed scheduling. Is there a one-to-one correspondence? If there is not, then there should be one, and it needs to be more explicit, for instance by not introducing separate terms but consistently using "centralized mode"/"distributed mode" throughout the document and remove "centralized scheduling", "centralized control", "centralized scheme", "centralized bandwidth request and allocations", etc, and ditto for the "distributed mode".

Suggested Remedy

The remedy goes beyond what can be expected from a reviewer in a WG Letter Ballot. The TG and the individual contributors need to streamline the document before it resubmits the document to the WG for a Letter Ballot recirculation.

GroupResolution   **Decision of Group:** **Superceded**

by #543 and #517.

Reason for Group's Decision/Resolution

Clarifications introduced through #543 and #517 deal with linking scheduling mode with the mode of bandwidth request and allocation.

Group's Notes
No objection

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

| **Comment by:** | Mike Hart | **Membership Status:** | Member | **Date:** 9/10/2007 |

| **Comment #** 0517 | **Document under Review:** P802.16j/D1 | **Ballot ID:** 28 |

Comment   **Type** Technical   **Part of Dis** ☐ **Satisfied** ☐   **Page** 79   **Line** 30   **Fig/Table#**   **Subclause** 6.3.6.7.1

Redundancy in headings.
Clarify that 6.3.6.7.1 and its subsections are for a non-transparent RS operating in distributed scheduling mode.

Suggested Remedy
[Modify 6.3.6.7.1 as indicated:]

6.3.6.7 Relay bandwidth request and allocation mechanisms
Insert new subclause 6.3.6.7.1:
6.3.6.7.1 ~~Distributed bandwidth request and allocation with n~~Non-transparent RS in distributed scheduling mode
In relay systems with non-transparent RSs operating in distributed scheduling mode resulting in distributed bandwidth request and
allocation, each MR-BS and RS individually determines
the bandwidth allocations on the links it controls (i.e. downlinks to and uplinks from its subordinate
stations) and creates its own MAPs reflecting these decisions. As a result, the RS must be non-transparent.
The following subclauses specify bandwidth request and allocation procedures for the relay link (i.e.
between an RS and its superordinate RS or MR-BS) in relay systems with RSs operating in distributed scheduling mode~~control~~.

[Modify the subclause titles as indicated:
6.3.6.7.1.1 Bandwidth request handling and transmission ~~in distributed mode with nontransparent~~
~~RS~~

6.3.6.7.1.1.1 Contention-based CDMA bandwidth requests ~~in distributed mode with nontransparent~~
~~RS~~

6.3.6.7.1.2 Bandwidth grants ~~in distributed mode with non-transparent RS~~

6.3.6.7.1.2.1 Polling ~~in distributed mode with non-transparent RS~~

6.3.6.7.1.2.2 Dedicated relay uplink channel allocation ~~in distributed mode with non-transparent~~
~~RS~~

GroupResolution   **Decision of Group:** **Accepted**

<u>**Comment by:**</u> Mike Hart	<u>**Membership Status:**</u> Member	<u>**Date:**</u> 9/10/2007

<u>**Comment #**</u> **0543**   <u>**Document under Review:**</u> **P802.16j/D1**   <u>**Ballot ID:**</u> **28**

<u>**Comment**</u>   <u>**Type**</u> Technical   <u>**Part of Dis**</u> ☐ **Satisfied** ☐   <u>**Page**</u> 84   <u>**Line**</u> 49   <u>**Fig/Table#**</u>   <u>**Subclause**</u> 6.3.6.7.2

Redundancy in headings.
Clarify that 6.3.6.7.2 and its subsections are for a non-transparent & transparent RS operating in centralized scheduling mode.

Suggested Remedy

[Modify 6.3.6.7.2 as indicated:]

6.3.6.7 Relay bandwidth request and allocation mechanisms

6.3.6.7.2 ~~Centralized bandwidth request and allocation with t~~Transparent or non-transparent RS <u>in centralized scheduling mode</u>

In systems with <u>RSs operating in centralized scheduling mode resulting in</u> centralized bandwidth allocation, the MR-BS shall determine the bandwidth allocations for all links (access and relay) in its MR-cell. Thus, before a station can transmit a packet to the MR-BS, that station's bandwidth request must first reach the MR-BS, which then creates bandwidth allocations on the links along the path from the station to the MR-BS. The following subclauses discuss centralized bandwidth request and allocation with transparent and/or non-transparent RSs <u>operating in centralized scheduling mode</u>. A transparent RS does not transmit MAPs. A non-transparent RS transmits MAPs; however, in a centralized scheme these MAPs are determined by the MR-BS.

[Modify the subclause headings as indicated:]
6.3.6.7.2.1 Bandwidth request handling and transmission ~~in centralized mode~~

6.3.6.7.2.1.1 CDMA bandwidth request in ~~centralized mode~~

6.3.6.7.2.2 Bandwidth grants ~~in centralized mode~~

6.3.6.7.2.2.1 Polling ~~in centralized mode~~

6.3.6.7.2.2.2 Dedicated relay uplink channel allocation ~~in centralized mode~~

GroupResolution   **Decision of Group:**   **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

Comment by:	Yunsong Yang	**Membership Status:** Member	**Date:** 9/7/2007

Comment # 0527   **Document under Review:** P802.16j/D1   **Ballot ID:** 28

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 81   **Line** 36   **Fig/Table#**   **Subclause** 6.3.6.7.1.1.1.

When the intermetiate RS has available uplink bandwidth, it is not necessary to request the bandwidth by contention-based CDMA code.

Suggested Remedy

"Insert a new paragraph at the end fo line 36 as follows:
If the RS has available uplink bandwidth, it shall simply forward the bandwidth request information to its
superordinate RS. Otherwise, the RS will have to request uplink bandwidth from its superordinate node using CDMA ranging codes."

GroupResolution   **Decision of Group:**   **Rejected**

Reason for Group's Decision/Resolution

RS should have a similar behaviour as SS for UL BW request, currently the 802.16 standard does not impose such restrictions.

Group's Notes
No objection.

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

| Comment by: | Yunsong Yang | Membership Status: | Member | Date: | 9/7/2007 |

| Comment # | 0542 | Document under Review: | P802.16j/D1 | Ballot ID: | 28 |

Comment **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 84   **Line** 39   **Fig/Table#**   **Subclause** 6.3.6.7.1.2.2

In 16 system, not all the bandwidth requirement of SF can lead to the service flow management message to modify the QoS parameters of SF. For example, for an rtPS SF, the SF management message can only modify its max/min rate.

Suggested Remedy

"This service flow adjustment is communicated to the ~~DSA, DSC, or DSD~~ DSX messages and bandwidth requests."
MR-BS via

GroupResolution   **Decision of Group:**   **Rejected**

Reason for Group's Decision/Resolution

Bandwidth request is not used for changing QoS requirement in 802.16 standard.

Group's Notes
No objection.

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

No objection

Comment by: Ronald   Mao   **Membership Status:**   Member   **Date:** 9/7/2007

Comment # **0547**   **Document under Review:** **P802.16j/D1**   **Ballot ID:** **28**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 86   **Line** 53   **Fig/Table#**   **Subclause** 6.3.6.7.2.2

In centralized mode, as long as traffic's time delay satifies the QoS parameters, MR-BS needn't allocate the bandwidth for the next link along the path at the first opportunity after the allocation of last link plus the intermediate station's processing time.

Suggested Remedy

Modify the text as follows:

the MR-BS shall allocate bandwidth on consecutive links along a path ~~by creating an allocation for the second link at the first opportunity after the allocation of the first link plus the intermediate station's processing time.~~as long as the QoS of the service flow is satisfied.

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

Modify the text as follows:
the MR-BS shall allocate bandwidth on consecutive links along a path <u>taking into consideration the</u> ~~by creating an allocation for the second link at the first opportunity after the allocation of the first link plus~~ the intermediate stations' processing times and the QoS requirements of the service flow.

Reason for Group's Decision/Resolution

Group's Notes
No objection

Comment by:	Ronald Mao		**Membership Status:** Member	**Date:** 9/7/2007

Comment # 0558   **Document under Review:** P802.16j/D1   **Ballot ID:** 28

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 88   **Line** 15   **Fig/Table#** 72a   **Subclause** 6.3.9

The procedure of figure 72a does not include RS in MS mode of operation which is defined in section 6.3.9.16.3.1.2, and the current RS initialization procedure is somewhat complex and confusing. In essence, the RS network entry procedure is independent from the procedure of RS path selection and configuration.

Suggested Remedy

Insert the following text after the third paragraph of 6.3.9

The RS initialization procedure can be separated into two independent procedures, the RS network entry procedure and RS configuration procedure. If the RS enters RS mode of operation immediately after the network entry, the RS configuration procedure shall be followed after the path selection procedure. The path selection procedure can be optionally included after the registration procedure.

If the RS is in MS mode of operation, the RS configuration procedure shall be performed during normal operation. Before the RS configuration procedure, the RS in MS operation mode shall perform neighbor measurement and reporting, and handover to the optimal access station using MS handover procedure.

Change the figure 72a accordly to the inserted text.

GroupResolution   **Decision of Group:** **Rejected**

Reason for Group's Decision/Resolution

The updated draft has been clarified by #560 to remove the mention of MS mode of operation during RS network entry procedure. So no update is needed to 6.3.9 and the associated figure.

Group's Notes

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

Comment by: Ronald   Mao   **Membership Status:**   Member   **Date:** 9/7/2007

Comment # 0618   **Document under Review:** **P802.16j/D1**   **Ballot ID:** **28**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 103   **Line** 29   **Fig/Table#**   **Subclause** 6.3.9.16.3

The description of the RS frame offset in section 6.3.9.16.3 is not consistent with its definition in section 11.7.27.

Suggested Remedy

Modify the first paragraph of section 6.3.9.16.3:

When an RS enters the network, the RS may negotiate the difference between frame numbers used by ~~the MR-BS~~its superordinate station and the RS by transmitting REG-REQ including RS frame offset TLV. The MR-BS shall calculate this frame offset value and respond to the RS by including RS frame offset TLV in REG-RSP when RS shall use a different frame number offset from the number which ~~the MR-BS~~its superordinate station transmits. If RS frame offset TLV is included in REG-RSP, the RS shall start with the frame number as indicated by RS frame offset TLV in REG-RSP. If RS frame offset TLV is not included in REG-RSP, RS shall start with the same frame number as the superordinate station transmits."

GroupResolution   **Decision of Group:**   **Superceded**

by #616

Reason for Group's Decision/Resolution

Group's Notes
No objection

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

Comment by:	Mike Hart	**Membership Status:**	Member	**Date:**	9/10/2007

Comment # 0616   **Document under Review:** P802.16j/D1   **Ballot ID:** 28

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☒   **Page** 103   **Line** 27   **Fig/Table#**   **Subclause** 6.3.9.16.3

How can the frame offset be negotiated? Surely it should be determined by MR-BS. See earlier comments relating to REG and Config stages in network entry

Suggested Remedy

[Modify as indicated:]

~~When an RS enters the network, the RS may negotiate the difference between frame numbers used by the MR-BS and the RS by transmitting REG-REQ including RS frame offset TLV. The MR-BS shall respond to the RS by including RS frame offset TLV in REG-RSP when RS shall use a different frame number offset from the number which the MR-BS transmits. If RS frame offset TLV is included in REG-RSP, the RS shall start with the frame number as indicated by RS frame offset TLV in REG-RSP. If RS frame offset TLV is not included in REG-RSP, RS shall start with the same frame number as the superordinate station transmits. When an RS starts transmitting its frame, the RS shall keep the difference to the frame number used by the superordinate station as indicated RS frame offset TLV in REG-RSP.~~

In addition to the network entry procedures described in 6.3.9, as indicated in Figure 72a, the following stages may take place: Neighbor station measurement and report (see 6.3.9.16.3.3); Path selection (see 6.3.9.16.3.5); RS operational parameter configuration (see 6.3.9.16.4).

GroupResolution   **Decision of Group:** **Accepted**

Reason for Group's Decision/Resolution

Keep the frame offset in RS configuration message. Needed for pilot sequence PRBS generator to ensure sufficient separation in multi-cell environment.

Group's Notes
No objection

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

Comment by:	Jianmin Lu	**Membership Status:** Member	**Date:** 9/8/2007

Comment # 0623   **Document under Review:** **P802.16j/D1**   **Ballot ID:** 28

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 103   **Line** 48   **Fig/Table#**   **Subclause** 6.3.9.16.3.1

Benefits is unnecessary

Suggested Remedy

delete the following text:
"in order to achieve some of the following benefits:
• To reduce the number of handovers when an MS crosses the boundaries of different RSs. Note,
the coverage of an RS is small so, even with a moderate number of RSs there can be lot of handovers.
• To increase the data rate when the MSs in an area receive adequate signal levels for the preamble,
FCH and MAPs but the data rate is low.
• When needed to enable an RS in a location where the segment allocation is not possible due to
interference from all other segments, which could cause high interference to broadcast messages.
• When several RSs are closely located or move together so that the co-operation is beneficial."

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

RS grouping may be used to enable particular operation scenarios:

- The operation of an RS in a location where no segment allocation is possible due to interference from all other segments.

- The operation of MSs in a region served by multiple short-range RS without incurring high handover signaling disadvantages.

- The operation of mobile RSs with dynamic adjustments of coordinated transmission and reception.

- Macro-diversity within an MR cell applied to individual SSs and individual connections.

The grouping of RS and the coordinated operation of RS in a group is determined and controlled by its super-ordinated station or MR-BS.

Reason for Group's Decision/Resolution

Group's Notes
No objection

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

| <u>Comment by:</u> | Erik Colban | <u>Membership Status:</u> Member | <u>Date:</u> ? |

| <u>Comment #</u> 0636 | <u>Document under Review:</u> **P802.16j/D1** | <u>Ballot ID:</u> 28 |

<u>Comment</u>   <u>Type</u> Technical   <u>Part of Dis</u> ☒ <u>Satisfied</u> ☐   <u>Page</u> 105   <u>Line</u> 6   <u>Fig/Table#</u>   <u>Subclause</u> 6.3.9.16.3.1.1

Group parent should be removed and replaced by superordinate. The group parent cannot be a member of the group. This section belongs under 6.3.9.16.1.

<u>Suggested Remedy</u>

Change:

Each RS group member shall monitor the CDMA ranging codes from subordinate nodes. ~~If the group parent is not a member of the RS group, then~~ RS group members shall follow the procedures in 6.3.9.16.1. ~~If the group parent is a member of the RS group, then the RS group members other than the parent shall follow the procedure in 6.3.9.16.1, and the parent (if not MR-BS) shall follow the procedures in 6.3.9.16.2.~~

Move this section under 6.3.9.16.1

<u>GroupResolution</u>   **<u>Decision of Group:</u>**   **Superceded**

by #694

<u>Reason for Group's Decision/Resolution</u>

<u>Group's Notes</u>
No objection

<u>Editor's Notes</u>   **<u>Editor's Actions</u>**

| Comment by: | Kanchei Loa | | Membership Status: | Member | | Date: | 9/10/2007 |

| Comment # | 0694 | | Document under Review: | P802.16j/D1 | | Ballot ID: | 28 |

| Comment | Type Technical | Part of Dis ☐ | Satisfied ☐ | Page 122 | Line 16 | Fig/Table# | Subclause 6.3.10.3 |

In P802.16j/D1, "*The RS group has a superordinate station (non-transparent RS or MR-BS) that is the superordinate station of all RSs in the group. All the RSs in the RS group shall either transmit the same preamble, FCH and MAPs or they all do not transmit any preamble, FCH or MAPs. The MR-BS or the superordinate station carries out resource control and scheduling for the RS group.*"

However, a subordinate transparent RS attached to a superordinate non-transparent RS under centralized scheduling cannot handle MS contention-based ranging and automatic adjustments. If the ranging code is received by both subordinate transparent RSs and superordinate non-transparent RS, the transparent RSs must request uplink bandwidth to send MR_Code-REP message to MR-BS, whereas the non-transparent RS must request downlink bandwidth to broadcast RSG-RSP message to MSs. As a result, the MR-BS will compare measured signal information at each transparent RS to decide the most appropriate path to communicate with the code originating MS but will also allocate downlink bandwidth for non-transparent RS broadcasting RNG-RSP message. Hence, the decision at the MR-BS will be incorrect. (see Figure 1)

Therefore, we propose a solution described as follows (see Figure 2). If the ranging code is received by both subordinate transparent RSs and superordinate non-transparent RS, the transparent RSs must request uplink bandwidth to send MR_Code-REP message to the non-transparent RS. As a result, the non-transparent RS will compare measured signal information at each transparent RS to decide the most appropriate path to communicate with the code originating MS. Then, the non-transparent RS must request downlink bandwidth for broadcasting RNG-RSP message.

Suggested Remedy

Adopt IEEE C80216j-07/525 or latter version.

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

Adopt IEEE C80216j-07/525r6

Reason for Group's Decision/Resolution

Group's Notes

No objection

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

| Comment by: | Shulan Feng | Membership Status: | Member | Date: 9/7/2007 |

| Comment # 0647 | Document under Review: P802.16j/D1 | Ballot ID: 28 |

Comment   Type Technical   Part of Dis ☒ Satisfied ☐   Page 105   Line 27   Fig/Table#   Subclause 6.3.9.16.3.2

In section 11.23.1, "Preamble indexes reserved for moving relay station" has been defined. However, this TLV seems can only be used in session 6.3.9.16.3.2, which is the initial network entry of mobile RS. There is no need to reserve dedicated preambles for mobile RS in the network entry procedure for the preamble is configured by MR-BS. The mobile RS shall perform the same network entry procedure with that of the fixed RS.

Suggested Remedy

Delete section 6.3.9.16.3.2, and section 11.23.1.

GroupResolution   Decision of Group: **Superceded**

by #560

Reason for Group's Decision/Resolution

Group's Notes
No objection

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

Comment by:	Chion Mary	**Membership Status:** Member	**Date:** 9/10/2007

Comment # **0655**	**Document under Review:** **P802.16j/D1**	**Ballot ID:** **28**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 106   **Line**   **Fig/Table#**   **Subclause** 6.3.9.16.4

There are a few questions need to be clarified for this section and also related embedded path management

1. Since this is an optional feature, how is the option indicated? How would a RS know, at network entry, if it will receive a CID_Alloc_Req and how does MR-BS know if the RS supports this feature?

2. Section 6.3.9.16.4, it seems to be describing both network entry procedures for RS and for MS.. suggest to clarify and maybe separate into 2 sections.

3. It is not clear that when CID_Alloc-Req message will be sent to RS during network entry. Is the CID pre-allcoation happening during network entry?

4. Is the CID range for management connection only? or should be 2 management connection and the rest for transport CID?

Suggested Remedy

Please clarify this section or remove it from the standard. (I tried to write clarification, but couldn't fully understand the intend of this section, thanks)

GroupResolution   **Decision of Group:**   **Superceded**

by #560

Reason for Group's Decision/Resolution

Group's Notes
No objection

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

| Comment by: | Erik Colban | Membership Status: | Member | Date: ? |

| Comment # | 0664 | Document under Review: | P802.16j/D1 | Ballot ID: | 28 |

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 106   **Line** 50   **Fig/Table#**   **Subclause** 6.3.9.16.4

What is "localized"? The term occurs only in this section and is not defined. "Embedded path management" is another term that is not defined either.

Suggested Remedy

Be more systematic in the assignment of new concepts and concept names.

GroupResolution   **Decision of Group:** **Superceded**

by #560

Reason for Group's Decision/Resolution

Group's Notes
No objection

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

Comment by: Peiying Zhu   **Membership Status:**   Member   **Date:** 9/10/2007

Comment # 0560   **Document under Review:** 802.16j-06/026r4   **Ballot ID: 28**

Comment   **Type** Technical   **Part of Dis** ☐ **Satisfied** ☐   **Page** 89   **Line** 8   **Fig/Table#**   **Subclause** 6.3.9.1

Some clarifications for the paragraph.
In addition, a MS also reports these information, do we really need to have this paragraph?

Suggested Remedy

Make the following change (option 1)
RS follows the scanning and synchronization procedure similar to that of the SS. In addition, however, the
RS may store frame start preamble indeces ~~index~~ and their associated signal strengths in order to report the stored values to the
serving MR-BS after registration.

Option 2.

RS follows the scanning and synchronization procedure similar to that of the SS. ~~In addition, however, the~~
~~RS may store preamble index and signal strength in order to report the stored values to the serving MR-BS~~
~~after registration.~~

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

1. Adopt C80216j-07/547 or later version
2. Review and adopt C80216j-07/556 or later version

Reason for Group's Decision/Resolution

Group's Notes
No objection

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

Comment by:	Yanhong Wang	**Membership Status:** Member	**Date:** 9/8/2007

Comment # **0688**   **Document under Review:** **P802.16j/D1**   **Ballot ID:** **28**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 121   **Line** 54   **Fig/Table#**   **Subclause** 6.3.10.3.5

intermediate RS can use BR header to request bandwidth, so "shall" should be modified to "may"

Suggested Remedy

change "shall" to "may"

GroupResolution   **Decision of Group:**   **Rejected**

Reason for Group's Decision/Resolution

The dedicated CDMA codes are not a replacement of the BR header. The BR header, if sent, will be sent later after MR-BS receives the CDMA code and gives allocation.

Group's Notes

No objection.

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

| Comment by: | Chion   Mary | | Membership Status: | Member | | Date: | 9/10/2007 |

Comment # **0689**   **Document under Review:** **P802.16j/D1**   **Ballot ID:** **28**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 122   **Line**   **Fig/Table#**   **Subclause** 6.3.14.9

As defined in draft document IEEE 802.16j_D1, when distributed scheduling is used, each RS will perform bandwidth allocation of its relay links and access link based on QoS requirements and channel conditions. In IEEE 802.16j_D1, it is already defined that each RS will receive the end-to-end QoS parameters during transport connection set up using DSA-* signaling and will receive the update to the parameters using DSC-*. However, the end to end QoS parameters need to be translated into per-hop parameters to allow each RS to schedule effectively to ensure overall QoS performance

Suggested Remedy

Discuss and adopt contribution C80216j-07_510 or latest revision

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

Discuss and adopt contribution C80216j-07_510

Reason for Group's Decision/Resolution

Group's Notes
No objection

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

| Comment by: | Chion Mary | Membership Status: | Member | Date: | 9/10/2007 |

| Comment # | 0690 | Document under Review: | P802.16j/D1 | Ballot ID: | 28 |

| Comment | Type Technical | Part of Dis ☒ Satisfied ☐ | Page 122 | Line | Fig/Table# | Subclause 6.3.14.9 |

There seems to be an inconsistency in how DSA/DSC procedures between MR-BS and RSs with distributed scheduling.

1. For SS-initiated DSA, BS-initiated DSA nd BS-initiated DSA, the MR-BS "MAY" send DSA-REQ or DSC-REQ to RS for admission control before sending messages to MS; For SS-initiated, MR-BS "SHALL" send DSC-REQ to RS for admission control. Why the difference? I think for distributed scheduling, the MR-BS shall always query RS for admission control decision since the MR-BS would not know the loading information and channel conditions of each RS

2. Only BS-initiated DSC includes some detail description on how DSC-REQ is relayed through intermediate RS, while other sections only indicates that DS* messages should be sent. Why is BS-initiated DSC handled differently? Suggest to make everything consistent

Suggested Remedy
Make the following modification:

1. Modify section 6.3.14.9.3.1
6.3.14.9.3.1 SS-initiated DSA

In MR network with distributed scheduling, before admitting the service flow and sending DSA-RSP to the requesting station which could be an MS or RS, the MR-BS ~~may~~ shall request for admission control decision from the intermediate RSs if the service flow parameters are new or updated.

- If the service flow ~~will be~~ maps~~ped~~ to an existing tunnel~~, the MR-BS may update~~ ad the service flow requirement for the tunnel is changed, ~~and~~ the MR-BS shall send a DSC-REQ to all the RS on the path to obtain admission control decision. The CID in the service flow parameter should be the tunnel CID.

- If the service flow is not mapped to a tunnel, the MR-BS ~~may~~ shall send a DSA-REQ using the requested service flow parameter to all the RS on the path to obtain admission control decision. The CID in the service flow parameter should be the CID of the individual service flow.

2. Modify section 6.3.14.9.3.2

6.3.14.9.3.2 BS-initiated DSA

In MR network with distributed scheduling, before MR-BS sending DSA-REQ to an MS or RS, the MR-BS ~~may~~ shall request all the RSs on the path for an admission control decision if the service flow parameters are new or updated. The procedures of sending and processing the DSA/DSC-REQ and DSA/DSC-RSP are the same as those defined for MS-initiated DSA

procedure defined in section 6.3.14.9.3.1.

3. Modify section 6.3.14.9.4.2

6.3.14.9.4.2 BS-initiated DSC
In MR network with distributed scheduling, before MR-BS sending DSC-REQ to an MS or RS to modify an
existing service flow, the MR-BS ~~may~~ shall first send DSC-REQ to all the RSs on the path to request for admission control decision. ~~Such DSC-REQ is first sent from MR-BS to its subordinate RS using its primary management CID. If the RS' resource condition cannot support the requested SF parameter, it updates the SF parameter with the one it can support. It then sends the DSC-REQ to its subordinated neighboring RS. This procedure is repeated by each RS, until the DSC-REQ reaches the access RS. After processing the DSCREQ, the access RS replies with a DSC-RSP using its own primary management CID directly to the MRBS~~.
The procedures of sending and processing the DSC-REQ and the correspondent DSC-RSP are the same
as those defined for MS-initiated DSC procedure defined in section 6.3.14.9.4.1. After receiving DSC-RSP
from the access RS, the MR-BS then shall send DSC-REQ to the MS or access RS.

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

Adopt changes in C802.16j-07/538r2.

Reason for Group's Decision/Resolution

Group's Notes
The procedure needs to be reviewed and changed based on the clarified text.
No objection

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

Comment by: Erik   Colban   Membership Status: Member   Date: ?

Comment # 0696   Document under Review: **P802.16j/D1**   Ballot ID: 28

Comment   Type Technical   Part of Dis ☒ Satisfied ☐   Page 122   Line 23   Fig/Table#   Subclause   6.3.14

QoS is handled in a seemingly inconsistent way. On the one hand, QoS is associated with a service flow, and the QoS parameters are negotiated when the SF is established via DSA messages, and modifed via DSC messages. On the other hand, the QoS associated with a tunnel, which is also associated with an SFID, is determined by a QoS subheader. It is not clear whether the QoS subheader shall override the QoS associated with the SFID of a tunnel. The purpose of the QoS subheader is not clear since all RSs on a path are involved in the DSx messaging that is exchanged to set up a tunnel (refer to section6.3.14.9) and, hence, may build tables to associate each CID, including tunnel CIDs, with QoS.

Second, the parameters associated with QoS of a tunnel are not clear. Whereas there are many parameters such as Maximum sustained traffic, tolerated jitter (ref section 11.13.4) that may be associated qith the QoS of a service flow, the QoS subheader uses 6 bits only to specify the scheduling type (3 bits) and the priority (3 bits); ref section 6.3.2.2.8.1.

Third, the notion aggregate QoS is not clear. In section 6.3.14.10, p. 125, lines 42-43, it is stated: "The QoS parameters of a tunnel are an aggregate of the QoS requirements of the individual service flows admitted into the tunnel." The use of the present tense in this sentence (and in the entire section as a whole) makes it difficult to tell whether this is a requirement on the QoS of a tunnel, or a simple observation. The QoS of a tunnel is the QoS of the SF that has been assigned to the tunnel. The QoS of that service flow is what has been negotiated during establishment or change of the SF using DSA/DSC messaging and not the aggregate of the QoS of the SFs that pass through a tunnel. If there are requirements on the MR-BS or the Access RS to ensure that the QoS of a tunnel shall satisfy the QoS requiremets of the individual service flow that pass through it, then that needs to be clearly stated.

Finally, what do the following sentences mean?

P78, line 11-14:"Different from per-service-flow QoS management, tunnel supports per-class-based QoS processing at MRBS and all RS. Tunnel should be able to differentiate/classify the data packets and prioritize them properly, and aggregate the same class packets into the same tunnel MAC PDU over R-link." Since an SF is associated with a tunnel, why is this different from per-service-flow QoS management?

P80, line 33: "An RS may combine the bandwidth requests that arrive from subordinate stations during a given period of time along with the bandwidth needs of packets in queue into one bandwidth request header per QoS class." There is no QoS field in an RS bandwidth request header, so why is there a requirement that there be a header per QoS class?

P121, line 31: "In addition, the QoS parameters of the service flow are included in the QoS parameters of the tunnel." What does this mean?

P121, line 38: "If the service flow is to traverse the tunnel, the MR-BS or Access RS modifies the
QoS parameters of the tunnel to include QoS requirements of the service flow". Is there a requirement on the MR-BS or Access RS to

modify the QoS parameters? Which node shall initiate the DSC-REQ?

P125, line 51: "In tunnel source end QoS control, ..." What is non-tunnel source end QoS control? In centralized scheduling, the MR-BS controls the scheduling; is there a conflict when the Access RS controls the scheduling?
How does this entire section fit in with the rest of the document that pertains to QoS?

Suggested Remedy

Hopefully, after a couple more iterations, QoS will start falling into place. Meanwhile:

Purge the document of the QoS subheader .

Remove Annex J and references to Annex J

Re-write section 6.3.14.10 using "shall" and "may" and not the present tense, and clarify that the MR-BS SHOULD ensure through DSA and DSC signalling that the QoS of a tunnel satisfies the QoS requiremets of the individual service flows that pass through it. (Rather than SHALL, it may be better to offer some flexibility and use SHOULD). With this requirement there is no further need to mention "aggregate QoS".

P78, line 11-14: Delete paragraph
P80, line 33: Delete "per QoS class"
P121, line 31: Delete "In addition, the QoS parameters of the service flow are included in the QoS parameters of the tunnel."
P125 , 51: Delete section 6.3.14.11

GroupResolution   **Decision of Group:**   **Superceded**

by #719 and other comments accepted on QoS

Reason for Group's Decision/Resolution

Group's Notes
No objection

| Comment by: | Shkumbin Hamiti | | Membership Status: | Member | | Date: 9/4/2007 |

| Comment # **0719** | | Document under Review: **P802.16j/D1** | | Ballot ID: **28** |

Comment   Type **Technical**   Part of Dis ☒ Satisfied ☒   Page **125**   Line **51**   Fig/Table#   Subclause **6.3.14.11**

The QoS control scheme specified in this section is not clear. Several issues are listed below.

* "Source end" is not a generic term and there is no definition of "source end" in 802.16j/D1.

* "QoS profile" is not defined in either 802.16e specification or 802.16j/D1. What is included in "QoS profile"?

* The scheme described in this section requires QoS profile for UL service to be distributed to access RS. However the procedure of QoS profile distribution is not defined.

* It is said that the QoS class 1 represent the highest class. But UGS which should be the highest class is assigned with QoS class ID 6.

Suggested Remedy

Remove section 6.3.14.11

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

Adopt C802.16j-07/530r5

If 440 is accepted and there is not enough type space for both headers then reduce the BR field to 3 bits and use the remaining and use the remaining bit to indicate if it is for flow control or tunnel BR.

Reason for Group's Decision/Resolution

Group's Notes
No objection

| Comment by: | Yanhong Wang | Membership Status: | Member | Date: 9/8/2007 |

| Comment # 0749 | Document under Review: P802.16j/D1 | Ballot ID: 28 |

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 127   **Line** 53   **Fig/Table#**   **Subclause** 6.3.17.4.2.1

In DL hop by hop HARQ for transparent RS, the BS allocates bandwidth hop by hop for RS and MS. That is to say, just after BS receive ACK from RS, it allocates bandwidth for MS and request RS to forward the sub burst to MS. Which will add extra delay to transmission. If BS allocates bandwidth end to end for RS and MS (i.e. allocate bandwidth over all the links in the path at the same time), when RS receives the burst incorrectly, MS will receive a empty burst and will combine it with later retransmission burst for decoding. This will cause gain degradation in burst decoding.

Suggested Remedy

Modify the following paragraph page 127, line 53:
"Upon receiving the NACK from the RS, the MRBS shall retransmit the HARQ sub burst to the RS. When HARQ sub-burst is successfully received at RS, MS-BS request RS to transmit HARQ sub-burst."

to

"Upon receiving the NACK from the RS, the MRBS shall retransmit the HARQ sub burst to the RS. When HARQ sub-burst is successfully received at RS, RS forwards the sub burst to the MS."

GroupResolution   **Decision of Group:** **Rejected**

Reason for Group's Decision/Resolution

The commenter is correct in that there can be a long delay, however the proposed solution does not take into consideration the RS processing delay. Therefore, the solution will not solve the problem. Suggest the commentor to provide anaylsis of end-to-end delay of current and proposed solution.

Group's Notes
No objection.

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

<u>Comment by:</u>	Chengjie Xie	<u>Membership Status:</u> Member	<u>Date:</u> 9/9/2007

<u>Comment #</u> **0751**   <u>Document under Review:</u> **P802.16h/D1**   <u>Ballot ID:</u> **28**

<u>Comment</u>   <u>Type</u> Technical   <u>Part of Dis</u> ☒ <u>Satisfied</u> ☐   <u>Page</u> 128   <u>Line</u> 3   <u>Fig/Table#</u>   <u>Subclause</u> 6.3.17.4.2.2

There are two modes in RS assisted DL HARQ, which are direct ACK/NACK mode and encoded ACK/NACK mode. MR-BS can configure the RS which mode to use via Compact DL-MAP MONITOR IE. According to the current specification, it can be deduced that just in encoded ACK/NACK mode, the RS needs to listen ACK/NACK from the MS, and then the RS shall clear the HARQ sub burst depending upon the ACK/NACK information. But in direct ACK/NACK mode, it can be deduced that the RS does not listen ACK/NACK from the MS, so the result is that when the RS clears the sub burst is unclear.
Here we suggest that in RS assisted HARQ, it shall be made clear that RS shall listen the ACK/NACK from the MS in both direct and encoded ACK/NACK mode. So the RS in direct ACK/NACK mode can clear the saved sub burst depending upon the ACK/NACK information from the MS.

<u>Suggested Remedy</u>
Modify the following paragraph page 128, line 3,IEEE P802.16j/D1 (August 2007):
In a case where the MR-BS sends a HARQ sub-burst to the MS directly, the MR-BS informs the RS that it needs to monitor that particular transmission by Compact DL-MAP MONITOR IE and also allocate HARQ ACK region allocation IE on the relay link for sending

As follows:
In a case where the MR-BS sends a HARQ sub-burst to the MS directly, the MR-BS informs the RS that it needs to monitor that particular transmission and listen the ACK/NACK from the MS by Compact DL-MAP MONITOR IE and also allocate HARQ ACK region allocation IE on the relay link for sending

Add the following paragraph page 128, line 16,IEEE P802.16j/D1 (August 2007) as follows:
If RS monitored the ACK from MS, the RS shall clear the HARQ sub-burst saved.

Modify the following paragraph page 128, line 18,IEEE P802.16j/D1 (August 2007):
MR-BS may also configure RS to listen the ACK/NACK from the MS using MR_DL-MAP MONITOR IE.

As follows:
MR-BS may also configure RS to use encoded ACK/NACK using Compact DL-MAP MONITOR IE. When receiving such IE, the RS listens the ACK/NACK from the MS as well as monitors the DL HARQ sub burst.

<u>GroupResolution</u>   <u>Decision of Group:</u>   **Accepted-Modified**

Modify third paragraph of 6.3.17.4.2.2 as indicated:

~~MR-BS may also configure RS to listen the ACK/NACK from the MS using Compact DL-MAP MONITOR IE.~~

MR-BS may also configure RS to use encoded ACK/NACK using Compact DL-MAP MONITOR IE. When receiving such IE, the RS listens to the ACK/NACK from the MS as well as monitors the DL HARQ sub burst. After the RS receives ACK/NACK from the MS, the RS replies using an encoded ACK/NACK defined in Table xxx through ACK channel prepared by MR-BS. RS shall clear the HARQ sub-burst depending upon the ACK/NACK information received from MS. If the RS received the HARQ sub-burst correctly and receives a NACK from MS, the RS replies the C2 to MR-BS. In this case, the MR-BS requests the RS to retransmit the HARQ sub-burst saved at the RS. When the RS fails to receive the HARQ sub-burst and receives a NACK from the MS, the RS sends a NACK to the MR-BS. Then the MR-BS retransmits the burst by itself. When the RS receives an ACK from MS then irrespective of whether RS receives the HARQ sub-burst correctly or not, the RS replies ACK to the MR-BS. RS will send the encoded ACK/NACK in the UL ACKCH according to the order of CID in the compact DL-MAP MONITOR IE.

Reason for Group's Decision/Resolution

The reason the other parts were not accepted is because the operation of clearing of buffer at RS is an implementation issue.

Group's Notes

No objection

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

| **Comment by:** | Zhibin Lin | | **Membership Status:** | Member | | **Date:** 9/7/2007 |

| **Comment #** 0776 | | **Document under Review:** **P802.16j/D1** | | **Ballot ID:** 28 |

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 132   **Line** 47   **Fig/Table#**   **Subclause** 6.3.22.1.1

For transparent RS, it can also broadcast the the MOB_NBR-ADV message

Suggested Remedy

Modify "For transparent RS, the MOB_NBR-ADV message shall be broadcasted by the MR-BS."
To:
"Transparent Rs shall broadcast the same MOB_NBR-ADV message as broadcasted by the MR-BS."

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

Modify the first paragraph of 6.3.22.1.1 as indicated:

The MR-BS and the <u>non-transparent</u> RS shall broadcast information about the infrastructure stations that are present in the
network using the MOB_NBR-ADV message defined in 6.3.2.3.47. The MR-BS and the RS may obtain the
information to be included in the MOB_NBR-ADV message over the backbone network or over the relay
links. Each non-transparent RS can broadcast a different MOB_NBR-ADV message that is suitable for its
service area. ~~For transparent RS, the MOB_NBR-ADV message shall be broadcasted by the MR-BS.~~

Reason for Group's Decision/Resolution

There is no benefit for the transparent RS to send this message since it is assumed that MS will receive the broadcast messages from
the MR-BS.

Group's Notes
No objection

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

Comment by:	Jianmin Lu		**Membership Status:**	Member	**Date:**	9/8/2007

Comment # 0784   **Document under Review:** P802.16j/D1   **Ballot ID:** 28

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 134   **Line** 50   **Fig/Table#**   **Subclause** 6.3.22.2

During handover, the routing and information in old MR cell and new MR cell will change. For example, in tunneling case, the tunnel might be modified or deleted in the old MR cell, and be added or modified in the new MR cell. In non-tunneling case, the path management message exchange is also needed to maintain path information. To avoid confusing, these procedures should be clarified.

Suggested Remedy

Add the following description:

"After handover, the routing information should be updated as per subclause 6.3.3.8.1. The QoS information should also be maintained as per subclause 6.3.14."

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

Insert the following at the end of 6.3.22.2:

"After handover in MR networks, the routing information along the old and new path may be updated as per subclause 6.3.25. The QoS information along the old and new path may be updated as per subclause 6.3.14."

Reason for Group's Decision/Resolution

Group's Notes
No objection

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

Comment by:	Erik Colban	Membership Status:	Member	Date: ?

Comment # 0829	Document under Review: P802.16j/D1	Ballot ID: 28

Comment Type Technical Part of Dis ☒ Satisfied ☐ Page 145 Line 31 Fig/Table# Subclause 6.3.24.10.1

Lines 31 - 44 should have been removed.

Suggested Remedy

Delete lines 31-44.

GroupResolution   Decision of Group: **Superceded**

by #830

Reason for Group's Decision/Resolution

Group's Notes
No objection

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

Comment by:	Yousuf Saifullah	Membership Status:	Member	Date: 9/9/2007

Comment # 0830	Document under Review: P802.16j/D1	Ballot ID: 28

Comment Type Editorial Part of Dis ☐ Satisfied ☐ Page 145 Line 31 Fig/Table# Subclause 6.3.24.10.1

The accepted contribution 07/453r2, from the July meeting, suggested to remove subclause 6.3.24.10.1

Suggested Remedy

remove page 145 line 31 through 44.

remove page 29 line 15 through 26

GroupResolution   Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes
No objection

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

| **Comment by:** | Jianmin Lu | **Membership Status:** | Member | **Date:** 9/8/2007 |

Comment # 0846   **Document under Review:** P802.16j/D1   **Ballot ID:** 28

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 151   **Line** 5   **Fig/Table#**   **Subclause** 6.3.25.5

This procedure is obvious in the subclause in 6.3.25.2.1.

Suggested Remedy

delete this subcluse 6.3.25.5 and modify the first paragraph in 6.3.25.2.1 as follows:

"6.3.25.2.1 Path establishment, removal and update
After a new path is discovered and calculated as specified in section 6.3.25.2 and a new MS/RS complete the registration process,
MR-BS sends a path establishment command to distribute the path information to all the RSs on that path by sending a DSA-REQ
message. The explicit path information and an uniquely assigned path id are included. The CID/T-CID/MCID to be routed on this path
and their associated service flow parameters are also included for path/CID/T-CID/MCID binding operation."

GroupResolution   **Decision of Group:**   **Rejected**

Reason for Group's Decision/Resolution

This procedure is not obvious if the text is removed. If the commenter has specific problems with the text, then please clarify to the TG.

Group's Notes
No objection.

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

Comment by:	Yunsong Yang	**Membership Status:**	Member	**Date:** 9/7/2007

Comment # 0853	**Document under Review:** P802.16j/D1	**Ballot ID:** 28

Comment **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 152   **Line** 24   **Fig/Table#**   **Subclause** 6.3.27.1

This algorithm is a common sense and well known.

Suggested Remedy

Delete subclause 6.3.27.1 and change subclause title "6.3.27.2" in page 153 to "6.3.27.1".

GroupResolution   **Decision of Group:** Rejected

Reason for Group's Decision/Resolution

The algorithm in 6.3.27.1 is a simple example of how to utilize the interference measurement results, even it is very straightforward but there is nothing wrong. Without this simple description, people may be confused about the purpose of interference measurement. There were a series of contributions introduced on how to utilize the interference measurement results for radio resource reuse or topology establishment (C802.16j-06/145,149 and C802.16j-07/019,020,043,140,169,172), and this is almost the minimum text left in draft standard to capture the basic idea behind those proposals.

Group's Notes

No objection.

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

Comment by:	Tzu-Ming Lin	Membership Status: Member	Date: 9/9/2007

Comment # 0864	Document under Review: P802.16j/D1	Ballot ID: 28

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 158   **Line**   **Fig/Table#**   **Subclause** 7.1.6.1

Section 7.1.6.1 states that "RS doesn't have any key information associated with MS" and only relays message whenever it receives from MS. This sentence conflicts with the relay QoS specified in section 6.3.14., where the RS needs to read QoS subheader (section 6.3.2.2.5.1) to enable relay QoS. Without key information, RS cannot read QoS subheader nor obtain QoS related parameters since the subheader is defined as payload and encrypted during transmission. In order to enable relay QoS, subheader should be readable by RSs in relay links.

Suggested Remedy

Adopt the text proposed in contribution C802.16j-07_468 or its later revision.

GroupResolution   **Decision of Group:** **Superceded**

by #239

Reason for Group's Decision/Resolution

Group's Notes
No objection

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

| Comment by: | Wei-Peng Chen | Membership Status: Member | Date: 9/6/2007 |

Comment # 0239   **Document under Review:** **P802.16j/D1**   **Ballot ID:** **28**

Comment   **Type** Technical   **Part of Dis** ☐ **Satisfied** ☐   **Page** 22   **Line** 36   **Fig/Table#**   **Subclause** 6.3.2.3.9.29

lack of description for PKMv2 AK transfer and PKMv2 AK transfer ACK

Suggested Remedy

1. add two entries to Table 50:
Code | PKM message type | MAC management message name
31 | PKMv2 AK transfer | PKM-REQ
32 | PKMv2 AK transfer ACK | PKM-RSP

2. add code and decription to 6.3.2.3.9.29 and 6.3.2.3.9.30

3. define AK TLV in 11.9

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

Adopt C802.16j-07/529r4

Reason for Group's Decision/Resolution

Group's Notes
No objection

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

Comment by:	Paul Piggin	**Membership Status:** Member	**Date:** ?

Comment # 0879	**Document under Review:** P802.16j/D1	**Ballot ID:** 28

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 162   **Line** 35   **Fig/Table#**   **Subclause** 8.4.4.2

Since an RS has multiple links RTD/2 is ambiguous. Since the R-RTG and the R-TTG have been defined it suffices to reference the definitions rather than repeating them here. The text does not take into account the case where the RTD/2 is greater than the RSTTG.

The text is furthermore very confusing and incorrect. For the R-TTG there is

a) a requirement on the superordinate station (MR-BS or RS) to honor the receving RS's RSTTG, i.e., not to transmit to the RS earlier than R-TTG (of the receiving RS) after the end of the preceding DL access or relay zone at the receiving RS .

b) a requirement on the RS to be capable of switching from transmit to receive mode within RSTTG.

For the R-RTG there is

a) a requirement on the subordinate station (SS or RS) to honor the receiving RS's RSRTG, i.e., to stop transmitting at least R-RTG (of the receiving RS) before the subsequent UL relay zone at the receiving RS. Since such a requirement cannot be imposed on the SS, this becomes a scheduling requirement, i.e., the SS or subordinate RS shall not be scheduled to transmit later than R-RTG before the start of the receiving RS's subsequent UL relay zone.

b) a requirement on the RS to be capable of switching from receive mode to transmit mode withn RSRTG.

Suggested Remedy

Since the requirements that the paragraph (lines 35-40) is intended to capture are self implied, remove the paragraph. Alternatively, reword the paragraph.

Aslo replace "received mode" by "receive mode" throughout the document.

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

Adopt C802.16j-07/539r3

Reason for Group's Decision/Resolution

Group's Notes
No objection

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

| Comment by: | Shulan Feng | Membership Status: | Member | Date: | 9/7/2007 |

Comment # 0971   **Document under Review: P802.16j/D1**   **Ballot ID: 28**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 197   **Line** 1   **Fig/Table#** 199e   **Subclause** 6.3.9.16.4.2

With this procedure, the MR-BS can't perform addmission control. For example, based on the available bandwidth of relay link. In a cellular system, BS should perform the addmision control.

Suggested Remedy

delete subclause 6.3.9.16.4

GroupResolution   **Decision of Group:**   **Superceded**

by #565

Reason for Group's Decision/Resolution

C802.16j-07/459r6 handles the admission control related concern raised in the comment.

Group's Notes
No objection

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

| Comment by: | Kanchei Loa | Membership Status: | Member | Date: | 9/10/2007 |

Comment # 0565   **Document under Review:** P802.16j/D1   **Ballot ID:** 28

Comment   **Type** Technical   **Part of Dis** ☐ **Satisfied** ☐   **Page** 89   **Line** 30   **Fig/Table#**   **Subclause** 6.3.9.16.1

In P802.16j/D1, MR_Code-REP message is used for reporting received CDMA BR ranging code, whereas RNG-REQ message is used for reporting received CDMA initial, handover and periodic ranging codes. By comparing the response latency and message size, using MR_Code-REP message is a better scheme, which also handles reporting multiple CDMA code more efficiently. That is, initial, periodic, BR and handover ranging codes receiving in a frame could be carried by one MR_Code-REP message as multiple codes. Therefore, we propose to replace RNG-REQ message with MR_Code-REP message for all CDMA ranging.

After unifying CDMA ranging code report with the MR_Code-REP message, paragraphs and diagrams (sequences charts and flow charts) to handle MS CDMA initial, periodic and bandwidth-request ranging in transparent mode could be combined into one unified scheme. Hence, we proposed to merge redundant paragraphs and diagrams in subclauses 6.3.9.16.1, 6.3.10.3.4.1, 6.3.10.3.4.3 and 6.3.10.3.4.5 and move these subclauses to a new subclause 6.3.10.3.6 in 6.3.10.3 "OFDMA-based ranging", which is consistent with how the MS CDMA ranging and OFDMA-based network entry procedure have been described in IEEE 802.16e-2005 (see 6.3.10.3.1 "Contention-based initial ranging and automatic adjustments", 6.3.10.3.2 "Periodic ranging and automatic adjustments" and 6.3.10.3.3 "CDMA HO ranging and automatic adjustment" for detail).

Suggested Remedy

Adopt IEEE C80216j-07/459 or latter version.

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

Adopt C802.16j-07/459r6 with the following modifications to the contributions:

1. Remove MR-BS/RS from 6.3.10.3.1 and 6.3.10.3.2

Reason for Group's Decision/Resolution

Group's Notes
No objection

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

<u>Comment by:</u>	Chion Mary	<u>Membership Status:</u> Member	<u>Date:</u> 9/10/2007

<u>Comment #</u> **1001**   <u>Document under Review:</u> **P802.16j/D1**   <u>Ballot ID:</u> **28**

<u>Comment</u>   <u>Type</u> Technical   <u>Part of Dis</u> ☒ <u>Satisfied</u> ☐   <u>Page</u> 212   <u>Line</u>   <u>Fig/Table#</u>   <u>Subclause</u> 11.7.28

The MR MAC feature support list lack explanation with some of the bits:

1. RS scheduling support: does this mean that if this bit is set, then distributed scheduling should be used?
2. What does RS mobility support defines?
3. What does Subordinate RS network entry support mean?

<u>Suggested Remedy</u>

Modify 11.7.27 as the following:

Bit #0: RS scheduling support<u>: when bit set to "1" in REG-RSP, distributed scheduling is enabled.</u>
Bit #1: NBR-ADV generating
Bit #2: Tunneling packet mode support
Bit #3: Tunneling burst mode support
Bit #4: ~~RS mobility support~~
Bit #5: ~~Subordinate RS network entry support~~
Bit #6-7 : Reserved

<u>GroupResolution</u>   <u>Decision of Group:</u> **Superceded**

by #1003

<u>Reason for Group's Decision/Resolution</u>

<u>Group's Notes</u>
No objection

<u>Editor's Notes</u>   <u>Editor's Actions</u>

| Comment by: | Mike Hart | Membership Status: | Member | Date: | 9/10/2007 |

| Comment # | **1003** | Document under Review: | **P802.16j/D1** | Ballot ID: | **28** |

| **Comment** | **Type** Technical | **Part of Dis** ☐ **Satisfied** ☐ | **Page** 212 | **Line** 14 | **Fig/Table#** | **Subclause** 11.7.28 |

Move this under 11.7.8 (SS & RS capability support)make bit#0 two bits for each mode as indicating mode does not give flexibility to MR-BS should an RS be able to support both scheduling modes. Add a note that both bits #2 and #3 must not be set to 1 at the same time in the RSP.

Suggested Remedy

[Move 11.7.28 to a new subclause under 11.7.8]

[Modify the value column as indicated:]

Bit #0: Centralised scheduling mode support
Bit #1: Distributed scheduling mode support
Bit #2: NBR-ADV generating support
Bit #3: Tunneling packet mode support
Bit #4: Tunneling burst mode support
Bit #5: RS mobility support
Bit #6: Subordinate RS network entry support

[Insert the following note under the table]

Whilst an RS can set any combination of bits in the REG-REQ message, an MR-BS can only set either bit #0 or bit #1, and it can only set either bit #3 or bit #4 to indicate which mode it is currently supporting. A value of 1 indicates support for the feature.

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

[Move 11.7.28 to a new subclause under 11.7.8]

[Modify the value column as indicated:]

Bit #0: Centralised scheduling mode support
Bit #1: Distributed scheduling mode support
Bit #2: NBR-ADV generating support
Bit #3: Tunneling packet mode support
Bit #4: Tunneling burst mode support
Bit #5: RS mobility support

Bit #6: Subordinate RS network entry support

[Insert the following note under the table]

If bit #5 is set to 1, then the RS can be an MRS. If bit #6 is set to 0, the RS cannot be an intermediate RS.
Whilst an RS can set any combination of bits in the REG-REQ message, an MR-BS can only set either bit #0 or bit #1, and it can only set either bit #3 or bit #4 to indicate which mode it is currently supporting. A value of 1 indicates support for the feature.

Reason for Group's Decision/Resolution

Group's Notes
No objection

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

Comment by:	Dong Hyun Ahn	Membership Status:	Member	Date: 9/10/2007

Comment # 1030   **Document under Review:** P802.16j/D1   **Ballot ID:** 28

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 999   **Line**   **Fig/Table#**   **Subclause** 8.4.4.7.2

The disadvantages of deployment the non-transparent RS has outweighed its advantage comparing to pico-BS deployment.

Section 8.4.4.7.2 describes the frame structure for non-transparent mode.
With this mode, all RS transmits its own preamble different from neighbor RSs. It shows the RSs acts as a base station in physical point of view. All the MSs in certain RS coverage regards the RS as a different BS. An MS should hand-off when it moves to the coverage of different RS. Also at the boundary area of RS coverage, there are inter-cell interference between RSs and BS.
For this case, what is advantage of adopting non-transparent RS instead of using small coverage pico-BSs.
The only advantage is that RS does not need signal cable connection onto infrastructure networks but still needs power line connection.
The other disadvantages include capacity degradation, more data transmission delay, potential increase of interference.

Suggested Remedy
Remove section 8.4.4.7.2. and related subsections, not for the transparent RS.

GroupResolution   **Decision of Group:** **Rejected**

Reason for Group's Decision/Resolution
Many reply comments regarding benefits not considered by the commenter:

There are other advantages of non-transparent RS that the commenter fails to mention that can potentially result in lower CAPEX and OPEX compared to pico-BS based deployment, particulary for a green-field operator, and can also provide an operator with more deployment flexibility.

Unless the commenter can provide a clearly worked example that demonstrates non-transparent RS is not feasible, I suggest the proposal to remove it be reconsidered.

Although RS does still need powerline, not requiring backhaul network connection is one of big advantages of relay system over pico-BS.

Comparing Non-Transparent relay to Pico BS covers only one aspect of NT RS deployment.

The non-transparent RS is the first choice for a green field operator, when there is no network infrastructure in place. In this case the CAPEX and OPEX costs for the RS are lower than for the pBS case. Non-transparent RSs could provide solutions for some network service providers category, while the pBS could be a solution for another category. The 802.16 standard should provide alternatives for both categories.

Group's Notes

TG vote:
In favour of accepting: 1
Against: 28

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

| Comment by: | In-Kyeong Choi | | Membership Status: | Member | | Date: | 9/10/2007 |

Comment # 1036   **Document under Review:** **P802.16j/D1**   **Ballot ID:** 28

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 999   **Line**   **Fig/Table#**   **Subclause** 8.4.4.7.1.2

IEEE 802.16j/D1 is very incomplete as it stands, with many missing functionalities, inconsistencies, and a number of other problems. The draft is not ready for and approval.

A partial list of the problems are as follows:

- The IEEE 802.16j/D1 defines the Dedicated Uplink Channel (RS_UL_DCH) for RSs (6.3.6.7.1.2.2). RS_UL_DCH is assigned by using a MAP IE which contains the amount of bandwidh for each allocation and the time interval between seccessive allocations. RS_UL_DCH allocation stays valid until the allocation information is updated by a new MAP IE. This scheme allows an RS to transmit data with short latency while minimizing MAP overhead.

  However, the RS_UL_DCH assignment MAP IE can be received incorrectly due to a channel error. When an error occurs, the MR-BS (or an RS) will try to receive data from the newly assigned resources while the subordinate RS will transmit its data on the resources that is no longer valid. This problem will degrades the effectiveness of Dedicated Uplink Channel.

- If it is possible to relay a packet within the same frame, there will be many applications that can benefit from the feature. However, IEEE 802.16j/D1 (Section 8.4.4.7.1.2) does not allow this same frame forwarding of packets (direct relay). One way to implement direct relay is to use deModulation-and-Forward (M&F) scheme. There has been contributions proposing M&F as a optional feature, but the contributions did not receive enough consideration due to lack of time.

  It is proposed that 16j task group would discuss and adopt contribution C802.16j-07/526 or the latest revision

- In centralized scheduling mode with transparent frame structure, to support multi-hop relays, IEEE 802.16j/D1 requires the MAP information to be transmismitted as a payload in the Relay Zone. However, this repeated transmission of MAP information in the Relay Zone causes a significant throughput degradation. With direct MAP relay scheme, the DL area used for the MAP informaiton transmission can be reduced.

  It is proposed that 16j task group would discuss and adopt C802.16j-07/293r5 or the latest version.

- MS network entry procedure (6.3.9.16.3.1.2) in RS grouping (6.3.9.16.3.1) is very ambiguous
  and it is extremely hard to understand. The text needs to be clarified.

- It is not clear when IEEE 802.16j/D1 supports multi-hop relay links and only two-hop links.
  Many places in the draft (e. g., P75, line 40, RS-RLY-MAP) implies multi-hop links
  are supported, which some places (e.g., bandwidth request on p85, in 6.3.9.16.2.1 network
  entry procedure, and RS grouping (p103)) only mentions 2 hop cases. The draft should be
  clarified when 16j supports multi-hop and when only 2 hops.

- IEEE 802.16j/D1 says "The DL sub-frame shall include at least one access zone" (p163).
  In order to have more than one access zone, the number of access zone should be
  configured suing RS-CD message, which is not possible with the current draft.

- A number of missing definitions: For example RS-Config-RSP message (9.4),
  DSA, DSC, and DSD for centralized scheduling (Sections 6.3.14.9.3, 6.3.14.9.4, and
  6.3.14.9.5), etc.

Suggested Remedy

It is suggested the comments given above be addressed to make to draft more complete.
Especially, it is suggested that contributions C802.16j-07/526 and C802.16j-07/293r5 or
their latest versions be discussed and adopted.

GroupResolution   **Decision of Group:**   **Superceded**

by #1045 & #894

Reason for Group's Decision/Resolution

Group's Notes
No objection

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

| Comment by: | Seung Joon Lee | | Membership Status: | Member | | Date: | 9/10/2007 |

| Comment # | 1046 | | Document under Review: | P802.16j/D1 | | Ballot ID: | 28 |

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 999   **Line**   **Fig/Table#**   **Subclause** 8.4.4.7.1.2

IEEE 802.16j/D1 is very incomplete as it stands, with many missing functionalities, inconsistencies, and a number of other problems. The draft is not ready for and approval.

A partial list of the problems are as follows:

- The IEEE 802.16j/D1 defines the Dedicated Uplink Channel (RS_UL_DCH) for RSs (6.3.6.7.1.2.2). RS_UL_DCH is assigned by using a MAP IE which contains the amount of bandwidh for each allocation and the time interval between seccessive allocations. RS_UL_DCH allocation stays valid until the allocation information is updated by a new MAP IE. This scheme allows an RS to transmit data with short latency while minimizing MAP overhead.

  However, the RS_UL_DCH assignment MAP IE can be received incorrectly due to a channel error. When an error occurs, the MR-BS (or an RS) will try to receive data from the newly assigned resources while the subordinate RS will transmit its data on the resources that is no longer valid. This problem will degrades the effectiveness of Dedicated Uplink Channel.

- If it is possible to relay a packet within the same frame, there will be many applications that can benefit from the feature. However, IEEE 802.16j/D1 (Section 8.4.4.7.1.2) does not allow this same frame forwarding of packets (direct relay). One way to implement direct relay is to use deModulation-and-Forward (M&F) scheme. There has been contributions proposing M&F as a optional feature, but the contributions did not receive enough consideration due to lack of time.

  It is proposed that 16j task group would discuss and adopt C802.16j-07/526 or the latest revision

- In centralized scheduling mode with transparent frame structure, to support multi-hop relays, IEEE 802.16j/D1 requires the MAP information to be transmismitted as a payload in the Relay Zone. However, this repeated transmission of MAP information in the Relay Zone causes a significant throughput degradation. With direct MAP relay scheme, the DL area used for the MAP informaiton transmission can be reduced.

  It is proposed that 16j task group would discuss and adopt C802.16j-07/293r5 or the latest version.

- MS network entry procedure (6.3.9.16.3.1.2) in RS grouping (6.3.9.16.3.1) is very ambiguous and it is extremely hard to understand. The text needs to be clarified.

- It is not clear when IEEE 802.16j/D1 supports multi-hop relay links and only two-hop links. Many places in the draft (e. g., P75, line 40, RS-RLY-MAP) implies multi-hop links are supported, which some places (e.g., bandwidth request on p85, in 6.3.9.16.2.1 network entry procedure, and RS grouping (p103)) only mentions 2 hop cases. The draft should be clarified when 16j supports multi-hop and when only 2 hops.

- IEEE 802.16j/D1 says "The DL sub-frame shall include at least one access zone" (p163). In order to have more than one access zone, the number of access zone should be configured suing RS-CD message, which is not possible with the current draft.

- A number of missing definitions: For example RS-Config-RSP message (9.4), DSA, DSC, and DSD for centralized scheduling (Sections 6.3.14.9.3, 6.3.14.9.4, and 6.3.14.9.5), etc.

Suggested Remedy

It is suggested the comments given above be addressed to make to draft more complete. Especially, it is suggested that contributions C802.16j-07/526 and C802.16j-07/293r5 or their latest versions be discussed and adopted.

GroupResolution   **Decision of Group:**   **Superceded**

by #1045 & #894

Reason for Group's Decision/Resolution

Group's Notes
No objection

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

Comment by:	Young Seog Song	**Membership Status:** Member		**Date:** 9/10/2007

Comment # 1051　　　　　　**Document under Review:** **P802.16j/D1**　　　　　　**Ballot ID:** 28

Comment　　**Type** Technical　　**Part of Dis** ☒ **Satisfied** ☐　　**Page** 999　**Line**　　**Fig/Table#**　　**Subclause** 8.4.4.7.1.2

IEEE 802.16j/D1 is very incomplete as it stands, with many missing functionalities, inconsistencies, and a number of other problems. The draft is not ready for
and approval.

A partial list of the problems are as follows:

- The IEEE 802.16j/D1 defines the Dedicated Uplink Channel (RS_UL_DCH) for RSs (6.3.6.7.1.2.2).
  RS_UL_DCH is assigned by using a MAP IE which contains the amount of bandwidh for each
  allocation and the time interval between seccessive allocations. RS_UL_DCH allocation
  stays valid until the allocation information is updated by a new MAP IE. This scheme
  allows an RS to transmit data with short latency while minimizing MAP overhead.

  However, the RS_UL_DCH assignment MAP IE can be received incorrectly due to a channel error.
  When an error occurs, the MR-BS (or an RS) will try to receive data from the newly
  assigned resources while the subordinate RS will transmit its data on the resources that
  is no longer valid. This problem will degrades the effectiveness of Dedicated Uplink Channel.

- If it is possible to relay a packet within the same frame, there will be many applications
  that can benefit from the feature. However, IEEE 802.16j/D1 (Section 8.4.4.7.1.2) does not
  allow this same frame forwarding of packets (direct relay). One way to implement direct
  relay is to use deModulation-and-Forward (M&F) scheme. There has been contributions
  proposing M&F as a optional feature, but the contributions did not receive enough
  consideration due to lack of time.

  It is proposed that 16j task group would discuss and adopt contribution C802.16j-07/526 or the
  latest revision

- In centralized scheduling mode with transparent frame structure, to support multi-hop
  relays, IEEE 802.16j/D1 requires the MAP information to be transmismitted as a payload
  in the Relay Zone. However, this repeated transmission of MAP information in the Relay Zone
  causes a significant throughput degradation. With direct MAP relay scheme, the DL area used
  for the MAP informaiton transmission can be reduced.

  It is proposed that 16j task group would discuss and adopt C802.16j-07/293r5 or
  the latest version.

- MS network entry procedure (6.3.9.16.3.1.2) in RS grouping (6.3.9.16.3.1) is very ambiguous
  and it is extremely hard to understand. The text needs to be clarified.

- It is not clear when IEEE 802.16j/D1 supports multi-hop relay links and only two-hop links.
  Many places in the draft (e. g., P75, line 40, RS-RLY-MAP) implies multi-hop links
  are supported, which some places (e.g., bandwidth request on p85, in 6.3.9.16.2.1 network
  entry procedure, and RS grouping (p103)) only mentions 2 hop cases. The draft should be
  clarified when 16j supports multi-hop and when only 2 hops.

- IEEE 802.16j/D1 says "The DL sub-frame shall include at least one access zone" (p163).
  In order to have more than one access zone, the number of access zone should be
  configured suing RS-CD message, which is not possible with the current draft.

- A number of missing definitions: For example RS-Config-RSP message (9.4),
  DSA, DSC, and DSD for centralized scheduling (Sections 6.3.14.9.3, 6.3.14.9.4, and
  6.3.14.9.5), etc.

Suggested Remedy

It is suggested the comments given above be addressed to make to draft more complete.
Especially, it is suggested that contributions C802.16j-07/526 and C802.16j-07/293r5 or
their latest versions be discussed and adopted.

GroupResolution   **Decision of Group:**   **Superceded**

by #1045 & #894

Reason for Group's Decision/Resolution

Group's Notes
No objection

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

| Comment by: | Kyu ha Lee | Membership Status: | Member | Date: | 9/10/2007 |

| Comment # | 1045 | Document under Review: | P802.16j/D1 | Ballot ID: | 28 |

| Comment | Type Technical | Part of Dis ☐ | Satisfied ☐ | Page 999 | Line | Fig/Table# | Subclause 11.8.3.7 |

In centralized scheduling mode with transparent frame structure, to support multi-hop relays, IEEE 802.16j/D1 requires the MAP information to be transmitted as a payload in the Relay Zone. However, this repeated transmission of MAP information in the Relay Zone causes a significant throughput degradation. With direct MAP relay scheme, the DL area used for the MAP information transmission can be reduced.

Suggested Remedy

It is proposed that 16j study group would discuss and adopt C802.16j-07/528 or the latest version.

GroupResolution   **Decision of Group:**   **Rejected**

Reason for Group's Decision/Resolution

Processing delay at RS may make the MR-BS transmitted preamble and RS forwarded preamble out of time alignment; isolation between antennas may be an issue;

Group's Notes
No objection

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

Comment by: suchang   chae   **Membership Status:**   Member   **Date:** 9/10/2007

Comment # 0894   **Document under Review: P802.16j/D1**   **Ballot ID: 28**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☒   **Page** 164   **Line** 36   **Fig/Table#**   **Subclause** 8.4.4.7.1.2

If it is possible to relay a packet within the same frame, there will be many applications
that can benefit from the feature. However, IEEE 802.16j/D1 (Section 8.4.4.7.1.2) does not
allow this same frame forwarding of packets (direct relay). One way to implement direct
relay is to use deModulation-and-Forward (M&F) scheme. There has been contributions
proposing M&F as a optional feature, but the contributions did not receive enough
consideration due to lack of time.

It is proposed that 16j task group would discuss contribution C802.16j-07/526 ,C802 16j-07_527 or the
latest revision

Suggested Remedy

Adoption of the proposed text and MAP IE on our contribution of C802 16j-07_526 and C802 16j-07_527

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

Adopt C802.16j-07/526r3 with the following modification.

Move section 8.4.4.7.5 to a subclause under 8.4.4.7.1.
[Change the first line to the following:]
Direct Relay Zone may be optionally assigned by the MR-BS to a transparent RS. Only end-to-end HARQ mode shall be used. An RS
with a direct relay zone shall not be used for more than 2 hops.

[Change the RS_CD table so that Number of direct relaying zones is only 1bit]

Reason for Group's Decision/Resolution

Group's Notes
No objection

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

Comment by: Junhong Hui   **Membership Status:**   Member   **Date:** ?

Comment # **2020**   **Document under Review:** **P802.16h/D1**   **Ballot ID:** **LB28a**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 3   **Line** 36   **Fig/Table#**   **Subclause**

"an RS can only support one segment."
Is it possible for transparent RS to support 3 segment operation.

Suggested Remedy

remove "an RS can only support one segment."

GroupResolution   **Decision of Group:**   **Superceded**

by #2002

Reason for Group's Decision/Resolution

Group's Notes

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

Comment by:	Peiying Zhu	**Membership Status:** Member	**Date:** 1/15/2008

Comment # **2002**   **Document under Review:** **P802.16j/D1**   **Ballot ID:** **LB28a**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☒   **Page** 2   **Line**   **Fig/Table#**   **Subclause** 1.6

This section needs to be rewritten to give an better overview, there are several inconsistency in the section. Some examples:

"This subclause provides an overview of the extended feature set defined to support MR systems and outlines
example protocol reference models for multihop relay deployments. The various MR features defined
throughout this standard permit a multihop relay system to be configured in several modes."

Where is the example protocol models? What are the several modes?

Suggested Remedy

Either add an example protocol model or delete the text.
Explain the modes or delete the text.

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

Adopt changes in C802.16j-08/050r2

Reason for Group's Decision/Resolution

Group's Notes

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

| Comment by: | Gamini Senarath | Membership Status: | Member | Date: ? |

| Comment # 2027 | Document under Review: P802.16j/D2 | Ballot ID: LB28a |

Comment | **Type** Technical | **Part of Dis** ☒ **Satisfied** ☐ | **Page** 3 | **Line** 49 | **Fig/Table#** | **Subclause** 3

The definitions of DL/UL access/relay zones are not consistent with the text in 8.4.4.7 and cooperative diversity transmissions. For example, in case of cooperative relaying, a non-transparent RS may cooperate with the MR-BS or MS to send space-time encoded or spatially multiplexed data to the MS or MR-BS, respectively.
That means thsi should not be limited only to the transparent RS.

Suggested Remedy

Change the some of the definitions as following:

3.90 DL access zone: A portion of the DL sub-frame in the MR-BS/RS frame used for MR-BS/RS to MS or
Transparent RS transmission. Additionally, under the control of the MR-BS, this zone may be used for MR-BS/RS to non transparent RS transmissions for specific performance enhancement schemes such as coorperative relaying. A frame may have no DL access zone, or the DL access zone may consist of the entire downlink subframe, depending on the method used to separate the transmissions on the access and
relay links.

3.91 UL access zone: A portion of the UL sub-frame in the MR-BS/RS frame used for MS to MR-BS/RS
transmission. A frame may have no UL access zone, or the UL access zone may consist of the entire uplink
subframe, depending on the method used to separate the transmissions on the access and relay links. An RS may also be scheduled to transmit to its super-ordinate station in this zone under the control of the MR-BS, with the specific performance enhancement schems such as corporative relaying.

GroupResolution   **Decision of Group:** **Rejected**

Reason for Group's Decision/Resolution

Not allowed based on description in P802.16j/D2

Group's Notes

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

Comment by:	Yuefeng Zhou	**Membership Status:** member	**Date:** 1/15/2008
Comment # 2040	**Document under Review:** P802.16j/D2		**Ballot ID:** LB28a

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 5 **Line** 24 **Fig/Table#** **Subclause** 3.107

As defined in the standard draft, P802.16j/D2, the centralized scheduling is the mode of operation applicable to multihop relay where an MR-BS determines the bandwidth allocations and generates the corresponding MAPs (or dictates the information used by RSs to generate their MAPs) for all access and relay links in the MR-cell. When increasing the number of hops, the MR-BS will have very heavy MAP overhead, since it has to generates the MAPs for each hop.
Considering the massive overhead in centralized scheduling mode, the maximum number of hops for centralized scheduling mode need to be limited by two.

Suggested Remedy

3. Definition
[Modify the definition 3.107]
3.107 centralized scheduling: a mode of operation applicable to multihop relay where an MR-BS determines the resource allocations and generates the corresponding MAPs (or dictates the information used by RSs to generate their MAPs) for all access and relay links in the MR-cell. Centralized scheduling shall not be used for more than two-hop relay systems.

6.3.3.8 MR construction and transmission of MAC PDUs

[Modify the 5th paragraph in 6.3.3.8]

In case of a non-transparent RS in a multi-hop topology, the tunnel burst mode , tunnel packet mode and the CID based forwarding mode can be used for centralized as well as distributed scheduling mode RSs while the tunnel burst mode can be used for distributed scheduling mode RSs.

GroupResolution   **Decision of Group:** **Superceded**

by #2039 (duplicate)

Reason for Group's Decision/Resolution

Group's Notes

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

<u>Comment by:</u> Mohammad Madihian		<u>Membership Status:</u> member	<u>Date:</u> 1/15/2008

<u>Comment #</u> **2039**   <u>Document under Review:</u> **P802.16j/D2**   <u>Ballot ID:</u> **LB28a**

<u>Comment</u>   <u>Type</u> Technical   <u>Part of Dis</u> ☒ <u>Satisfied</u> ☒   <u>Page</u> 5   <u>Line</u> 24   <u>Fig/Table#</u>   <u>Subclause</u> 3.107

As defined in the standard draft, P802.16j/D2, the centralized scheduling is the mode of operation applicable to multihop relay where an MR-BS determines the bandwidth allocations and generates the corresponding MAPs (or dictates the information used by RSs to generate their MAPs) for all access and relay links in the MR-cell. When increasing the number of hops, the MR-BS will have very heavy MAP overhead, since it has to generates the MAPs for each hop.
Considering the massive overhead in centralized scheduling mode, the maximum number of hops for centralized scheduling mode need to be limited by two.

Suggested Remedy

3. Definition
[Modify the definition 3.107]
3.107 centralized scheduling: a mode of operation applicable to multihop relay where an MR-BS determines the resource allocations and generates the corresponding MAPs (or dictates the information used by RSs to generate their MAPs) for all access and relay links in the MR-cell. <u>Centralized scheduling shall not be used for more than two-hop relay systems.</u>

6.3.3.8 MR construction and transmission of MAC PDUs

[Modify the 5th paragraph in 6.3.3.8]

In case of a non-transparent RS in a multi-hop topology, the <u>tunnel burst mode</u> , tunnel packet mode and the CID based forwarding mode can be used for ~~centralized as well as~~ distributed scheduling mode RSs ~~while the tunnel burst mode can be used for distributed scheduling mode RSs~~.

GroupResolution   **Decision of Group:**   **Rejected**

TG made vote to make resolution and it was rejected with the records (Vote: for : 0, reject : 8).

Reason for Group's Decision/Resolution

Two hop implementation is too restrictive.

Group's Notes

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

Comment by:	Junhong Hui	**Membership Status:**	Member	**Date:** ?

Comment # **2047**   **Document under Review:** **P802.16j/D2**   **Ballot ID:** **LB28a**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 5   **Line** 58   **Fig/Table#**   **Subclause**

3.117 in-band relay: A MR network where the access links and relay links use the same frequency and are separated in time.
3.118 out-of-band relay: A MR network where the access links and relay links use different frequencies and may not be time separated.

But the transparent RS DL access link and relay link is not separated in time.

Suggested Remedy
Need to modify and change the category criterion.

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

3.117 in-band relay: A non-transparent relay ~~MR network~~ where the access links and relay links use the same carrier frequency and are separated in time, or a transparent relay.

3.118 out-of-band relay: A non-transparent relay~~MR network~~ where the access links and relay links use different carrier frequencies and

may not be time separated.

Reason for Group's Decision/Resolution

Group's Notes

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

| Comment by: | Shulan Feng | Membership Status: | Member | Date: | 1/14/2008 |

Comment # 2049   **Document under Review:** **P802.16j/D2**   **Ballot ID:** **LB28a**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 6   **Line** 2   **Fig/Table#**   **Subclause** 3

The meaning of superordinate station is not clear.

Suggested Remedy

Insert the following text at the end of section 3:

3.XXX superordinate station: The superordinate station of an RS is the station from which the RS received the DL frame-start preamble, FCH, MAP message(s) and channel descriptor (DCD/UCD) messages. The superordinate station can be an MR-BS or a non-transparent RS. The superordinate station can not be a transparent RS.

GroupResolution   **Decision of Group:**   **Rejected**

TG made the vote for resolution of comment. (For: 0. Against: 14)

Reason for Group's Decision/Resolution

According to several cases in the draft, a superordinate station can be a transparent RS.

Group's Notes

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

Comment by:	Shulan Feng	Membership Status: Member	Date: 1/14/2008

Comment # 2123	Document under Review: P802.16j/D2	Ballot ID: LB28a

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 25   **Line** 50   **Fig/Table#** 38   **Subclause** 6.3.2.3

As defined in the current draft, when the RS received a message such as MS_SCN-INF, MS_INFO-DEL, and so on, it shall return an MR-Generic-ACK message as a response. However, the RS may return more than one MR-Generic-ACK messages at the same frame. For example, the RS may return two MR-Generic-ACK messages at the same frame, one for MS_SCN-INF message, and another for MS_INFO-DEL message. However, this consumes redundant message overhead.

Similar problem would happen when the MR-BS returns more than one MR-Generic-ACK messages to the RS at the same frame.

Suggested Remedy

Add a new row in table 38:

Type	Message name	Message description	Connection
TBD	MR_Multi-ACK	Multiple ACKs of received messages	RS Basic

Insert new subclause 6.3.2.3.X MR_Multi-ACK:

When the MR-BS/RS needs to return more than one ACKs at the same frame, it may send an MR_Multi-ACK message including all the ACK information. The message format for the MR_Multi-ACK message shall be in accordance with Table X.

Table X—MR_Multi-ACK message format

Syntax	Size	Note
MR_Multi-ACK_Message_Format(){		
Management Message Type = TBD	8bits	
Num_of_ACKed_Messages	8bits	Number of Messages to be ACKed
for(i=0; i< Num_of_ACKed_Messages; i++){		
Transaction_ID	16bits	Transaction Identifier
}		
TLV Encoded Information	variable	TLV Specific
}		

The advantage of the proposal:
Since the size of the TLV encoded information is at least 13 bytes (when using CMAC tuple without MDHO), we consider the case that the size of the TLV encoded information is 13 bytes. In this case, when the RS needs to return 2 ACKs at the same frame, if using 2 MR_Generic-ACK messages, the cost is 32 bytes; however, if using one MR_Multi-ACK message, the cost is 19 bytes, saving 13 bytes.

GroupResolution   **Decision of Group:** **Rejected**

TG made the vote for resolution of comment(For: 0, Against: 10)

Reason for Group's Decision/Resolution

In general, only one signaling exchange is ongoing. multiple on-going transaction between MR-BS and RS is rare event, therefore need for multi-ACK is not justified.

Group's Notes

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

2008/08/21   **IEEE 802.16-08/002r3**

Comment by: Shulan   Feng   **Membership Status:**   Member   **Date:** 1/14/2008

Comment # 2154   **Document under Review:** **P802.16j/D2**   **Ballot ID:** **LB28a**

Comment   **Type** Editorial   **Part of Dis** ☒ **Satisfied** ☐   **Page** 49   **Line** 7   **Fig/Table#**   **Subclause** 6.3.2.3.70

There is not any description for "Used subchannel bitmap" in 11.26.1

Suggested Remedy

Requesting clarification

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

Delete the TLV from line 8 on page 49.

Reason for Group's Decision/Resolution

Group's Notes

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

Comment by:	Junhong Hui	**Membership Status:**	Member	**Date:** ?

Comment # 2175   **Document under Review:** **P802.16j/D2**   **Ballot ID:** **LB28a**

Comment   **Type** Technical   **Part of Dis** ⊠ **Satisfied** ☐   **Page** 68   **Line** 3   **Fig/Table#** 183y   **Subclause** 6.3.2.3.86

Some modification of RS_Member_List_Update Message is needed in order to reduce the unnecessary overhead.

Suggested Remedy

GroupResolution   **Decision of Group:**   **Rejected**

Reason for Group's Decision/Resolution

No proposed remedy raised from commenter. And the comment is too abstract to capture the proposed remedy.

Group's Notes

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

Comment by:	Tzu-Ming Lin	Membership Status:	Member	Date:	1/15/2008

Comment #	2189	Document under Review:	P802.16j/D2	Ballot ID:	LB28a

Comment　　Type Technical　　Part of Dis ☒　Satisfied ☐　　Page 79　Line 11　Fig/Table#　　Subclause 6.3.3.8

In the transmission case of non-transparent RS in two hop topology, Tunnel Burst Mode can be applied for distributed scheduling mode. C802.16j-08/024 provides the clarification of tunnel burst mode in this case.

Suggested Remedy

Adopt IEEE C802.16j-08/024 or the latest version.

GroupResolution　　　　　　　**Decision of Group:**　**Superceded**

by #2188

Reason for Group's Decision/Resolution

Group's Notes

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

Comment by:	Rakesh Taori		Membership Status:	Member		Date:	1/15/2008

Comment # **2188** Document under Review: **P802.16j/D2** Ballot ID: **LB28a**

Comment Type **Technical** Part of Dis ☒ Satisfied ☒ Page **78** Line **58** Fig/Table# Subclause **6.3.3.8**

There are two tunnel modes right now; Tunnel Packet Mode and Tunnel Burst Mode. The Tunnel Burst mode, however, has a very limited use (It is only used in distributed scheduling when the number of hops is more than 2.) It appears that the primary reason for TBM is that the overgead is lower than TPM.

But TPM uses R-MAC header and offers flexibility to use newly definied functionality.

If overhead is the prime concern, then one can use CID based forwarding. IN CID based forwarding we do not even to use the CID in the MAP IE.

It is unclear exactly why TBM shoudl be used.

Suggested Remedy

1. Change lines 58-59 on page 78 as follows:

~~Four~~ Three modes for forwarding MAC PDUs belonging to a connection are specified within the standard . ~~There are two tunnel modes called the Tunnel Packet mode and the Tunnel Burst mode~~. The Tunnel PAcket mode is described in Section 6.3.3.8.1.

2. Change lines 14-16 on page 79 as follows:
In case of a non-transparent RS in a multi-hop topology, the tunnel packet mode and the CID based forwarding mode can be used for centralized as well as distributed scheduling mode RSs ~~while the tunnel burst mode can be used for distributed scheduling mode RSs.~~

3. Delete lines 4-9 on page 80
~~In the second mode, called Tunnel Burst Mode, MAC PDUs transmitted through a tunnel are concatenated together into PHY bursts and transmitted without appending a relay MAC header. In this mode, the T-CID or MT-CID of the tunnel is specified in the DL-MAP IE to identify the tunnel on which the PHY burst is transmitted. In the UL-MAP IE, the basic CID shall be used to indicate UL burst allocation. In this mode, all MAC PDUs in a PHY burst must be from connections that traverse the tunnel.~~

GroupResolution Decision of Group: **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

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

Comment by:	Yuefeng Zhou	**Membership Status:**	member	**Date:**	1/15/2008

Comment # 2190   **Document under Review:** P802.16j/D2   **Ballot ID:** LB28a

Comment **Type** Editorial   **Part of Dis** ☒ **Satisfied** ☐   **Page** 79   **Line** 14   **Fig/Table#**   **Subclause** 6.3.3.8

It should be clear that "multihop" includes 2-hop or it means more than 2-hop. In subclause 6.3.3.8, it means more than 2-hop, while in other parts of 16j_D2, it includes 2-hop.
The text in subclause 6.3.3.8 needs to be further cleaned.

Suggested Remedy

6.3.3.8 MR construction and transmission of MAC PDUs
[Modify the fifth to eighth paragragh in subclause 6.3.3.8]

The mode of RS operation (Transparent or Non-Transparent), the type of scheduling (centralized or distributed) and the number of hops, N_{hop}, (~~2 hop or multi-hop~~ $N_{hop}=2$ or $N_{hop}>2$) determine which forwarding modes may be used.
In case of a transparent RS in a two-hop topology, either Burst based forwarding or CID based forwarding may be used.
In case of a non-transparent RS in a two-hop topology, either the Tunnel Packet mode or the CID based forwarding mode is used.
In case of a non-transparent RS in a ~~multi-hop~~ $N_{hop}>2$ topology, the tunnel packet mode and the CID based forwarding mode can be used for centralized as well as distributed scheduling mode RSs while the tunnel burst mode can be used for distributed scheduling mode RSs.

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

6.3.3.8 MR construction and transmission of MAC PDUs
[Modify the fifth to eighth paragragh in subclause 6.3.3.8]

The mode of RS operation (Transparent or Non-Transparent), the type of scheduling (centralized or distributed) and the number of hops from the MR-BS to the MS/SS, (~~2 hop or multi-hop~~) determine which forwarding modes may be used.
In case of a transparent RS in a two-hop topology, either Burst based forwarding or CID based forwarding may be used.
In case of a non-transparent RS in a two-hop topology, either the Tunnel Packet mode or the CID based forwarding mode is used.
In case of a non-transparent RS in a ~~multi-hop~~ topology with more than two hops, the tunnel packet mode and the CID based forwarding mode can be used for centralized as well as distributed scheduling mode RSs while the tunnel burst mode can be used for distributed scheduling mode RSs.

Reason for Group's Decision/Resolution

Group's Notes

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

| Comment by: | Tzu-Ming Lin | | Membership Status: | Member | | Date: | 1/15/2008 |

| Comment # | 2192 | | Document under Review: | P802.16j/D2 | | Ballot ID: | LB28a |

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 79   **Line** 18   **Fig/Table#**   **Subclause** 6.3.3.8

In the transmission case of non-transparent RS in two hop and multi-hop topology, Tunnel Burst Mode can be applied for centralized scheduling mode. C802.16j-08/023 provides the clarification of tunnel burst mode in this case.

Suggested Remedy

Adopt IEEE C802.16j-08/023 or the latest version.

GroupResolution   **Decision of Group:**   **Rejected**

TG made the vote for resolution. (for : 1, against : 8)

Reason for Group's Decision/Resolution

Although Tunnel burst mode can be applied to centralized scheduling mode, CID base forwarding can be used to achieve the same goal.

Group's Notes

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

Comment by:	Gamini Senarath	Membership Status:	Member	Date: ?

Comment # 2194	Document under Review: P802.16j/D2	Ballot ID: LB28a

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 79   **Line** 23   **Fig/Table#**   **Subclause** 6.3.3.8

The data forwarding methods for RS group is not described in current text.

Suggested Remedy

[Change the text as on line 23 of page 79]

~~The above description does not apply to RS group operation.~~
In MR networks with RS groups, tunnel-based, CID based or burst-based forwarding can be applied. In tunnel-based forwarding, the tunnel connections are established between the MR-BS and the superordinate station of the RS group, i.e., the super-ordinate station is the end-of-tunnel in DL and begining-of-tunnel in UL. In this case, the data forwarding between the super-ordinate station and the MS/SS may be either CID based or burst-based. The burst based forwarding shall be employed only if selective forwarding is not used, i.e., when all RS group membes are involved in forwarding data to a specific MS/SS. More specific information for data forwarding within RS group is provided in Subclause 6.3.33.

[Change text on line 34 of page 79]

One or more tunnels may be established between the MR-BS and the access RS after the Network entry is performed. If the MS/SS is served by an RS group, the tunnnels shall be established between the MR-BS and the super-ordinate station of the RS group.

[Change the text on line 22 of page 172 as follows]

Data forwarindg in MR networks with RS group is described in Subclause 6.3.3.8. The following describes d~~D~~ata forwarding within RS group in detail. For DL, the members of an RS group may be configured to forward traffic data for only specific subordinate terminal stations.

GroupResolution   **Decision of Group:**   **Rejected**

TG made the vote for resolution of comment. (For: 8 Against: 12)

Reason for Group's Decision/Resolution

No need to define applicability of each forwarding mode to RS groups.

Group's Notes

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

| **Comment by:** | Tzu-Ming Lin | **Membership Status:** | Member | **Date:** | 1/15/2008 |

| **Comment #** 2218 | **Document under Review:** P802.16j/D2 | **Ballot ID:** LB28a |

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 80   **Line** 42   **Fig/Table#**   **Subclause** 6.3.4.6.4

According to some data from 3GPP LTE system, TCP throughput shall be impact due to HARQ residual error. The simulation results also evidence that ARQ can help for maintaining TCP throughput in wireless data transmission. C802.16j-08/021 proposes an optional relay support for 16e ARQ to enhance TCP throughput in relay links.

Suggested Remedy

Adopt C802.16j-08/021 or the latest version.

GroupResolution   **Decision of Group:**   **Rejected**

TG made the vote for resolution of comment to accept as modified by adopting C802.16j-08/021r2. (For: 2. Against: 13)

Reason for Group's Decision/Resolution

The TG decided that there is no obvious benefit of the proposed version of ARQ when compared to either a pure hop-by-hop or end-to-end ARQ approach.

Group's Notes

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

| **Comment by:** | Adrian Boariu | **Membership Status:** | Member | **Date:** | 1/14/2008 |

Comment # 2284   **Document under Review:** **P802.16j/D2**   **Ballot ID:** **LB28a**

Comment   **Type** Technical   **Part of Dis** ☐ **Satisfied** ☐   **Page** 102   **Line** 47   **Fig/Table#**   **Subclause** 6.3.9.16.3

Some clarifications are provided for the section

Suggested Remedy

Addopt contribution C80216j-08_028 or its latest version

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

Adopt C802.16j-08/028r3

Reason for Group's Decision/Resolution

Group's Notes

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

| **Comment by:** | Shulan Feng | **Membership Status:** | Member | **Date:** | 1/14/2008 |

Comment # 2285   **Document under Review:** **P802.16j/D2**   **Ballot ID:** **LB28a**

Comment   **Type** Editorial   **Part of Dis** ☒ **Satisfied** ☐   **Page** 102   **Line** 50   **Fig/Table#**   **Subclause** 6.3.9.16.3

The RS may not use a different frame number offset from the number which the MR-BS transmits.

Suggested Remedy

[Modify the sentence as indicated:]
When RS ~~shall~~ use<u>s</u> a different frame number offset from the number which the MR-BS transmits, MR-BS shall include RS frame offset TLV in RS_Config-CMD message.

GroupResolution   **Decision of Group:** **Superceded**

by #2284

Reason for Group's Decision/Resolution

Group's Notes

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

| Comment by: | Shulan Feng | Membership Status: | Member | Date: | 1/14/2008 |

Comment # **2287**   **Document under Review:** **P802.16j/D2**   **Ballot ID:** **LB28a**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 102   **Line** 55   **Fig/Table#**   **Subclause** 6.3.9.16.3

No R-amble offset parameter contained in the RCD

Suggested Remedy

requesting clarification

GroupResolution   **Decision of Group:** **Superceded**

by #2284

Reason for Group's Decision/Resolution

Group's Notes

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

| Comment by: | Shulan Feng | Membership Status: | Member | Date: | 1/14/2008 |

Comment # **2288**   **Document under Review:** **P802.16j/D2**   **Ballot ID:** **LB28a**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 103   **Line** 5   **Fig/Table#**   **Subclause** 6.3.9.16.3

Text is needed to clarify in which frame the non-transparent RS starts transmitting its own frame start preamble.

Suggested Remedy

[Modify the sentence as indicated:]
In the operational state, the non-transparent RS shall start transmitting its own frame start preamble at ~~a specified frame~~ the frame indicated by Frame Number Action in the RS_Config-CMD message, whereas a transparent RS shall continue to monitor the frame start preamble transmitted by the superordinate station.

GroupResolution   **Decision of Group:** **Superceded**

by #2284

Reason for Group's Decision/Resolution

Group's Notes

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

Comment by:	Yuefeng Zhou	**Membership Status:** member		**Date:** 1/15/2008

Comment # 2393   **Document under Review:** **P802.16j/D2**   **Ballot ID:** **LB28a**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 149   **Line** 41   **Fig/Table#**   **Subclause** 6.3.22.4.1.2

Moving BS mode has not been well defined. Since 16j already has Moving RS mode, no need to define Moving BS mode.

Suggested Remedy

Delete the remaining paragragh 6.3.22.4.1.2

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

Adopt the resoultion in contribution C802.16j-08/052.

Reason for Group's Decision/Resolution

Group's Notes

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

Comment by:	Tzu-Ming Lin	Membership Status:	Member	Date:	1/15/2008

Comment # 2516   **Document under Review:** **P802.16j/D2**   **Ballot ID:** **LB28a**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 177   **Line** 10   **Fig/Table#**   **Subclause** 7.2.2.6

There are two security models, named centralized and distributed control, defined in security sublayer. However, no texts are specified to handle the security problems during MS/MRS handover in P802.16/D2. In distributed security control model, keys shall be distributed from MR-BS to target RS if target RS do not have the active keys for maintaining security sessions in handover process.

Suggested Remedy

Adopt IEEE C802.16j-08/022 or the latest version.

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

[Add the following text in the end of Section 7.2.2.6]

MR-BS may process key pre-distribution to target RS before MS handoff occurs. If target RS does not possess MS's active AK, MR-BS may deliver an active AK to the RS when receiving entry/re-entry request from MS.

When RS handover is triggered, the RS may issue re-authentication to MSs that it serves to update the security materials of the MSs.

Reason for Group's Decision/Resolution

Group's Notes

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

Comment by: Junhong Hui   **Membership Status:**   Member   **Date:** ?

Comment # 2537   **Document under Review:** P802.16j/D2   **Ballot ID:** LB28a

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 185   **Line** 51   **Fig/Table#**   **Subclause**

The DL sub-frame shall include at least one DL access zone and may include one or more DL relay zones.

Is is possible to have more than one DL access zone in one DL sub-frame?

Suggested Remedy

Change to : The DL sub-frame shall include one DL access zone.

GroupResolution   **Decision of Group:**   **Superceded**

by #2610

Reason for Group's Decision/Resolution

Group's Notes

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

Comment by:	Adrian Boariu	**Membership Status:** Member		**Date:** 1/14/2008

Comment # 2610   **Document under Review:** **P802.16j/D2**   **Ballot ID:** **LB28a**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☒   **Page** 253   **Line** 37   **Fig/Table#**   **Subclause** 11.25.6

For zone configuration the standard specifies only TX/RX/idle modes. However, there is no information if that zone is for access ot relay link.

Suggested Remedy

On lines 37 and 51, insert after the "Tranceiver mode":
Zone mode (1-bit)

Change the lines 39 and 53 as:
Frame Configuration Duration (unsigned 6~~5~~-bits)

Insert on p. 254 line 11:
   Zone mode
Indicates that the zone is assigned to be used for access link (0), or for relay link (1)

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

[On lines 37 and 51, insert after the "Tranceiver mode":]
Zone mode (1-bit)

[Change the lines 39 and 53 as:]
Frame Configuration Duration (unsigned 6~~5~~-bits)

[Insert on p. 254 line 11:]
   Zone mode
Indicates that the zone is assigned to be used for access link (0), or for relay link (1)

[Change "Number of relay zones" to "Number of zones" in TLV type 16 & 17 in 11.25.6]
[Chnage "Number of relay zones" to "Number of zones" in the description fields following the table in 11.25.6]

Reason for Group's Decision/Resolution

Group's Notes

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

| Comment by: | Yuefeng Zhou | Membership Status: | member | Date: | 1/15/2008 |

| Comment # | 2595 | Document under Review: | P802.16j/D2 | Ballot ID: | LB28a |

Comment   Type Technical   Part of Dis ☒ Satisfied ☐   Page 227   Line 47   Fig/Table#   Subclause 8.41111111

In legacy IEEE802.16e, BS can directly measure the uplink CQI for each MS to facilitate the radio resource control and scheduling. However, in multi-hop relay networks, the MR-BS could not measure the UL CQI for the MS/RS connecting to the subordinated RS in centralized scheduling mode. Some mechanisms are needed to fix this issue.

Suggested Remedy

Review and accept the proposed text in the contribution C80216j-08_008.doc or its revision.

GroupResolution   **Decision of Group: Superceded**

by #2594 (duplicate)

Reason for Group's Decision/Resolution

Group's Notes

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

| Comment by: | Masaaki Yuza | Membership Status: | member | Date: | 1/15/2008 |

| Comment # | 2594 | Document under Review: | P802.16j/D2 | Ballot ID: | LB28a |

Comment **Type** Technical   **Part of Dis** ☒ **Satisfied** ☒   **Page** 227 **Line** 47   **Fig/Table#**   **Subclause** 8.41111111

In legacy IEEE802.16e, BS can directly measure the uplink CQI for each MS to facilitate the radio resource control and scheduling. However, in multi-hop relay networks, the MR-BS could not measure the UL CQI for the MS/RS connecting to the subordinated RS in centralized scheduling mode. Some mechanisms are needed to fix this issue.

Suggested Remedy

Review and accept the proposed text in the contribution C80216j-08_008.doc or its revision.

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

Adopt C802.16j-08/008r1

Reason for Group's Decision/Resolution

Group's Notes

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

| Comment by: | Junhong Hui | Membership Status: | Member | Date: ? |

Comment # 2608   **Document under Review:** **P802.16j/D2**   **Ballot ID:** **LB28a**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 249   **Line** 58   **Fig/Table#**   **Subclause**

Relay UL allocation start time indicates the effective start time of the uplink allocation defined by the RMAP on R-link. If the effective start time is defined as 0, the uplink allocation defined by the RMAP is effective in the current frame; if the value is set to N, the uplink allocation defined by the R-MAP in frame i is effective in frame i + N.

As defined in the D2 section 11.25.1, the UL relay allocation start time aiming at the timing of transmission in UL relay link after receiving data from the UL access link for non-transparent RS (Because in the definition of relay UL allocation start time, it specifically mentions about the RMAP on R-link) is transmitted from MR-BS to configure one or all RSs.

But the same problem also remains for other link connection conditions, like the UL relay allocation start time with the timing of transmission in UL relay link after receiving data from the UL relay link for non-transparent RS in a more than 2 hop MMR system. Similarly, in the DL relay allocation start time with the timing of transmission in DL relay link after receiving data from the DL relay link for non-transparent RS in a more than 2 hop MMR system or in the DL relay allocation start time with the timing of transmission in DL access link after receiving data from the DL relay link in both transparent RS and non-transparent RS assisted system.

Suggested Remedy

Adoopt the text proposal of C80216j-08_045 or higher version into 802.16j Draft Document.

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

Adopt C802.16j-08/045r1 changing TLV name to minimum forwarding delay.
Note: Authors to send TLV type to editor before implementation.

Reason for Group's Decision/Resolution

Group's Notes

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

| Comment by: | Shulan Feng | Membership Status: | Member | Date: | 1/14/2008 |

| Comment # | 2613 | Document under Review: | P802.16j/D2 | Ballot ID: | LB28a |

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 256 **Line** 7 **Fig/Table#** **Subclause** 11.26.1

Since the RS scheduling mode has been set in the REG-RSP message (either "Bit #0: RS centralized scheduling" or "Bit #1: RS distributed scheduling"), It is not necessary to reset the RS scheduling mode in the RS_Config-CMD message.

Suggested Remedy

Cancel the ability of reseting RS scheduling mode in RS_Config-CMD message or clarify why and when to reset the RS scheduling mode in the RS_config-CMD message.

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

Editors to separate out bit#0 and #1 from the TLV in 11.7.8.10 and create a new TLV called MR scheduling support TLV that is only included in the REG-REQ message. Update the REG-REQ message description to include this TLV as mandatory in the REG-REQ message. Remove the associated notes that relate to the removed bits from 11.7.8.10.

[Add the following into the new section:]
The scheduling mode is configured by the RS_Config-CMD message.

Reason for Group's Decision/Resolution

Group's Notes

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

Comment by:	yuefeng Zhou		**Membership Status:** Member		**Date:** 3/16/2008

Comment # 012   **Document under Review:** **P802.16j/D3**   **Ballot ID:**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 5   **Line** 35   **Fig/Table#**   **Subclause** 3.124

Normally, inspectrum specifications/documents, "band" means certain frequency range. For example, 2.5GHz band means certain frequency range arround 2.5GHz. Therefore, terminologies, "in-band" and "out-of-band" could not reflect the real meaning.

Suggested Remedy

To avoid confusion, suggest to replace "in-band relay" by " same carrier frequency relay ", and replace "out-of-band relay" by " different carrier frequency relay"

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

Adopt Option 2 from C802.16j-08/090

Reason for Group's Decision/Resolution

Group's Notes

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

Comment by:	Hongyun Qu	**Membership Status:** Member	**Date:** 3/15/2008

Comment # 025   **Document under Review:** P802.16j/D3   **Ballot ID:**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 18   **Line**   **Fig/Table#**   **Subclause** 6.3.2.1.2.2.2.3

MR acknowledge header and MR Generic ACK message are mandatory to be transmitted by RS as a response of some specific messages, for example, RCD message, CID-ALLOC-REQ message, RS-Config-CMD message, RS-AccessRS-REQ message, MR-SLP-INFO message, MS-SCN-INFO message, MS-INFO-DEL message. In this case, the unsolicit uplink bandwidth shall be provided to RS to transmit MR acknowledge header or MR Generic ACK message to the superorinate station.

Suggested Remedy

6.3.2.1.2.2.2.3 MR Acknowledgment header

[To modify the second sentence on page 18 as follows:]
When the acknowledge is required, the unsolicited uplink bandwidth shall be provided to tThe RS to sends this header to the MR-BS or its superordinate RS as an indication of the message reception.

6.3.2.3.85 MR generic acknowledgement (MR_Generic-ACK) message

[To modify the first paragraph on page 70 as follows:]

This message is transmitted on the RS's basic CID. If this message is required to acknowledge the receipt of any specific message, the unsolicit uplink bandwidth shall be provided to RS to transmit this message to the superordinate station.   The message format of MR_Generic-ACK message is shown in Table 183x.

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

Insert the following after the table in 11.7.26:

When bit#3 is set in the REG-RSP message, the RS shall use the MR Acknowledgement header instead of the MR_Generic-ACK message where both options are available for the message being acknowledged.

6.3.2.1.2.2.2.3 MR Acknowledgment header

[To modify the second sentence on page 18 as follows:]
When an acknowledgement is required, unsolicited uplink bandwidth may be provided to tThe RS to sends this header to the MR-BS or its superordinate RS as an indication of the message reception.

6.3.2.3.85 MR generic acknowledgement (MR_Generic-ACK) message

[To modify the first paragraph on page 70 as follows:]

This message is transmitted on the RS's basic CID. If this message is required to acknowledge the receipt of any specific message, unsolicited uplink bandwidth may be provided to RS to transmit this message to the superordinate station. The message format of MR_Generic-ACK message is shown in Table 183x.

Reason for Group's Decision/Resolution

Group's Notes

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

Comment by:	Shulan Feng	**Membership Status:** Member	**Date:** 3/14/2008

Comment # 042   **Document under Review:** P802.16j/D3   **Ballot ID:**

Comment   **Type** Editorial   **Part of Dis** ☒ **Satisfied** ☐   **Page** 40   **Line** 29   **Fig/Table#**   **Subclause** 6.3.2.3.65

DL subframe configuration (see 11.25.6)
UL subframe configuration (see 11.25.6)

There is no 11.25.6 in draft3

Suggested Remedy

DL subframe configuration (see 11.24.6)
UL subframe configuration (see 11.24.6)

GroupResolution   **Decision of Group:** **Superceded**

by #040

Reason for Group's Decision/Resolution

Group's Notes

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

| **Comment by:** | Wei-Peng Chen | **Membership Status:** | Member | **Date:** | 3/15/2008 |

Comment # 040   **Document under Review:** **P802.16j/D3**   **Ballot ID:**

Comment   **Type** Editorial   **Part of Dis** ☐ **Satisfied** ☐   **Page** 40   **Line** 9   **Fig/Table#**   **Subclause** 6.3.2.3.65

The section references for TLVs in this subclause (RCD) are incorrect.

Suggested Remedy

change all "11.25.*" to "11.24.*" in the section 6.3.2.3.65

GroupResolution   **Decision of Group:** **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

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

<u>Comment by:</u>	Tzu-Ming Lin	<u>Membership Status:</u> Member		<u>Date:</u> 3/15/2008	

<u>Comment #</u> **061**   <u>Document under Review:</u> **IEEE P802.16j/D3**   <u>Ballot ID:</u>

<u>Comment</u>   <u>Type</u> Technical   <u>Part of Dis</u> ☒ <u>Satisfied</u> ☐   <u>Page</u> 78   <u>Line</u> 49   <u>Fig/Table#</u>   <u>Subclause</u> 6.3.3.8.1

No clear specification of CID used in MAP. Please clarify what kind of CID is used in MAP for tunnel packet mode. T/MT-CID? Access RS basic CID?
Ambiguous statements shall cause consistent problem.

<u>Suggested Remedy</u>

Stations through which a tunnel traverses may forward the tunnel packets by the MAP-IE based on the TCID or MT-CID in the relay MAC header.

<u>GroupResolution</u>   <u>Decision of Group:</u>   **Rejected**

Following was proposed as an alternative to the original comment but it was rejected.

Change the second para in 6.3.3.8.1 as indicated:

All MAC PDUs from a connection that is assigned to traverse a tunnel must be transmitted through that tunnel. The mode for constructing and forwarding MAC PDUs from connections that traverse a tunnelis called as Tunnel Packet Mode. In the Tunnel Packet Mode, MAC PDUs that traverse a tunnel shall be encapsulated in a relay MAC PDU with the relay MAC header carrying the T-CID or MT-CID of the tunnel. Refer to subclause 6.3.2.1.1.1 for the definition of the relay MAC Header. This header along with the encapsulated MAC PDUs is called a relay MAC PDU. Multiple MAC PDUs from connections that traverse the same tunnel can be concatenated into a relay MAC PDU for transmission. The station at the ingress of the tunnel is responsible for encapsulating the MAC PDUs into relay MAC PDU, and the station at the egress of the tunnel is responsible for removing the relay MAC header. Stations through which a tunnel traverses may forward the relay MAC PDUs based on the T-CID or MT-CID in the relay MAC header. In this mode, multiple relay MAC PDUs, potentially from different tunnels traversing an RS can be concatenated into a single PHY burst. <u>If a single PHY burst contains relay MAC PDUs from multiple tunnels, the subordinate RS's basic CID shall be indicated in the respective DL-MAP_IE. If a single tunnel MAC PDU is carried by a PHY burst, the tunnel CID shall be indicated in the respective DL-MAP_IE.</u> When Tunnel Packet Mode is used with an RS operating in centralized scheduling mode, Allocation Subheaders shall be included in relay MAC PDUs on the downlink to enable the receiving RS to match the MAC PDUs in the relay MPDU payloads with the IEs in the MAP messages it receives from the MR-BS to broadcast in the access and relay zones.

<u>Reason for Group's Decision/Resolution</u>

Either the RS basic CID or tunnel CID can be used in the DL MAP IE for the case of tunnel mode. This is just an implementation issue as to which one to use and doesn't need to be specified.

Group's Notes

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

2008/08/21

Comment by:	Tzu-Ming Lin	**Membership Status:**	Member	**Date:** 3/15/2008

Comment # **066**   **Document under Review:** **IEEE P802.16j/D3**   **Ballot ID:**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 79   **Line** 15   **Fig/Table#**   **Subclause** 6.3.3.8.2

No clear specification of CID used in MAP. Please clarify what kind of CID is used in MAP if CID is included. MS basic CID? T/MT-CID? Or RS basic CID?
Ambiguous statements shall cause consistent problem.

Suggest : RS basic CID

Suggested Remedy

In CID based forwarding scheme, the forwarding of MAC PDUs by each RS is performed based on the CID contained in the MAC PDU header. An RS is informed about the next hop station during the setup of the service flow. When forwarding using this scheme, the inclusion of CID in the DL-MAP is optional. If CID is included, RS basic CID shall be used.

GroupResolution   **Decision of Group:**   **Rejected**

Reason for Group's Decision/Resolution

Either the RS basic CID or MS transport CID can be used in the DL MAP IE for the case of CID based forwarding mode. This is just an implementation issue as to which one to use and doesn't need to be specified.

Group's Notes

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

Comment by:	Gamini Senarath	Membership Status:	Member	Date: ?

Comment # 073   **Document under Review:** **P802.16j/D3**   **Ballot ID:**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 80   **Line**   **Fig/Table#**   **Subclause** 6.3.4

In distributed security and distributed scheduling scenario, the distributed ARQ may be implemented as an optional operation where the ARQ operation of an ARQ enabled connection is performed between an MS and its access RS.

Suggested Remedy

Adopt contribution C802.16-08/068 or the latest revision.

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

Adopt C802.16j-08/082r5

Reason for Group's Decision/Resolution

Group's Notes

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

Comment by:	Shulan Feng	**Membership Status:**	Member	**Date:**	3/14/2008

Comment # 079   **Document under Review:** **P802.16j/D3**   **Ballot ID:**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 81   **Line** 14   **Fig/Table#**   **Subclause** 6.3.5.2.1

The determination on when the access RS grants bandwidth to the SS relies not only the RS-SCH message, but also the processing time of the access RS for the data belonging to the service. For example, when the current link quality between the access RS and the SS is good, the access RS may grant bandwidth to the SS only one frame before the frame when its superordinate station grant bandwidth to it; otherwise, when the current link quality between the RS and the SS is not very good and changes rapidly, the access RS may grant bandwidth to the SS even earlier.

In order to guarantee that the access RS could be able to forward the MAC PDU from the SS to its superordinate station using the bandwidth granted by its superordinate station, it may be defined how the access RS grants bandwidth to the SS based on the RS-SCH message received by the access RS.

Suggested Remedy

[Insert the following text at the end of the paragraph:]
If the access RS receives the RS-SCH message, it may determine the processing time for the MAC PDU belonging to the service and grant bandwidth to its subordinate SS based on the RS-SCH message as well as the processing time for the MAC PDU.

GroupResolution   **Decision of Group:**   **Rejected**

Reason for Group's Decision/Resolution

The proposed text is a scheduling mechanism and doesn't need to be specified.

Group's Notes

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

| Comment by: | Shulan Feng | Membership Status: | Member | Date: | 3/14/2008 |

| Comment # | 080 | Document under Review: | P802.16j/D3 | Ballot ID: |

Comment **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 81   **Line** 35   **Fig/Table#**   **Subclause** 6.3.5.2.2.1

The determination on when the access RS grants bandwidth to the SS relies not only the RS-SCH message, but also the processing time of the access RS for the data belonging to the service. For example, when the current link quality between the access RS and the SS is good, the access RS may grant bandwidth to the SS only one frame before the frame when its superordinate station grant bandwidth to it; otherwise, when the current link quality between the RS and the SS is not very good and changes rapidly, the access RS may grant bandwidth to the SS even earlier.

In order to guarantee that the access RS could be able to forward the MAC PDU from the SS to its superordinate station using the bandwidth granted by its superordinate station, it may be defined when the access RS grants bandwidth to the SS based on the RS-SCH message received by the access RS.

Suggested Remedy

[Insert the following text at the end of the paragraph:]
If the access RS receives the RS-SCH message, it may determine the processing time for the MAC PDU belonging to the service and grant bandwidth to its subordinate SS based on the RS-SCH message as well as the processing time for the MAC PDU.

GroupResolution   **Decision of Group:**   **Rejected**

Reason for Group's Decision/Resolution

The proposed text is a scheduling mechanism and doesn't need to be specified.

Group's Notes

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

2008/08/21

Comment by:	Shulan Feng	**Membership Status:** Member	**Date:** 3/14/2008

Comment # 087   **Document under Review:** P802.16j/D3   **Ballot ID:**

Comment   **Type** Editorial   **Part of Dis** ☒ **Satisfied** ☐   **Page** 84   **Line** 1   **Fig/Table#**   **Subclause** 6.3.6.7.1.1.1

It misses a space between "should" and "send".

Suggested Remedy

Add a space between "should" and "send".
It is changed as follows:

The RS should send a bandwidth request CDMA ranging.

GroupResolution   **Decision of Group:** **Superceded**

by #086

Reason for Group's Decision/Resolution

Group's Notes

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

2008/08/21

Comment by:	Ling Xu	**Membership Status:** Member	**Date:** 3/14/2008

Comment # 088   **Document under Review:** P802.16j/D3   **Ballot ID:**

Comment   **Type** Editorial   **Part of Dis** ☒ **Satisfied** ☐   **Page** 84   **Line** 1   **Fig/Table#**   **Subclause** 6.3.6.7.1.1.1

The term "shouldsend" is found. There should be a sapce between "should " and "send"

Suggested Remedy

change "shouldsend" as "should send"

GroupResolution   **Decision of Group:** **Superceded**

by #086

Reason for Group's Decision/Resolution

Group's Notes

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

2008/08/21

Comment by:	Wei-Peng Chen	**Membership Status:** Member	**Date:** 3/15/2008

Comment # 086   **Document under Review:** P802.16j/D3   **Ballot ID:**

Comment **Type** Editorial   **Part of Dis** ☐ **Satisfied** ☐   **Page** 84   **Line** 1   **Fig/Table#**   **Subclause** 6.3.6.7.1.1.1

insert a space between "should" and "send"

Suggested Remedy

Change as indicated:

"should send"

GroupResolution   **Decision of Group:** Accepted

Reason for Group's Decision/Resolution

Group's Notes

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

2008/08/21

Comment by:	Derek Yu		**Membership Status:**	Nonmember		**Date:** ?

Comment # 100   **Document under Review:** P802.16j/D3   **Ballot ID:**

Comment   **Type** Editorial   **Part of Dis** ☐ **Satisfied** ☐   **Page** 93   **Line** 45   **Fig/Table#**   **Subclause** 6.3.6.7.2.2.2

Need a space to separate the two words "header" and "in"

Suggested Remedy

Do the following change:
"an RS may send this header in other uplink allocations."

GroupResolution   **Decision of Group:** **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

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

2008/08/21

Comment by:	Ling Xu		**Membership Status:**	Member		**Date:** 3/14/2008

Comment # 101   **Document under Review:** P802.16j/D3   **Ballot ID:**

Comment   **Type** Editorial   **Part of Dis** ☒ **Satisfied** ☐   **Page** 93   **Line** 46   **Fig/Table#**   **Subclause** 6.3.6.7.2.2

The term "heade-rin" is found.

Suggested Remedy

Chage "heade-rin" as "heade-r in".

GroupResolution   **Decision of Group:** **Superceded**

by #100

Reason for Group's Decision/Resolution

Group's Notes

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

Comment by:	Shulan Feng	Membership Status: Member	Date: 3/14/2008

Comment # 110   **Document under Review:** **P802.16j/D3**   **Ballot ID:**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 100   **Line** 32   **Fig/Table#**   **Subclause** 6.3.9.9.3

As defined in 802.16j draft3, after registration, transparent RS and non-transparent RS work in a different way. Before registration, one bit indication (bit#0 access zone preamble transmission support) in SBC-REQ/RSP is used to indicate whether RS can support access zone preamble transmission or not. It just means whether RS has an ability to send a preamble or not, but it does not mean that RS has to send a preamble. RS may be able to support both transparent and non-transparent modes.

Suggested Remedy

After ~~registration~~ receiving the RS_Config-CMD message during the configuration stage and having idetified itself as a transparent RS, the transparent RS received the R-MAP message and then the RCD message in the access zone from the access station in order to obtaining R-link parameters (see Figure 94e).

After ~~registration~~ receiving the RS_Config-CMD message during the configuration stage and having idetified itself as a non-transparent RS, the non-transparent RS shall obtain the location of the relay zone containing the R-FCH through 'Relay zone indicator (DIUC = 13)' in the DL-MAP message in the access zone.

GroupResolution   **Decision of Group:** **Superceded**

by #112

Reason for Group's Decision/Resolution

Group's Notes

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

Comment by:	Gamini Senarath	**Membership Status:** Member	**Date:** ?
Comment # 112		**Document under Review:** P802.16j/D3	**Ballot ID:**

Comment **Type** Technical   **Part of Dis** ☒ **Satisfied** ☒   **Page** 100   **Line** 32   **Fig/Table#**   **Subclause** 6.3.9.9.3

The network entry procedure has several inconsistencies in 80216j/D3 after several key changes made in meeting #53. These are addressed in this contribution. The main items are:

(1)In meeting #53 we concluded that all the RS configuration should happen at the configuration stage. Prior to that stage, BS even does not categorize it as a transparent RS (TRS) or Non-Transparent RS (NTRS). Therefore, we agreed that some changes are required to the network entry section. Specially, several TLV items in the REG_REQ/RSP TLV (11.7.8.10) need to be moved to new TLV (11.7.8.11) created only for REG-REQ as per the discussion.

(2) Obtaining R-Link parameters (section 6.3.9.9.3) is not necessary before the neighborhood measurements stage because for neighborhood measurements the location of the R-Amble is located at the end of the DL subframe and that knowledge is not necessary. So, R-FCH information is not necessary and some of the statements such as "After that RS shall decode the R-FCH and R-MAP in the relay zone" are not correct (RS decode messages in the R-ZONE only after/at the configuration stage). The current text says different procedures for TRS and NTRS. These are not necessary and at this stage we even does not know that it is a transparent RS or not since this will be configured at the configuration stage.
•   For this purpose, Section 6.3.9.9.3 can be deleted and some text is included to clarify the neighborhood measurement process in that section, i.e. the RS receives RCD message in the access zone and obtain the parameters for the neighborhood measurement and carries out neighborhood measurements.

(3) In figure 102g, the starting status should not be "RS is operational". RS is operational means that RS starts transmitting its own preamble (defined earlier). RS goes to operational state only after some number of frames indicated by the MR-BS. So we need to change this "RS is operational" to "RS is ready to be operational".

Suggested Remedy
Adopt C802.16j-08_074 or a later version.

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

Adopt C802.16j-08/074r4

Reason for Group's Decision/Resolution

Group's Notes

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

Defer to RCD group

Comment by:	Hongyun Qu	**Membership Status:** Member	**Date:** 3/15/2008

Comment # 113   **Document under Review:** **P802.16j/D3**   **Ballot ID:**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 100   **Line** 33   **Fig/Table#**   **Subclause** 6.3.9.9.3

In the text, sentence as following is found:

The non-transparent RS shall obtain the location of the relay zone containing the R-FCH from the RCD message.

Actually, the location of relay zone is indicated by the DL MAP IE with DIUC=13 in DL-MAP message.

Suggested Remedy

Revise the sentence into:

The non-transparent RS shall obtain the location of the relay zone containing R-FCH from the ~~RCD~~ <u>DL MAP IE with DIUC=13 in DL-MAP</u> message.

GroupResolution   **Decision of Group:** **Rejected**

The location shall be obtained from RCD, the reason we have an indicator in the DIUC=13 MAP IE and STC Zone Switch IE is for recovering when the R-FCH is lost.

Reason for Group's Decision/Resolution

Group's Notes

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

| Comment by: | Hongyun Qu | | Membership Status: | Member | | Date: | 3/15/2008 |

| Comment # | 115 | Document under Review: | P802.16j/D3 | Ballot ID: |

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 102   **Line** 12   **Fig/Table#** Fig   **Subclause** 6.3.9.16

Figure 102a describes the RS neighbor measurement report procedure, which could be triggered by RNG-RSPmessage with "RS network entry optimization" TLV and RCD message with "preamble indexes reserved for mobile RSs" TLV.

Therefore, the name of Figure 102a-"Handling RCD first reception at an RS" is inappropriate.

Suggested Remedy

Revise the name of Figure 102a into:

Figure 102a Handling ~~RCD first reception~~ <u>neighbor measurement report</u> at an RS

GroupResolution   **Decision of Group:**   **Superceded**

by #033

Reason for Group's Decision/Resolution

Group's Notes

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

| Comment by: | Hongyun Qu | | Membership Status: | Member | | Date: | 3/15/2008 |

| Comment # | 120 | | Document under Review: | P802.16j/D3 | | Ballot ID: |

| Comment | Type Technical | Part of Dis ☒ Satisfied ☐ | Page 103 | Line 1 | Fig/Table# Figur | Subclause 6.3.9.17 |

Since Figure 102c-"Handling RS_AccessRS-REQ first reception at an RS" and Figure 102d-"Handling RS_AccessRS-REQ retransmission at an RS" are totally same with each other, do we really needs to keep both?

Suggested Remedy

Detele Figure 102d.

And change the title of 102c into "Handling RS_AccessRS-REQ ~~first reception~~ at an RS".

GroupResolution   **Decision of Group:** **Superceded**

by #033. Figure is deleted.

Reason for Group's Decision/Resolution

Group's Notes

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

Comment by:	Kanchei Loa	Membership Status: Member	Date: 3/14/2008

Comment # 033	Document under Review: P802.16j/D3	Ballot ID:

Comment **Type** Technical **Part of Dis** ☐ **Satisfied** ☐ **Page** 27 **Line** 1 **Fig/Table#** **Subclause** 6.3.2.3.6

Propose to optimize the RS network entry by replacing the RS_Access-REQ message with the RNG-RSP message and skip the access station selection phase if there is no change for the access station. In P802.16j/D3, the "RS access selection request (RS_Access-REQ) message" is used by an MR-BS to indicate the access station the RS is supposed to attach to. Since this message is only used for RS network entry, which occurs infrequently, and could be easily replaced by "ranging response (RNG-RSP) message" that has been used for similar purpose during the MS network entry. We proposes to replace the "RS_Access-REQ message" by the "RNG-RSP message with status abort and Preamble Indexes TLV" to indicate the access station the RS shall attach to. If the current access station is changed, the MR-BS shall start T65 timer and send the RNG-RSP message which contains abort status and Preamble Indexes TLV to the RS to indicate the preamble index of a newly selected access station. (Time reference of T65 is "Wait for RNG-REQ message with RS basic CID after sending RNG-RSP message which contains abort status and Preamble Indexes TLV") The MR-BS and the RS shall perform network re-entry as described in 6.3.9 with the following modifications. Instead of using ranging CID, the RS shall send RNG-REQ message with the assigned RS basic CID to the new access station. The MR-BS may instruct the RS to omit phases by the RS network entry optimization TLV in the RNG-RSP message.

Suggested Remedy

Adopt C802.16j-08/003r3 or later version

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

Adopt C802.16j-08/003r5

Reason for Group's Decision/Resolution

Group's Notes

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

Comment by:	Hongyun Qu	**Membership Status:** Member	**Date:** 3/15/2008

Comment # 134   **Document under Review:** P802.16j/D3   **Ballot ID:**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 109   **Line**   **Fig/Table#** Fig   **Subclause** 6.3.10.3.1.1

Figure 115c and 115d describe some ranging operation at the superordinate RS.

Suggested Remedy

Change the title of Figure 115c and 115d into:

Figure 115c-Handling initial/handover ranging at the superordinate station

Figure 115d-Handling periodic ranging at the superordinate station

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

Change the title of Figure 115c and 115d into:

Figure 115c-Handling initial/handover ranging at the access RS
Figure 115d-Handling periodic ranging at the access RS

Reason for Group's Decision/Resolution

Group's Notes

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

Comment by:	Cancan Huang	**Membership Status:** Member	**Date:** 3/14/2008

Comment # 180   **Document under Review:** **P802.16j/D3**   **Ballot ID:**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 138 **Line** 23   **Fig/Table#**   **Subclause** 6.3.17.5

The data transmission direction is DL while this paragraph is about UL HARQ.

"If a packet fails at any of the intermediate RSs, the RS transmits code C1 defined in the Table 463a as a NAK to the superordinate station and transmits to the subordinate station the pilot subcarriers and may trans-mit null data subcarriers. It shall not re-encode the erroneous packet to transmit to the subordinate station."

Suggested Remedy

Revise the mentioned text as follows.

"If a packet fails at any of the intermediate RSs, the RS transmits code C1 defined in the Table 463a as a NAK to the superordinate station and transmits to the subordinate station the pilot subcarriers and may trans-mit null data subcarriers to the superodinate station. It shall not re-encode the erroneous packet to transmit to the ~~subordinate~~ superordinate station."

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

Modify the text in 6.3.17.5 as indicated:

If a packet fails at any of the intermediate RSs, the RS transmits the code C1 ~~defined in the Table 463a as a NAK to the superordinate station~~ and ~~transmits to the subordinate station the pilot subcarriers and may transmit~~ null data subcarriers with pilots to the superordinate station. It shall not re-encode the erroneous packet to transmit to the ~~subordinate~~ superordinate station.

Reason for Group's Decision/Resolution

Group's Notes

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

| **Comment by:** | | Jeff Qian | | **Membership Status:** | Member | | **Date:** 3/14/2008 |

Comment # 209   **Document under Review:** P802.16j/D3   **Ballot ID:**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 151   **Line** 7   **Fig/Table#**   **Subclause** 6.3.22.4.2

In MRS handover with preamble change, "The serving MR-BS exchanges handover decision and initiation stage signaling (6.3.22.2.2) with each MS before the MRS conducts handover and preamble change." However, what the MS do after MRS conducts handover and preamble change is not defined. It seems that a normal network entry MS will perform.

However, it is no meaning that MS scans the MRS when MRS does not performing a successful handover.

Suggested Remedy

Revise the mentioned text as follows.

The serving MR-BS exchanges handover decision and initiation stage signaling (6.3.22.2.2) with each MS before the MRS conducts handover and preamble change. The MOB_BSHO-REQ message is sent to the subordinate MSs with the "HO operation mode" set to 1. The association with level 1 or level 2 defined in 6.3.22.1.3 may be required for MS attached to the MRS. When the association procedure is adopted, the"rendezvous time" shall contain the time MRS performs a successful handover.

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

Modify the 6th para in 6.3.22.4.2 as indicated:

The serving MR-BS exchanges handover decision and initiation stage signaling (6.3.22.2.2) with each MS before the MRS conducts handover and preamble change. The MOB_BSHO-REQ message is sent to the subordinate MSs with the "HO operation mode" set to 1. The operation of MS receiving the MOB_BSHO-REQ follows the procedures in 6.3.22.2.

Reason for Group's Decision/Resolution

Group's Notes

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

Comment by:	Hongyun Qu	Membership Status:	Member	Date:	3/15/2008

Comment # 210	Document under Review:	P802.16j/D3	Ballot ID:

Comment Type Technical   Part of Dis ☒ Satisfied ☐   Page 153 Line 11   Fig/Table#   Subclause 6.3.23.3

For MBS service, MR-BS may not be the entity that schedules the MBS data, so the target transmission time may not be decided by MR-BS.

In addition, for centralized scheduling, allocation subheader is used to instruct RS when to transmit the data over the relay link and access link. But for distributed scheduling, the synchornization of MBS data trasmission between MR-BS and RSs is a problem. So allocation subheader must be also used for the synchronization when operating in distributed scheduling.

Suggested Remedy

6.3.23.3 MBS in an MR network

[To modify paragraph 3 in line 11 as follows:]

When the capability of MBS data synchronization with target transmission time is selected, ~~MR-BS should determine~~ target transmission frame over access link should be determined for each MBS data burst based on maximum cumulative delay, DM and other MR-BS information. This capability can only be supported in tunnel packet mode. MR-BS shall include frame number of the target transmission frame with each relay MBS MAC PDU using Allocation subheader. The RS shall remove relay MAC header and subheaders and transmit the MBS data to MS over access link at target transmission frame.

6.3.2.2.8.2 Allocation subheader

[To modify the whole paragraph as follows:]

The MR-BS may include the allocation subheader in a relay MAC PDU. When operating in centralized scheduling mode, the MR-BS uses allocation subheader to instruct an RS ~~operating in centralized scheduling mode~~ when to relay the MAC PDU. When included, the MR-BS shall use one allocation subheader per RS for the relay link, and one or more allocation subheader for the access link. The allocation subheaders corresponding to the relay link shall precede the ones for access link. If there are multiple intermediate RSs, the allocation subheader associated with RS that is nearest to the MR-BS shall be included first. The access RS shall use the continuation bit in the allocation subheader to detect whether there is a subsequent allocation subheader.

When operating in distributed scheduling, the MR-BS may uses the allocation subheader to instruct target transmission frame over access link for a MBS MAC PDU. When included, MR-BS shall use only one allocation subheader per MBS MAC PDU. The access RS shall transmit the MBS MAC PDU according the target transmssion frame specified in allocation subheader.

The allocation subheader format is specified in Table 37b. When used in distributed scheduling mode for MBS MAC PDU, only target transmission frame field shall be used.

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

Adopt C802.16j-08/086r1

Reason for Group's Decision/Resolution

Group's Notes

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

2008/08/21

Comment by:	Kim Olszewski	**Membership Status:** Member	**Date:** 3/14/2008

Comment # 234   **Document under Review:** **P802.16j/D3**   **Ballot ID:**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 181   **Line** 5   **Fig/Table#**   **Subclause** 6.8.4.4.7

The frame structure of out of band is found as follows.
"For out-of-band MR systems, the frame structure specified in subclause 8.4.4.2 shall be used on each link."
However, no clear definition is found . For instance, out of band should be non-transparent (distributed scheduling). There is no such definition in 8.4.4.2.

In addition, since RS is generally located at the edge of the cell, the inter-cell interference caused by the introduction of new frequency RS shall also be carefully considered.

Suggested Remedy

Further discussion on the out of band is needed.

GroupResolution   **Decision of Group:**   **Superceded**

by #011

Reason for Group's Decision/Resolution

Group's Notes

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

<u>Comment by:</u>	Mike Hart	<u>Membership Status:</u> Member	<u>Date:</u> 3/16/2008

<u>Comment #</u> 011	<u>Document under Review:</u> **P802.16j/D3**	<u>Ballot ID:</u>

<u>Comment</u>   <u>Type</u> Technical   <u>Part of Dis</u> ☒ <u>Satisfied</u> ☒   <u>Page</u> 5   <u>Line</u> 35   <u>Fig/Table#</u>   <u>Subclause</u> 3.12416845

Dispparove comment #2525 in 802.16-08/002 mentions that out-of-band is not properly catered for in P802.16j/D2. The resolution to this comment was simply to make a minor change to the definition for in-band and out-of-band and this did not deal with the issue raised. Consequently, the current draft still mentions out-of-band relay, but does not define it in a way that enables it to profit from all of the advanced features introduced in .16j for in-band relays.

As explained in C802.16j-08/060 out-of-band relaying is potentially an attractive approach for an operator that is deploying an N>1 network, as opposed to in-band relays, as the existing BSs that are using all subchannels on a sector will not have to segment their carriers in order to enable relays to attach and prevent significant increases in interference.

<u>Suggested Remedy</u>

Adopt proposed text in the latest revision of C802.16j-08/079 into D3.

<u>GroupResolution</u>   <u>Decision of Group:</u>   **Accepted-Modified**

Adopt proposed text in the latest revision of C802.16j-08/079r1

<u>Reason for Group's Decision/Resolution</u>

<u>Group's Notes</u>

<u>Editor's Notes</u>   **<u>Editor's Actions</u>**

Comment by:	Hyunjeong Kang	**Membership Status:**	Member	**Date:**	3/16/2008

Comment # 252   **Document under Review:** **P802.16j/D3**   **Ballot ID:**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 192   **Line** 9   **Fig/Table#**   **Subclause** 8.4.5.3

In the last meeting (#53), comments #2556 was accepted-modified. MS does not process the signal transmitted in the downlink relay zone indicated by DL_MAP IE with DIUC=13 or STC_DL_Zone_IE with dedicated pilots bit set to 1.
As same as downlink case, MS shall not process the signal in the uplink relay zone. For this purpose, UIUC= 13 is defined in the P802.16j/D3, but not defined UL_zone_IE. If BS uses UL_zone_IE and does not allocate data for MS, MS do not process for sending UL data after UL_zone_IE.

During initial entry, the RS can obtain relay zone information from DL/UL subframe configuration TLV in the RCD message (11.24.6) during registration process. Therefore, DIUC/UIUC = 13 in the DL/UL MAP IE, relay zone indicator is redundant to indicate relay zone for RS.

Suggested Remedy

Discuss and adopt contribution C802.16j-08_083

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

 C802.16j-08_083r2

Reason for Group's Decision/Resolution

Group's Notes

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

Comment by:	Dale Branlund	**Membership Status:**	Member	**Date:**	3/14/2008

Comment # 258   **Document under Review:** **P802.16j/D3**   **Ballot ID:**

Comment   **Type** Technical   **Part of Dis** ☒ **Satisfied** ☐   **Page** 203   **Line** 20   **Fig/Table#**   **Subclause** 8.4.4.7.2.3

Section 8.4.4.7.2.3 of P802.16j/D3 describes the AAS Relay Zone and describes unicast maps.Details should be provided for these private MAPs and associated CQICH signaling.

Suggested Remedy

Accept the contribution "C80216j-08_071"(re submitted the contribution C80216j-08/-048r2).

GroupResolution   **Decision of Group:**   **Rejected**

TG made the vote for resolution of comment to accept as modified by adopting C802.16j-08/071r3 (For: 11, Against: 18)

Reason for Group's Decision/Resolution

Incomplete ranging procedure, new TLV required. New transmit power control algorithm needs to be described. Physical layer frame structure needs to be described.

Group's Notes

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

| Comment by: | Dale   Branlund | Membership Status: | Member | Date: | 3/14/2008 |

| Comment # **259** | Document under Review: **P802.16j/D3** | Ballot ID: |

| Comment | Type Technical | Part of Dis ☒ Satisfied ☐ | Page 203 | Line 20 | Fig/Table# | Subclause 8.4.4.7.2.3 |

Section 8.4.4.7.2.3 of P802.16j/D3 describes the AAS Relay Zone access channel and messaging. Details of the access messages are required for managing channel descriptor request, initial bandwidth request/grant, codeword assignment and range/frequency/power adjustment.

Suggested Remedy

Accept the contribution "C802.16j-08_072" (resubmitted the contribution C802.16j-08_047r2)

GroupResolution   **Decision of Group:**   **Rejected**

TG made the vote for resolution of comment to accept as modified by adopting C802.16j-08/072r4. (For: 11, Against: 15)

Reason for Group's Decision/Resolution

Insufficient description of new ranging algorithm and associated TLVs. No description of power control mode and impromper messaging for new power control mode.

Group's Notes

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

Comment by:	Tzu-Ming Lin	**Membership Status:**	Member	**Date:**	3/15/2008

Comment # 285　　　　**Document under Review:** IEEE P802.16j/D3　　　　**Ballot ID:**

Comment　**Type** Editorial　　**Part of Dis** ☒ **Satisfied** ☐　　**Page** 240　**Line** 19　　**Fig/Table#**　　**Subclause** 11.7.8.10

Tunnel Burst Mode was removed.

Suggested Remedy

~~Bit #2 Tunnel Burst mode support~~

GroupResolution　　　　　**Decision of Group:** Superceded

by #284

Reason for Group's Decision/Resolution

Group's Notes

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

Comment by:	Ling Xu	**Membership Status:**	Member	**Date:**	3/14/2008

Comment # 284   **Document under Review:** P802.16j/D3   **Ballot ID:**

Comment   **Type** Editorial   **Part of Dis** ☒ **Satisfied** ☐   **Page** 240   **Line** 10   **Fig/Table#**   **Subclause** 11.7.8.10

In current text, the MR-BS and RS MAC feature support includes tunnel burst mode, which is already delted in the last meeting.

Suggested Remedy

change the text as follows:

Bit #0: NBR-ADV generating support
Bit #1: Tunnel packet mode support
~~Bit #2: Tunnel burst mode support~~
Bit #2: Superordinate RS of an RS group support
Bit #3: RS mobility support
Bit #4: Subordinate RS network entry support
Bit #5: Location support
Bit #6: Multicast management support
Bit #7: DL Flow control
Bit #8: RS centralized security support
Bit #9: RS distributed security support
Bit #10: Embedded path management support
Bit #11: Explicit path management support
Bit #12: Burst-based forwarding support
Bit #13: Local CID allocation support
Bit #14: MOB_SLP-RSP support
Bit #15: MOB_SCN-RSP support
~~Bit #16: Superordinate RS of an RS group support~~
Bit #~~17~~ 16-#23: Reserved

GroupResolution   **Decision of Group:**   **Accepted**

Reason for Group's Decision/Resolution

Group's Notes

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