Document under Review: P802.16/D4   **Ballot Number: 0000166**   **Comment Date**

Comment # 1   **Comment submitted by:**   Jose   Costa

Comment Type Technical	**Starting Page #**	**Starting Line #**	**Section**

Abstain because I believe that this draft standard does not meet the needs of the industry.

Suggested Remedy

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

No suggested changes.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **2**   **Comment submitted by:** Jose   Costa

Comment   **Type** Editorial   **Starting Page #**   **Starting Line #**   **Section**

There is an inconsistency on how the terms "physical layer(s)" and "physical layer specification" and "physical layer implementation" are used in the draft, for example:p.1, lines 35-37: "This standard includes a particular physical layer implementation..."p.27, line 29, "This standard specifies... physical layers (PHY)..." p.27, line 31-32: "... physical layers, and the standard is structured to contain a variety of them..."p.29, line 62: "The various physical layers supported are described in detail in Clause 8" p.242, line 41: "The following physical layer specification..."

Suggested Remedy

Review the text for consistency. There is only ONE physical layer. There may be multiple physical layer specifications. Some specifications are in the standard and others are not. The ones that are not in the standard may either be standardized elsewhere or be proprietary. Each standard specification can have multiple implementations that conform to that standard specification.

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

Reason for Recommendation

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

Page 1, Line 36, change the word "implementation" to "specification"
Page 29, Line 62, change the word "described" to "specified"

Change "physical layers" to "physical layer specifications" globally.

Reason for Group's Decision/Resolution

The language that mentions multiple PHYs is to allow TG3/4 to add their PHY more easily.

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **3**   **Comment submitted by:** Roger   Marks

Comment **Type** Editorial   **Starting Page #**   **Starting Line #**   **Section**

Make editorial changes as recommended by IEEE staff Project Editor:

MEMO

TO: Balloting Center
FROM: Jennifer Longman
DATE: 21 August 2001
RE: Editorial Coordination of IEEE P802.16/ D4

Upon review of IEEE P802.16/ D4, I have the following comments:

1. For consistency in all IEEE 802 Standards, the name of document should read as follows:

Draft Standard for Local and metropolitan area networks---Part 16:
Standard Air Interface for Fixed Broadband Wireless Access Systems

2. Review the use of shall/should/may/can/will/must throughout the document to be sure they are used in accordance with IEEE's style.

3. Most of the information in subclause 1.3 is a repeat of information that is standard boilerplate in all IEEE 802 standards. Please review the front matter of other IEEE 802 standards in order to determine whether this information should be removed. Is it necessary for the implementation of the standard? If not, it should not be included in the normative portion of the standard.

4. Would you like users of this standard to refer to the most recent version of the standards in Clause 2? If yes, the statement preceding the lists of references must read, "This standard shall be used in conjunction with the following publications. When the following standards are superseded by an approved revision, the revision shall apply."

5. The bracketed information before each reference in Clause 2 must be removed. This does not conform to IEEE's style.

6. The terms in Clause 3 (Definitions) must all be lowercased. Also, all acronyms within definitions must be spelled out.

7. The following statement should precede the list of definitions:

"For the purposes of this standard, the following terms and definitions apply. IEEE 100, The Authoritative Dictionary of IEEE Standards Terms should be referenced for terms not defined in this clause."

8. The definitions of the acronyms in Clause 4 must all be lowercased. Also, italics must be removed. It does not comply with IEEE's style.

9. Color in Figure 125 needs to be removed.

10. The Bibliography must be labeled as Annex A and labeled as "Informative."

11. The Working Group will need to provide clean reproducible-quality figures in electronic format (preferably TIFF or EPS format.) If figures were derived or obtained from sources other than the Working Group itself, please obtain and supply permission from the appropriate sources.

Please note that items 2, 3, 4, 10, and 11 will require a recirculation and must be resolved before the draft is submitted to RevCom. If you have any questions or concerns, do not hesitate to contact me.

Suggested Remedy

Make changes as indicated above.

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

1.Changed name to: "IEEE Draft Standard for Local and metropolitan area networks---Part 16: Air Interface for Fixed Broadband Wireless Access Systems"

2. Made many changes and clarifications to "shall/should/may/can/will/must throughout the document".

3.Deleted subclause 1.3; it will be introduced later into the informative introduction.

4. Changed start of Clause 2 to "This standard shall be used in conjunction with the following publications. When any is superseded by an approved revision, the revision shall apply."

5. Edited references in Clause 2 and Bibliography to conform to IEEE style.

6. Set defined terms in Clause 3 into lowercase, except where used as proper nouns in the text.

7. At start of Clause 3, added "For the purposes of this standard, the following terms and definitions apply. IEEE Standard 100 ("The Authoritative Dictionary of IEEE Standards Terms") should be referenced for terms not defined in this clause."

8. Set acronyms in Clause 34into lowercase, except where used as proper nouns in the text.

Editor's Questions and Concerns

Editor's Action Items
lower-case the Table and Figure titles (if IEEEstyle requires)
Correct spelling and double-spaces
Take out colored text
Add participant info.
Look for "which"

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **4**   **Comment submitted by:**   Roger   Marks

Comment   **Type** Editorial   **Starting Page #**   **Starting Line #**   **Section**

Replace copyright statement in accordance with new IEEE-SA policy:

Delivered-To: rbmarks@mail-dnvr.uswest.net
Date: Wed, 5 Sep 2001 12:03:40 -0400
From: d.messina@ieee.org

A new draft copyright statement has been written by the Manager, Standards Licensing and Contracts. This copyright statement replaces the existing copyright statement for drafts and should be used on all draft standards immediately. We have updated the on-line style manual to reflect this change and we are also in the process of updating the Word Document template on the IEEE-SA website. IEEE Project Editors will make sure (through the editorial review process) that all drafts include the new copyright statement. Editors will also inform Working Groups of the change during field editing assignments. The new copyright statement is as follows:

Suggested Remedy
Replace as indicated above.

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **5**   **Comment submitted by:** Chet   Shirali

Comment   Type Technical   **Starting Page #**   **Starting Line #**   **Section**

Proposals for the changes of message formats that support the above comments are included in document number 802.16-3c-01/37 dated March 7, 2001

Suggested Remedy

Faster to market with matured standard.

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

Reason for Group's Decision/Resolution

It is not clear what the comment means by "the above comments".

Changes proposed in the cited document were debated and rejected during draft development and Working Group WG Letter Ballot.

For wireless access systems, the suggested message formats would cause a significant capacity reduction.

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **6**   **Comment submitted by:** James Scott   Marin

Comment   Type Technical   **Starting Page #** 1   **Starting Line #** 1   **Section**

Congratulations to the 802.16 team. Job well done!

Suggested Remedy

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **7**   **Comment submitted by:**   Jenshan   Lin

Comment   Type Technical   **Starting Page #** 27   **Starting Line #** 58   **Section** 1.2.1

Frequency bands are not described clearly.Somewhat confusing. It's not clear whether 10-66GHz is licensed or unlicensed bands. 1.2.2 states 2-11GHz licensed bands. There is an overlap at 10-11GHz.1.2.3 does not state frequency range.

Suggested Remedy

Define clearly the frequency bands without ambiguities.

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

Reason for Recommendation

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

Page 27, Line 55, change the title to read "10-66 GHz Licensed Bands"
Page 27, Line 58, change the word "but" to "and"
Page 27, Line 59, change "minimized." to "minimized, due to the short wavelength."
Page 28, Line 6, change "Unlicensed bands" to "Unlicensed bands (primarily 5-6 GHz)"

Reason for Group's Decision/Resolution

The overlap between 10-66 GHz and 2-11 GHz is mandated by the PARs governing the current P802.16 draft and the two amendment projects (802.16a and 802.16b). In any case, spectrum availability and operator requirements may favor the use either one or the other of the two PHY specifications in the overlapping frequency band.

Group's Notes

Group's Action Items

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

Modified third change; sentence reads "The 10-66 GHz bands provide a physical environment where, due to the short wavelength, line of sight (LOS) is required and multipath is negligible."

Editor's Questions and Concerns

Editor's Action Items

Document under Review: P802.16/D4   **Ballot Number:** 0000166   Comment Date

Comment # 8   **Comment submitted by:** Stanley   Wang   2001/09/07

Comment   **Type** Technical, Non-binding   **Starting Page #** 30   **Starting Line #** 55   **Section** 2

It is recommended that DES and two-key Triple DES be deleted from the IEEE 802.16 specification because both of those have been compromised. Additionally, NIST is very near to completion of the AES FIPS and AES Modes of Operation which will replace DES for all sensitive government data. Lastly, if these changes are not made, questions will be raised in the public arena as were recently seen with 802.11b as 802.16 chose to use security protocols that are known to be deficient.

The final round of comments are being reviewed for the AES FIPS and the AES Modes of operation are also near completion. Based on these developments, it is strongly recommended that IEEE 802.16 adopt these as the data-path encryption standard and as the TEK encryption scheme.

The basic standard does not change much as AES supports the same (and more) DES modes of operation, meaning that CBC mode still exists. Also, the 64-bit DES and all associated keys will now use the 128 bit key sizes which only causes minimal impacts to the specification (note that AES will use a 128 bit key and 128 block size in IEEE 802.16). This also eliminates the two ways in which DES was being used (a. for the data path with CBC and ECB modes and the two-key triple DES for the TEKs). All of these will now be done by AES which simplifies the specification, and moreover the implementation, as only one encryption standard instead of two have to be adhered to (this does not impact all of the RSA crypto schemes at all). Note that the Residual Termination Block processing in the current spec should have also been using Ciphertext Stealing and these changes have also been added to the AES implementation below (see Schneier for details on this rationale).

The AES FIPS are complete and available for download from the following URLs (FIPS numbers TBD until final comments approved):

 FIPS AES: http://csrc.nist.gov/encryption/aes/
 FIPS Recommended Modes of Operation: http://csrc.nist.gov/encryption/modes/

Suggested Remedy

Page 30, Lines 55-56, Delete reference to FIPS-46-2 (FIPS DES)
Page 30, Lines 62-63, Delete reference to FIPS-81(FIPS DES Modes of Operation)
Page 31, Line 4, Change "[FIPS-186]" to "[FIPS-186-2]".
Page 31, Line 7, Add [FIPS-xxx] Federal Information Processing Standards Publication (FIPS PUB) xxx, "Advanced Encryption Standard."
(Note: FIPS number is to be assigned)
Page 31, Line 7, Add [FIPS-yyy] Federal Information Processing Standards Publication (FIPS PUB) yyy, "Recommendations for Block Cipher Modes of Operation." (Note FIPS number is to be assigned)
Page 32, Line 4, add the following reference: "[RFC-2630] IETF RFC-2630, "Cryptographic Message Syntax," R. Housley, June 1999."
Page 35, Line 58, Delete Line 58 Abbreviation "3-DES"
Page 35, Line 58, Add "AES Advanced Encryption Standard"
Page 36, Line 30, Delete abbreviation "DES"
Page 36, Line 42, Change the line to read "ECB Electronic CodeBook" (note: CodeBook in one word)

Page 199, Line 53, change "DES key and CBC" to "AES key and CBC"
Page 201, Replace Lines 45-47 with "The 128-bit traffic encryption key (TEK) in the Key Reply is AES encrypted, using a key encryption key (KEK) derived from the Authorization Key."
Page 212, Line 11, change "triple DES encrypted" to "AES encrypted"
Page 222, Replace the entire section 7.5 with the proposed section 7.5 included in "Section75.fm" and fix the corss-references.
Page 312, Line 11, Change the "Length" column to "16".
Page 312, Line 59, Change the "Length" column to "20". (the bytes is octets and is understood)
Page 313, Line 27, Change the "Length" column to "49".
Page 313, Line 55, Change the "Length" column to "16".
Page 316, Line 25, Change the "Description" column to "CBC Mode, 128-bit AES".
Page 316, Line 48, Change the "Description" column to "CBC Mode, 128-bit AES".
Page 317, Line 10, Change the "Description" column to "no data encryption, no data authentication & CBC AES, 128"
Page 317, Line 11, Change the "Description" column to "CBC Mode 128-bit AES data encryption, no data authentication & CBC Mode 128-bit AES TEK encryption, 128"

Proposed   Resolution   Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group   Decision of Group: Rejected

Reason for Group's Decision/Resolution

Current specification already provides hooks for the inclusion of additional encryption standards. For now, 56-bit DES is sufficient. Need additional time to investigate additional possible modes under AES, such as counter mode. The amendments 802.16a & 802.16b provide the opportunity to include AES in the near future.

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **9**   **Comment submitted by:** Stanley   Wang   2001/09/07

Comment   **Type** Editorial   **Starting Page #** 33   **Starting Line #** 55   **Section** 3

The word "byte" is not uniformly defined. For example, CDC-Cyber uses 9 bits as one byte. We should use the word "octet" instead.

Suggested   Remedy

Change "byte" to "octet" and "bytes" to "octets" and make the change for the entire document.

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

Reason for Recommendation

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

Ignore the suggestion of the comment and do the following change:

Page 32, Line 32, add the following definition:
"Byte: For the purpose of this specification, one byte is defined to be 8 bits."

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Changed to: "Throughout this standard, one byte is defined to be 8 bits."

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   Comment Date

Comment # **10**   **Comment submitted by:** Stanley   Wang   2001/09/07

Comment   **Type** Editorial   **Starting Page #** 35   **Starting Line #** 57   **Section** 4

Typo

Suggested Remedy
Change the line to read: "3-DES Triple Data Encrpytion Standard"

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes   **Editor's Actions**   k) done
Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **11**   **Comment submitted by:** Stanley   Wang   2001/09/07

Comment   Type Editorial   **Starting Page #** 36   **Starting Line #** 27   **Section** 4

Typo

Suggested Remedy

Change the line to read "Demand Assigned Multiple Access"

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **12**   **Comment submitted by:** Roger   Marks

Comment   **Type** Editorial   **Starting Page #** 38   **Starting Line #** 54   **Section** 5

"MAC-CPS" should be "MAC CPS". "MAC-CPS" is not in the abbreviation list.

Suggested Remedy

change "MAC-CPS" to "MAC CPS" globally

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes   **Editor's Actions**   k) done
Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # 13   **Comment submitted by:**   Peter   Ecclesine

Comment   Type Technical   **Starting Page #** 51   **Starting Line #** 1   **Section**   5.2.5.3

Management Plane undefined here and 5.2.7.3

Suggested Remedy

Delete Management Plane clause(s) or write them.

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

Page 42, delete lines 52-56.
Page 51, delete lines 1-4.
Page 52, delete lines 29-33.
Page 197, delete 50-65.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   Comment Date

Comment # **14**   **Comment submitted by:** Chet   Shirali

Comment   Type Technical   **Starting Page #** 65   **Starting Line #** 14   **Section** 6.2.2

Change the generic header format to DOCSIS 1.1 header.Extended header is required (as defined in DOCSIS).

Change HCS to 16 bits.

Suggested Remedy

As per IEEE 802.16 decisions, this draft is used for both MMDS and LMDS applications. Most of the MMDS target market and some of the LMDS target markets are residential/SOHO, where low cost is an important feature and the applications are IP centric. Low cost will be achieved by using existing technology as DOCSIS and the header should be based on IP environment, not on connection oriented environment that is not typical to residential/SOHO appplications. Time to market will be achieved by making use of a matured standard with existing products as DOCSIS (including DOCSIS based wireless products). It is important to support applications such as VoIP, QoS, link layer encryption. Using IP centric protocol is critical for this and using DOCSIS based protocol will enable the use of existing products. Without an extended header, it is almost impossible to make future improvements to the standard with backward compatibility.<CR>CRC of 8 bits is not enough, especially for non line of sight applications.<CR>The use ATM centric header is very non-efficient, due to the use of small cells. To reduce the relative overhead, 802.16 tried to minimize the header. The 802.16 MAC is designed for connection oriented with non-optimal adaptations for connectionless. One example is the mandated usage of many different CIDs for different control tasks that cause large overhead in the allocations to the different connections. The sub 11 GHz market is mainly IP oriented and as such the ATM related constraints that limit the efficiency and technical level of the standard, do not apply.

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

Reason for Group's Decision/Resolution

This comment duplicates a comment that was debated and rejected during draft development and Working Group WG Letter Ballot.

For wireless access systems, the suggested header format would cause a significant capacity reduction. The 802.16 system was designed to efficiently carry connectionless as well as connection-oriented protocols and fits seamlessly into a routed IP network. The MAC protocol is well suited to residential and SOHO applications. It is to be noted that the proposed alternative is also connection-oriented.

Similar suggestions were extensively debated and rejected during development of the draft.

Group's Notes

Group's Action Items

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: P802.16/D4   **Ballot Number: 0000166**   **Comment Date**

Comment # 15   **Comment submitted by:** Stanley   Wang   2001/09/07

Comment   **Type** Editorial   **Starting Page #** 71   **Starting Line #** 39   **Section** 6.2.2.2.2
Typo.

Suggested Remedy
Change "service polling type" to "service scheduling type"

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

Reason for Recommendation

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

Change "service polling type" to "scheduling service type" instead.

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **16**   **Comment submitted by:** Chet   Shirali

Comment   **Type** Technical   **Starting Page #** 74   **Starting Line #** 44   **Section** 6.2.2.3.1-2,

DCD and UCD messages should be adapted to support OFDM PHY and adaptive modulation. It is required to configure the OFDM parameters in these messages. The messages should enable the definition of multiple profiles for each usage code (DIUC/ UIUC) .

Suggested Remedy

These messages are designed for single carrier. PHY layer for the 802.16.3 (this draft is for both 802.16.1 and 802.16.3) has not been selected yet but OFDM and adaptive modulation are required by the customers to support reliable and efficient operation in the Non Line of Sight (NLOS) environment.

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

The comment is irrelevant since there is no OFDM PHY in this document.

The 802.16 Working Group is working on amendments that include OFDM. This comment may be appropriate to those amendments.

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   Comment Date

Comment # **17**   **Comment submitted by:** Roger   Marks   2001/07/31

Comment   **Type** Editorial   **Starting Page #** 75   **Starting Line #** 9   **Section** 6.2.2.3.1

{originated by Antonis Karvelas }
There is no reason to spend bandwidth which is a valuable resource.

Suggested Remedy

Insert the following note :
"When there is one-to-one corresponding between the downlink and uplink channel (in other words when there are not multiple uplink
channels for one downlink channel but only one) then the Uplink Channel ID field is not needed".

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution
We don't want this message to become PHY specific.

Group's Notes
Group's Action Items

Editor's Notes   **Editor's Actions**   l) none needed
Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **18**   **Comment submitted by:** Roger   Marks   **2001/07/31**

Comment   **Type** Editorial   **Starting Page #** 76   **Starting Line #** 61   **Section** 6.2.2.3.2

{originated by Antonis Karvelas }
To help the reader.

Suggested Remedy

Insert a note that describes the reason of existence of the Downlink Channel ID field.

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

Reason for Recommendation

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

Page 76, Line 64, add to the end of the paragraph the following

"This acts as a local identifier for transations such as ranging."

Also, on page 75 line 52, page 76 line 42, page 78 line 23, and page 79 line 26, change "i < n" to "i <= n"

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **19**   **Comment submitted by:** Chet   Shirali

Comment   **Type** Technical   **Starting Page #** 77   **Starting Line #** 16   **Section** 6.2.2.3.3-4

DL-MAP and UL-MAP should be adapted to support allocation on both frequency and time domain for OFDM and for multiple antennas for MIMO.

Suggested Remedy

OFDM and MIMO are required by the service providers to support reliable and efficient operation in NLOS environment. The current allocation scheme refers to a single carrier scheme where the allocations refer just to the time domain.<CR><CR>This comment was rejected by the working group of 802.16 on the ground that the burst descriptors were moved to PHY specific sections.<CR><CR>The 802.16 Groupís reasing does not refer to Vyyoís comment. We talked about MAP; they talk about DCD and UCD. While there may be a reason to wait for the DCD and UCD definition, based on the PHY, the MAPs are integral and basic components of the MAC that must be defined. Insufficient and not flexible allocation scheme would cause very low efficiency of the channel usage. The current definition of UL-MAP that is the part of the 802.16 MAC, applies to a single dimension that is typical to a single carrier PHY and is not flexible enough.

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

The comment is irrelevant since there is no OFDM PHY in this document.

The 802.16 Working Group is working on amendments that include OFDM. This comment may be appropriate to those amendments.

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **20**   **Comment submitted by:** Roger   Marks   2001/07/31

Comment   **Type** Editorial   **Starting Page #** 77   **Starting Line #** 35   **Section** 6.2.2.3.3

{originated by Antonis Karvelas }
To help the reader.

Suggested Remedy

Insert a note that describes the reason of existence of the Base Station ID field.

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

Reason for Recommendation

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

Page 77, line 37, add to the end of the paragraph the following: "This is a network management hook that can be combined with the Downlink Channel ID of the DCD message for handling edge-of-sector and edge-of-cell situations."

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **21**   **Comment submitted by:** Stanley   Wang   2001/09/07

Comment   **Type** Editorial   **Starting Page #** 77   **Starting Line #** 37   **Section** 6.2.2.3.3

Currently, there is no way to ensure the uniqueness of an operator ID.

Suggested Remedy

Delete the word "unique"

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   Comment Date

Comment # 22   **Comment submitted by:** Roger   Marks   2001/07/31

Comment   Type Editorial   **Starting Page #** 79   **Starting Line #** 40   **Section** 6.2.2.3.4

{originated by Antonis Karvelas }
There is no reason to spend bandwidth which is a valuable resource.

Suggested Remedy
Insert the following note :
"When there is one-to-one corresponding between the downlink and uplink channel (in other words when there are not multiple uplink channels for one downlink channel but only one) then the Uplink Channel ID field is not needed".

Proposed Resolution   Recommendation: Recommendation by

Reason for Recommendation

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

Reason for Group's Decision/Resolution
We don't want this message to become PHY specific.

Group's Notes
Group's Action Items

Editor's Notes   Editor's Actions l) none needed
Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   Comment Date

Comment # **23**   **Comment submitted by:** Roger   Marks   2001/07/31

Comment   **Type** Editorial   **Starting Page #** 81   **Starting Line #** 47   **Section** 6.2.2.3.6

{originated by Antonis Karvelas }
There is no reason to spend bandwidth which is a valuable resource.

Suggested Remedy

Insert the following note :
"When there is one-to-one corresponding between the downlink and uplink channel (in other words when there are not multiple uplink channels for one downlink channel but only one) then the Uplink Channel ID field is not needed".

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution
We don't want this message to become PHY specific.

Group's Notes
Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   Comment Date

Comment # **24**   **Comment submitted by:** Roger   Marks

Comment   Type Editorial   **Starting Page #** 82   **Starting Line #** 45   **Section** 6.2.2.3.7

(originated by Ken Stanwood)
HMAC Digest is a TLV. So, for consistency with other sections, it should be in the TLV section.

Suggested Remedy

page 82, move line 45 to line 49 and precede it with a line stating "The Registration Request shall contain the following TLV."

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

Do the above changes and also on page 82 line 45 and page 83 line 38, change "Digest" to "Tuple"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: P802.16/D4   **Ballot Number:** 0000166   Comment Date

Comment # 25   **Comment submitted by:** Roger   Marks

Comment   Type Technical, Non-binding   **Starting Page #** 82   **Starting Line #** 53   **Section** 6.2.2.3.7

(originated by Ken Stanwood)
The BS needs to know the UL CID Support SS Capability Encoding and there is no practical default.

Suggested Remedy

page 82, line 53 – the UL CID Support SS Capability Encoding must be listed separately from the others and should be mandatory. (move it to line 49 and precede it with a line stating "The Registration Request shall contain the following TLV.")

Proposed Resolution   Recommendation: Recommendation by

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes   Editor's Actions   k) done

Including Comments 25 and 24, Page 82, Lines 45-56 now reads:

All other parameters are coded as TLV tuples.

The Registration Request shall contain the following TLVs:
        HMAC Tuple (see 11.4.9)
        UL CID Support (see 11.4.1.1)
The Registration Requests may contain the following TLV parameters stored in or generated by the SS:
        Vendor ID Encoding (see 11.4.3)
        SS Capabilities Encodings (excluding UL CID Support, Physical Parameters Supported, and Bandwidth Allocation Support) (see 11.4.1)

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **26**   **Comment submitted by:** Roger   Marks

Comment   **Type** Technical, Non-binding   **Starting Page #** 83   **Starting Line #** 41   **Section** 6.2.2.3.8

(Originally from Ken Stanwood)
If the BS can't handle the default SS Capabilities, it needs to communicate this to the CPE.

Suggested Remedy

page 83, line 41 - change "if found in the Registration Response" to "if found in the Registration Response or if the BS requires the use of a non-default value."

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Used "if found in the Registration Request {not "Response"} or if the BS requires the use of a non-default value"

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **27**   **Comment submitted by:** Roger   Marks

Comment   Type Editorial   **Starting Page #** 83   **Starting Line #** 49   **Section** 6.2.2.3.8

(Originally from Ken Stanwood)
None of the capabilities in question are on/off capabilities.

Suggested Remedy

page 83, line 49 - change "Only capabilities set to on in the REG-REQ may be set to on in the REG-RSP" to "Capabilities returned in the REG-RSP may not be set to require greater capability of the SS than it indicated in the REG-REQ".

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

used "shall" instead of "may"

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **28**   **Comment submitted by:**   Roger   Marks

Comment   **Type** Editorial   **Starting Page #** 83   **Starting Line #** 55   **Section** 6.2.2.3.8
(Originally from Ken Stanwood) Clarity

Suggested Remedy
page 83, line 55 - add "of the BS"

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes   **Editor's Actions**   k) done
Line reads: :Vendor ID Encoding (of the BS; see 11.4.3)"

To incorporate the comment consistently, need to make these other changes:

also page 82, line 52: add "of the SS"

Page 326 line 48, change "SS" to "SS or BS"

On page 326, line 51, change "Request" to "Request and Response"

On page 326, line 55, replace last sentence with these two sentences: "A vendor ID used in a Registration Request shall be the Vendor ID of the SS sending the request. A vendor ID used in a Registration Response shall be the Vendor ID of the BS sending the response."
Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **29**   **Comment submitted by:**   Roger   Marks

Comment   **Type** Technical, Non-binding   **Starting Page #** 83   **Starting Line #** 57   **Section** 6.2.2.3.8

(Originally from Ken Stanwood) That's the only situation in which it makes sense.

Suggested Remedy

page 83, line 57 – before this line add a line stating: "The following parameter may be included in the Registration Response if the Registration Request contained the Vendor ID Encoding for the SS."

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Inserted at line 56 {Understood that the new line applies to "Vendor-specific extensions" butnot to "Vendor ID Encoding".}

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **30**   **Comment submitted by:** Stanley   Wang   **2001/09/07**

Comment   **Type** Technical, Non-binding   **Starting Page #** 91   **Starting Line #** 56   **Section** 6.2.2.3.9.9

There is no more root CA that certifies manufacturer certificate.

Suggested Remedy

Page 91, line 56, change the last sentence of the paragraph to read:

"All X.509 CA certificates shall be self-signed by the manufacturer."

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

Reason for Recommendation

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

Ignore the proposed change but delete the last sentence of the paragraph.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **31**   **Comment submitted by:** Roger   Marks

Comment   Type Editorial   **Starting Page #** 101   **Starting Line #** 7   **Section** 6.2.2.3.18
(Originally from Ken Stanwood) Consistency

Suggested Remedy
Page 101, line 7 change "DCC_REQ" to "DCC-REQ"

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes   **Editor's Actions**   l) none needed
Deleted by 32.
Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **32**   **Comment submitted by:** Peter   Ecclesine

Comment   Type Technical   **Starting Page #** 101   **Starting Line #** 16   **Section** 6.2.2.3.18

The word 'study' is used eight times in this draft (5.2.5.3, 5.2.7.3, 6.2.2.3.18, 6.2.2.3.19, 6.2.4, 6.3.1, 6.3.2, 12.2.1), and every use is incorrect for a standard.

Suggested Remedy

Replace with a reserved field or remove altogether.

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

On page 74, lines 15 & 17, change the rows of the table to read "reserved for future use"
On page 101, delete lines 1-42.
On page 358, delete lines 22-31.

Reason for Group's Decision/Resolution

The changes in 5.2.5.3, 5.2.7.3, 6.3.1, and 6.3.2 was implemented through another comment by the same voter.
6.2.4 was implemented through another comment.

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # 33   **Comment submitted by:**   Peter   Ecclesine

Comment   Type Technical   **Starting Page #** 101   **Starting Line #** 16   **Section** 6.2.2.3.18

Both the Dynamic Channel Change Request and Dynamic Channel Change Response need Transaction ID fields, along with a description of the subsequent fields.

Suggested Remedy

Describe Transaction ID field and subsequent fields.

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Subclauses were deleted in another comment.

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **3 4**   **Comment submitted by:** Roger   Marks

Comment   Type Editorial   **Starting Page #** 101   **Starting Line #** 28   **Section** 6.2.2.3.19

(Originally from Ken Stanwood)
Consistency

Suggested Remedy

Page 101, line 28 change "DCC_RSP" to "DCC-RSP"

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

Reason for Group's Decision/Resolution

DCC_RSP was deleted through another comment.

Group's Notes
Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **35**   **Comment submitted by:** Roger   Marks

Comment   **Type** Technical, Non-binding   **Starting Page #** 102   **Starting Line #** 37   **Section** 6.2.2.3.21
(Originally from Ken Stanwood)
These parameters are completely useless here.

Suggested Remedy
Page 102, delete line 37 and lines 54-62

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   Comment Date

Comment # **36**   **Comment submitted by:**   Roger   Marks   Member   2001/08/02

Comment   Type Technical, Non-binding   **Starting Page #** 106   **Starting Line #** 6   **Section** 6.2.2.3.27

{originated by Yigal Leiba}

Allow more flexibility in the times of sending the CLK-CMP message, and reduce the need to compensate for the 8-bit field overflow (that would happen because of the difference between clock frequencies).

Suggested Remedy

Change the comparison value field width to 32bits

Proposed Resolution   Recommendation: Recommendation by

Reason for Recommendation

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

Reason for Group's Decision/Resolution

What is important is not absolute difference but the change in difference. 8 bits are sufficient for the purpose.

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **37**   **Comment submitted by:** Roger   Marks

Comment   **Type** Editorial   **Starting Page #** 107   **Starting Line #** 45   **Section** 5.2.3
(Originally from Ken Stanwood)
Deletion was missed when HMAC Tuple was added in previous editing.

Suggested Remedy
Page 107 – delete lines 45-50

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

Reason for Recommendation

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

Do the above change but also on page 107 line 54 and page 108 line 60, change the reference from "11.4.12" to "11.4.8"

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes   **Editor's Actions**   k) done
Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **38**   **Comment submitted by:**   Stanley   Wang   2001/09/07

Comment   **Type** Editorial   **Starting Page #** 108   **Starting Line #** 27   **Section** 6.2.2.3.29

Typo

Suggested Remedy

Change "11.4.17" to "11.4.11"

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: P802.16/D4   **Ballot Number:** 0000166   **Comment Date**

Comment # 39   **Comment submitted by:** Arthur H.   Light

Comment   Type Technical   **Starting Page #** 110   **Starting Line #**   **Section** 6.2.3

The flow chart in Figure 26 does not allow for both packing and fragmentation. In the first box under fragmentation, it says that packing is to precede fragmenting, but the path does not allow entry into the fragmentation path from this point.

Suggested Remedy

The obvious solution is to move the "Fragment?" box after the "Add Packing Sub-Headers" box and place the fragmentation path below that decision. A "NO" to the "Pack SDUs?" decision will still point to the "Fragment?" decision and a "NO" to "Fragment?" will still point into the "Prepend other sub-headers" box.

Proposed Resolution   Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group   Decision of Group: Accepted-Modified

Insert figure from file "IEEE 802.16.1c-01/38" <http://ieee802.org/16/tg1/docs/802161c-01_38.pdf> which clarifies the procedure.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes   Editor's Actions   k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **40**   **Comment submitted by:** Roger   Marks

Comment   Type Editorial   **Starting Page #** 110   **Starting Line #** 63   **Section** 6.2.3.2

"1 or more" is bad style

Suggested Remedy

change to "one or more"

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **41**   **Comment submitted by:** Peter   Ecclesine

Comment   Type Technical   **Starting Page #** 114   **Starting Line #** 61   **Section** 6.2.4

ARQ mechanism is undefined

Suggested Remedy

Define one or delete clause

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

Reason for Recommendation

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

Change the paragraph to read "ARQ shall not be used with the PHY specification defined in 8.2."

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **42**   **Comment submitted by:** Stanley   Wang   2001/09/07

Comment   **Type** Editorial   **Starting Page #** 114   **Starting Line #** 63   **Section** 6.2.4

The wording is not very precise about what is "optional."

Suggested Remedy

Page 114, line 63, change the paragraph to read as follows:

"ARQ protocol shall be specified. The implementation of the ARQ protocol shall be optional for both the SS and the BS. The ARQ details are for future study."

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **43**   **Comment submitted by:**   Stanley   Wang   2001/09/07

Comment   **Type** Editorial   **Starting Page #** 115   **Starting Line #** 32   **Section** 6.2.5

The footnote serves no purpose.

Suggested Remedy

Remove the footnote.

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **4 4**   **Comment submitted by:**   Stanley   Wang   2001/09/07

Comment   Type Editorial   **Starting Page #** 117   **Starting Line #** 3   **Section** 6.2.6
Using the abbreviation for the first time.

Suggested Remedy
change "DAMA" to "Demand Assigned Multiple Access (DAMA)"

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes   **Editor's Actions**   k) done
Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   Comment Date

Comment # **45**   **Comment submitted by:** Roger   Marks   2001/07/31

Comment   **Type** Technical, Non-binding   **Starting Page #** 117   **Starting Line #** 38   **Section** 6.2.6.1

{originated by Antonis Karvelas }

There is no obvious reason that the Bandwidth Requests transmitted in broadcast or multicast Request IEs should always be aggregate requests. Even if the BS lost some incremental Bandwidth Requests it has the aggregate Bandwidth Requests to replace its perception of the bandwidth needs of the connection. There is not any reason to restrict the ability of the SS to send incremental Bandwidth Requests in broadcast or multicast Request IEs.

Suggested Remedy

Remove the sentence: "Due to the possibility of collisions, Bandwidth Requests transmitted in broadcast or multicast Request IEs should always be aggregate requests."

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

Reason for Recommendation

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

Ignore the suggested change but remove the word "always" from the sentence.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   Comment Date

Comment # **46**   **Comment submitted by:** Roger   Marks   2001/07/31

Comment   **Type** Editorial   **Starting Page #** 119   **Starting Line #** 45   **Section** 6.2.6.4.1

{originated by Antonis Karvelas }

This note is more suitable here, than in page 119, line 17. The note will help the reader to understand the format of the unicast polling for the GPSS mode.

Suggested Remedy

Insert the sentence "Note that unicast polling of a GPSS SS would normally be done on SS basis by allocating a Data Grant IE directed at its Basic CID."

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

Reason for Recommendation

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

Insert the sentence: "Note that unicast polling of a GPSS SS would normally be done on a per-SS basis by allocating a Data Grant IE directed at its Basic CID."

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **47**   **Comment submitted by:** Stanley   Wang   2001/09/07

Comment   **Type** Editorial   **Starting Page #** 123   **Starting Line #** 56   **Section** 6.2.6.4.3

Clarity

Suggested Remedy

Change the begining of the line to read "to request bandwidth for non-UGS connections."

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: P802.16/D4   **Ballot Number: 0000166**   **Comment Date**

Comment # 4 8   **Comment submitted by:**   Stanley   Wang   2001/09/07

Comment   Type Editorial   **Starting Page #** 123   **Starting Line #** 58   **Section** 6.2.6.4.3

Typo.

Suggested Remedy

Line 58, change "SSs" to "SS's"
Line 62, change "MAC headers" to "MAC Grant Management Sub-headers"

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

Line 58, change "SSs" to "SS's"
Line 62, change "MAC headers" to "MAC Grant Management subheaders"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **4 9**   **Comment submitted by:** Roger   Marks

Comment   **Type** Editorial   **Starting Page #** 124   **Starting Line #** 60   **Section** 6.2.7.2

Bad grammar in "bandwidth controller shall not to allocate uplink bandwidth"

Suggested Remedy

delete "to"

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **50**   **Comment submitted by:** Roger   Marks

Comment   **Type** Editorial   **Starting Page #** 125   **Starting Line #** 1   **Section** 6.2.7.2

Fig 39 caption says "TDD Frame Structure", but it is used in the "Framed (Burst) FDD" section instead of in TDD section.

Suggested Remedy

On page 125, line 1, change "Figure 38 and Figure 39 describe" to "Figure 38 describes"

On page 125, line 65, change "A TDD frame" to "A TDD frame (see Figure 39)"

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # 5 1   **Comment submitted by:** Chet   Shirali

Comment   **Type** Technical   **Starting Page #** 131   **Starting Line #** 7   **Section** 6.2.9

Initialization procedure should be changed to optimize the channel selection, based on frequency selective performance, channels load, PHY parameters (more robust or higher throughput tradeoff), geographical location, antenna direction (sector) and polarization.<CR>Both initial selection and on the fly changing of the channel should be supported.

Suggested Remedy

The current proposal can cause a SS to randomly select a channel or in a typical implementation to select the first one that is found in the scanning for downstream, and the first one in the UCD for upstream. This will result in a very unloaded system and managing it with channel change messages will make the initialization very slow.<CR>Channels may have big difference in the performance per SS, based on the frequency diversity in NLOS channels, channels that serve different antenna sectors or cells, and channels with different PHY parameters. It is important to select the optimal channel per SS, while maintaining load balance in the whole system.<CR><CR>The 802.16 working group rejected the comment on the following grounds:<CR><CR>∑ "The text in the MAC specification has been made generic enough to accommodate all PHYs. Any rules that are necessary for a specific PHY will be included within the appropriate PHY sectionî<CR>. ìRNG-RSP can direct a SS to a different channelî<CR>∑ ìIn addition, a BS ID is present to allow the SS to register only with a pre-specified BSî<CR><CR>Vyyo's response: <CR><CR>∑ It is not a PHY related issue. It is part of the MAC and should be supported by the MAC ∑ It is not an efficient method. It can cause most of the SSes to initially connect to the same channel - BIG problem on system initialization and failure recovery. It makes the channel selection much longer. The BS doesn't know the receive parameters for each channel, for it must repeatedly direct to a new channel, get the parameters and then direct to the next one to measure. If the SS is directed to a channel it cannot receive it may cause an initialization that will delay the process even more. <CR>∑ It requires unwanted pre-configuration of the BS ID for each SS. This does not solve the problem for selection of the right sector.

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

The point is invalid. The MAC provides the base station with the ability to direct the SS to another channel. Therefore, the SS cannot "randomly select a channel" unless the vendor chooses to implement a random selection process. Channel selection of the sort described in the comment has been considered a network management system issue and outside the scope of the standard.

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

   Document under Review: P802.16/D4   **Ballot Number: 0000166**   **Comment Date**

   Comment # 52   **Comment submitted by:**   Roger   Marks

Comment   Type   **Starting Page #** 132   **Starting Line #**   **Section**

{originated by Carl Eklund}
Figure 45 is incorrect

Suggested Remedy
Replace Figure 45 on page 132 with Figure 1 in "IEEE 802.16.1c-01/36"

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

Replace Figure 45 on page 132 with Figure 1 in "IEEE 802.16.1c-01/36r1" <http://ieee802.org/16/tg1/docs/802161c-01_36r1.pdf>.

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # 53   **Comment submitted by:**   Roger   Marks

Comment   **Type**   **Starting Page #** 132   **Starting Line #**   **Section**

{originated by Carl Eklund}
Need figures to clarify the text.

Suggested Remedy

Insert figures 2 and 4 of 802.16.1c-01/36 into section 6.2.9.2. on page 132.

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

Reason for Recommendation

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

Insert figures 2 and 4 of IEEE 802.16.1c-01/36r1" <http://ieee802.org/16/tg1/docs/802161c-01_36r1.pdf> into section 6.2.9.2. on page 132.

On Page 132, Line 63: Add sentence to end of paragraph: "The process of acquiring synchronization is illustrated in Figure [2]. The process of maintaining synchronization is illustrated in Figure [4]."

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **5 4**   **Comment submitted by:** Roger   Marks

Comment   Type   **Starting Page #** 132   **Starting Line #**   **Section**

{originated by Carl Eklund}
Diagram in figure 49 lacks an initial state.

Suggested Remedy
Replace figure 49 with figure 3 of 802.16.1c-01/36.

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

Do above change and also make the following changes:

Insert Figures 5 and 6 (along with captions) of IEEE 802.16.1c-01/36r1" <http://ieee802.org/16/tg1/docs/802161c-01_36r1.pdf> to Section 6.2.9.3 in place of Figure 46 on page 134.

On Page 133, Line 3: delete "Refer to Figure 46".
On Page 133, Line 13: Add sentence to end of paragraph: "The process of obtaining uplink parameters is illustrated in Figure [5]."On Page 134, Line 65: Add sentence to end of paragraph: "This is illustrated in Figure [6]."

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes   **Editor's Actions**   k) done
New figure 49 taken from 802.16.1c-01/36r1 instead of 802.16.1c-01/36.
Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **55**   **Comment submitted by:** Roger   Marks   2001/07/31

Comment   **Type** Editorial   **Starting Page #** 132   **Starting Line #** 37   **Section** 6.2.9

{originated by Antonis Karvelas }

The figure 45 must agree with text in page 141 which says that after Negotiate basic capabilities the SS performs SS authorization and key exchange.

Suggested Remedy

In the figure 45 insert after "Basic Capabilities Negotiated" a new box with title "SS authorization and key exchange".

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

Reason for Recommendation

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

Replace Figure 45 with Figure 1 from IIEEE 802.16.1c-01/36r1" <http://ieee802.org/16/tg1/docs/802161c-01_36r1.pdf>.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **56**   **Comment submitted by:** Roger   Marks   2001/07/31

Comment   **Type** Technical, Non-binding   **Starting Page #** 137   **Starting Line #** 44   **Section** 6.2.9.5

{originated by Antonis Karvelas }

From the first RNG-RSP message the SS gets not only the Basic Connection ID but also the Primary Management Connection ID.

Suggested Remedy

Replace the sentence :
"recognize own MAC Address, store Basic Connection ID & adjust other parameters"
with the following :
"recognize own MAC Address, store Basic and Primary Management Connection ID & adjust other parameters".

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: P802.16/D4   **Ballot Number: 0000166**   Comment Date

Comment # 5 7   **Comment submitted by:** Stanley   Wang   2001/09/07

Comment   Type Technical, Non-binding   **Starting Page #** 144   **Starting Line #** 29   **Section** 9

Since TFTP is based on UDP over IP, which is a best-effort service, it is very unreliable (hence with poor performance) to transfer large files over the IEEE 802.16 type of transmission media. Even though the required part of the configuration file is small, the vendor-specific portion can be very large especially when it contains, for example, software release upgrades.

Suggested Remedy

Convert to FTP, which is a guaranteed service based on TCP over IP, for configuration file download. May need a join MAC session with MMDS people to discuss this.

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

Reason for Group's Decision/Resolution

The group would like to accomodate this request, but specific details are required.

Group's Notes

Group's Action Items

Stanley will do the initial research on RFC for FTP.

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **58**   **Comment submitted by:** Stanley   Wang   2001/09/07

Comment   **Type** Technical, Non-binding   **Starting Page #** 144   **Starting Line #** 33   **Section** 6.2.9.12

There is no SDL figure for "Transfer Operational Parameters."
Current minimum wait time between TFTP retries of 10 minutes and a minimum of 3 retries imply a minimum of 20 minutes wait for the operation to move to another possible downlink channel. 2 mimutes is a more reasonable value, since it takes significantly less than 1 minute to set up IP sockets and to transfer the configuration file.

Suggested Remedy

Page 144, line 40, add the attached figure (file name: SDL for TFTP.fm) and change "Figure 49" on line 33 to "Figure xx" where xx is the new figure number.

Page 298, line 60, change the "time reference" column to read "The time period between two consecutive TFTP retries."
Page 298, line 60, change the "Minimum Value" column to read "2 min"

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

Reason for Recommendation

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

Ignore the above changes but do the following changes:

Page 298, line 60, change the "time reference" column to read "The time period between two consecutive TFTP retries."
Page 298, line 60, change the "Minimum Value" column to read "2 min"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **5 9**   **Comment submitted by:** Stanley   Wang   2001/09/07

Comment   **Type** Editorial   **Starting Page #** 144   **Starting Line #** 63   **Section** 6.2.11

This comment was approved in the Working Group's Session #14 but somehow the edit did not happen.

Suggested Remedy

Page 144, move the sentence on lines 63-64 (starting "On receiving...") to page 138, line 37.

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **60**   **Comment submitted by:**   Roger   Marks

Comment   **Type** Technical, Non-binding   **Starting Page #** 151   **Starting Line #** 49   **Section** 6.2.12

(from Carl Elkund)
There is a need for assigning SSs to multicast group.

Suggested Remedy

Create new section H3 between 6.2.12 and 6.2.13 on page 151 with the heading "Assigning SSs to multicast groups" The content of the section: "The BS may add an SS to a Multicast polling group by sending a MCA-REQ message with the Join command. Upon receiving a MCA-REQ message, the SS shall respond by sending a MCA-RSP message. The protocol is shown in Figure XX and Figure YY."
Use Figures 7 and 8 from IEEE 802.16.1c-01/36r1 for Figures XX and YY above.

On page 299 add a new row to Table 118 with the content "| BS | T15 | Wait for MCA-RSP | 20 ms | 20 ms | |"

On page 101 line 46, replace the paragraph with "The Multicast Polling Assignment Request message is sent to an SS to assign it to or remove it from a multicast polling group. The format of the message is shown in <reference table 45>."

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **61**   **Comment submitted by:** Roger   Marks   2001/07/31

Comment   **Type** Technical, Non-binding   **Starting Page #** 152   **Starting Line #** 55   **Section** 6.2.13.2

{originated by Antonis Karvelas }
This definition comes from the DOCSIS 1.1 standard but it is not valid for this standard.

Suggested Remedy

The ProvisionedQoSParamSet is not presented during registration. Also the configuration file doesn't include any Service Flow encodings.

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

Reason for Recommendation

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

Page 152, line 55 through page 153 line 2, change the description of ProvisionedQoSParameterSet to "A QoS parameter set provisioned via means outside of the scope of this standard, such as the network management system."

Page 153, delete footnote #4.

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **62**   **Comment submitted by:** Roger   Marks   **2001/07/31**

Comment   **Type** Technical, Non-binding   **Starting Page #** 153   **Starting Line #** 2   **Section** 6.2.13.2

{originated by Antonis Karvelas }

Based on section "6.2.10 Establish provisioned connections" the Service Flow is not created via registartion.
Generally the section "6.2.13 Quality of Service" has to be revised because it has text that belongs to DOCSIS v1.1 standard, that it has no meaning in this standard.

Suggested Remedy

The sentence :"The ProvisionedQoSParamSet is defined once when the Service Flow is created via registration." is not correct.

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes   **Editor's Actions**   l) none needed
Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   Comment Date

Comment # **63**   **Comment submitted by:** Roger   Marks   2001/07/31

Comment   **Type** Technical, Non-binding   **Starting Page #** 154   **Starting Line #** 33   **Section**

{originated by Antonis Karvelas }

The configuration file doesn't contain any Service Flow encodings. This happen in the DOCSIS v1.1 standard but not here in this standard. The whole section "6.2.13 Quality of Service" must be revised because has a lot of concepts related to DOCSIS v1.1 that are not meaningful to this standard.

Suggested Remedy

The text "This type of Service Flow is known via provisioning through the configuration file, ..." is not correct.

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

Reason for Recommendation

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

Change "provisioning through the configuration file" to "provisioning by, for example, the network management system"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   Comment Date

Comment # **6 4**   **Comment submitted by:** Roger   Marks   2001/07/31

Comment   **Type** Technical, Non-binding   **Starting Page #** 157   **Starting Line #** 16   **Section** 6.2.13.6.1

{originated by Antonis Karvelas }
Based on section "9.Configuration file" the TFTP Configuration file doesn't contain the description of the Provisioned Service Flows.

Suggested Remedy
The text "That is, the description of any such service flow in the TFTP configuration file ..." is not correct.

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

Reason for Recommendation

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

On line 17, delete "in the TFTP configuration file"

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   Comment Date

Comment # **6 5**   **Comment submitted by:** Roger   Marks   2001/07/31

Comment   Type Editorial   **Starting Page #** 158   **Starting Line #** 38   **Section** 6.2.13.7.1

{originated by Antonis Karvelas }

This will help the reader to understand that this section describes the static way to create Service Flows. It is a more suitable title.

Suggested Remedy

Change the title of section 6.2.13.7.1 to "Static Service Flow creation".

Proposed Resolution   Recommendation: Recommendation by

Reason for Recommendation

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

Ignore the above change but do the following:

Change the title of 6.2.13.7 to "Pre-provisioned Service Flow Creation"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # 66   **Comment submitted by:** Roger   Marks   2001/07/31

Comment   Type Editorial   **Starting Page #** 158   **Starting Line #** 41   **Section** 6.2.13.7.1

{originated by Antonis Karvelas }

This note will help the reader to understand the differences between static service flow creation and dynamic service flow creation.

Suggested Remedy

Insert the text "The Static configuration of Service Flows is done with the Network Management System (NMS)."

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

Reason for Recommendation

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

Instead of the above, do the following:

Add to the beginning of line 40.5 "The provisioning of Service Flows is done via means outside of the scope of this standard, such as the network management system."

Page 158, line 40.5, change "Static configuration Service flows" to "Configuration of provisioned Service Flows"

Page 158, line 43, delete the last sentence.

Page 159, delete Figure 60.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   Comment Date

Comment # **67**   **Comment submitted by:** Roger   Marks   2001/07/31

Comment   **Type** Editorial   **Starting Page #** 161   **Starting Line #** 18   **Section** 6.2.13.8

{originated by Antonis Karvelas }

The note will clarify the document.

Suggested Remedy

Insert the note : "This section refers to the Dynamic creation of the Service Flows. It has no meaning for the static creation of the Service Flows that is done using the Network Management System (NMS)".

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Even provisioned ones are created the same way.

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # 6 8   **Comment submitted by:** Peter   Ecclesine

Comment   Type Technical   **Starting Page #** 197   **Starting Line #** 62   **Section** 6.3

MAC Common Part Sublayer - Management Plane is undefined

Suggested Remedy

Define one that describes control of frequency, service speed and transmit power, or delete clause.

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Clause deleted through another comment.

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **69**   **Comment submitted by:** Roger   Marks

Comment   **Type** Editorial   **Starting Page #** 198   **Starting Line #** 53   **Section** 7.1.2

"ensuring individual SS clients only receive keying material they are authorized for" could be grammatically improved

Suggested Remedy

change to "ensuring that individual SS clients receive only keying material for which they are authorized"

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   Comment Date

Comment # 70   **Comment submitted by:** Stanley   Wang   2001/09/07

Comment   Type Technical, Non-binding   **Starting Page #** 224   **Starting Line #** 25   **Section** 7.5.6

There is no more root CA that certifies manufacturer certificate. To guarantee interoperatibility, the size of the key shall either be fixed or be negotiated.

Suggested Remedy

Page 224, line 21, replace "all three of" with "both of"

Page 224, line 25, replace the paragraph to read as follows:

"As with its RSA encryption keys, Privacy uses 65537 (0x010001) as the public exponent for its signing operation. Manufacturer CAs shall employ the signature key length of 1024 bits and the Manufacturer CA certificates shall be self-signed."

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

Ignore the above changes but do the following changes:

Page 224, line 21, replace "all three of" with "both of"

Page 224, line 26, delete the sentence starts with "The external..."

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes   **Editor's Actions**   k) done
Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # 71   **Comment submitted by:**   Wesley G   Brodsky

Comment   Type Editorial   **Starting Page #** 242   **Starting Line #** 52   **Section** 8.2.1

FDD and TDD are used in 8.2.1 but not defined until 8.2.2.1

Suggested Remedy

Define Frequency Division Duples (FDD) and Time Division Duplex i(TDD) in 8.2.1

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Page 242, line 52, spell out FDD (Frequency Division Duplex) and TDD (Time Division Duplex).
Page 243, line 53, don't spell them out anymore.

Group's Notes

Group's Action Items

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

New sentence: "The downlink supports a burst format that allows systems to implement an adaptive burst profile scheme for Frequency
Division Duplex (FDD) as well as Time Division Duplex (TDD) configurations."

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **72**   **Comment submitted by:**   Jose   Costa

Comment   Type Technical   **Starting Page #** 242   **Starting Line #** ?   **Section** 8.2.1

This reads as a "commercial" for this particular specification and this text is not proper for a standard. The standard should be written in the form of a technical specification (not justification) to guide in the technical implementation of the standard.

Suggested Remedy

Delete everything after the first sentence in the first paragraph, lines 43-49: "It incorporates ... capacity requirements".

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

Replace the lines 41-49 with the following paragraph:

"The following physical layer specifcation, targeted for operation in the 10-66 GHz frequency band, is designed with a high degree of flexibility in order to allow service providers the ability to optimize system deployments with respect to cell planning, cost considerations, radio capabilities, offered services, and capacity requirements."

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # 7 3   **Comment submitted by:**   Roger   Marks

Comment   Type Editorial   **Starting Page #** 243   **Starting Line #** 10   **Section**   8.2.1.1

"MAC packet" is not 802.16 terminology

Suggested   Remedy

change "MAC packet" to "MAC PDU"

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **74**   **Comment submitted by:** Roger   Marks

Comment   **Type** Technical, Non-binding   **Starting Page #** 243   **Starting Line #** 13   **Section** 8.2.1.1

"roll-off factor of 0.25 (0.15 and 0.35 optional)" is inconsistent with 8.2.6, which requires roll-off factor of 0.25.

Same comment regarding Line 40, and in three other places in draft

Something needs to be changed for consistency

Suggested Remedy

delete "0.15 and 0.35 optional)" on both line 13 and line 30/31.

Also on these places:

p. 276 line 37

p. 277 line 30

also on p. 284 line 27

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

Reason for Recommendation

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

Do the above changes.
Also, on page 284, line 41, delete "which are interoperable over the air interface"
Page 284, remove the last sentence of the first paragraph of section 8.2.6.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # 75   **Comment submitted by:** Roger   Marks

Comment   Type Editorial   **Starting Page #** 252   **Starting Line #** 55   **Section** 8.2.4.2.1
missing space in "8.2.2.1.1or"

Suggested   Remedy
add space

Proposed   Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes   **Editor's Actions**   k) done
Editor's Questions and Concerns

Editor's Action Items

Document under Review: P802.16/D4   **Ballot Number: 0000166**   **Comment Date**

Comment # 76   **Comment submitted by:**   Wesley G   Brodsky

Comment   Type Editorial   **Starting Page #** 252   **Starting Line #** 56   **Section** 8.2.4.2.1
No space between '8.2.2.1' and or.

Suggested Remedy
Insert space between '8.2.2.1' and or.

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **77**   **Comment submitted by:** Roger   Marks

Comment   Type Editorial   **Starting Page #** 253   **Starting Line #** 4   **Section** 8.2.4.2.1

The use of "per" in this sentence is poor:

"This standard provides the capability to efficiently support either a fixed modulation level per downlink carrier or an adaptively changing modulation level and FEC coding set on a per subscriber station basis."

There is also some redundancy in the rest of the paragraph.

Suggested   Remedy

Change paragraph to:

"This standard provides the capability to support a fixed modulation level on each downlink carrier or to adaptively adjust the modulation level and FEC coding set for each subscriber station on a frame-by-frame basis. Although both alternatives are efficiently supported, the deployment scenario may indicate the appropriate choice."

Proposed   Resolution   Recommendation: **Recommendation   by**

Reason for Recommendation

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

Don't do the above change but replace the paragraph with the following:

"This standard provides the capability to adaptively adjust the modulation level and FEC coding set for each subscriber station on a frame-by-frame basis."

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **7 8**   **Comment submitted by:** Roger   Marks

Comment   **Type** Editorial   **Starting Page #** 253   **Starting Line #** 10   **Section** 8.2.4.2.1

The commas in these sentences should be deleted:

The structures of the downlink subframe used by the BS to transmit to the SSs, using time division duplexing (TDD), are shown in Figure 108. The structure of the downlink subframe used by the BS to transmit to the SSs, using FDD, is shown in Figure 109.

Also, there is no need to define TDD again.

Suggested Remedy

Change to:

The structure of the downlink subframe used by the BS to transmit to the SSs using TDD is shown in Figure 108. The structure of the downlink subframe used by the BS to transmit to the SSs using using FDD is shown in Figure 109.

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **79**   **Comment submitted by:** Roger   Marks

Comment   **Type** Editorial   **Starting Page #** 253   **Starting Line #** 13   **Section** 8.2.4.2.1

The sentence "These burst structures define the downlink physical channel." is incorrect. The downlink physical channel is a physical factor outside of the standard.

Suggested Remedy
Delete the sentence.

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **80**   **Comment submitted by:** Roger   Marks

Comment   Type Editorial   **Starting Page #** 253   **Starting Line #** 14   **Section** 8.2.4.2.1

In the sentence beginning "It starts", the word "It" doesn't point to anything.

Suggested Remedy
Change "It starts" to:

"The downlink subframe starts"

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **81**   **Comment submitted by:** Roger   Marks

Comment   **Type** Editorial   **Starting Page #** 254   **Starting Line #** 8   **Section** 8.2.4.2.1

"This portion of the downlink subframe contains data transmitted to half-duplex SSs that are scheduled to transmit earlier in the frame than they receive, if any." is a bit hard to understand.

Suggested Remedy

Change to:

"This portion of the downlink subframe is used to transmit data to any half-duplex SSs scheduled to transmit earlier in the frame than they receive."

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes   **Editor's Actions**   k) done
Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **82**   **Comment submitted by:** Roger   Marks

Comment   **Type** Technical, Non-binding   **Starting Page #** 261   **Starting Line #** 43   **Section** 8.2.4.4.4.1
(Originally from Ken Stanwood) conflicts with page 26, lines 12-15.

Suggested Remedy
Page 261, lines 43-44 – delete sentence "While a burst begins on a PS boundary …"

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes   **Editor's Actions**   k) done
Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **83**   **Comment submitted by:** Roger   Marks   2001/08/02

Comment   **Type** Technical, Non-binding   **Starting Page #** 262   **Starting Line #** 12   **Section** 8.2.4.4.4.1

{originated by Lars Lindh }

Randomization is defined in a previous section. It can be very confusing to mention randomization here because the reader can get impression that it should be performed twice.

It also extremely important in every serialization operation to indicate which bit is to be transmitted first.

These changed were also done in the "less than K bytes" case.

Suggested   Remedy

Change the sentence "When the number of bytes ....." to
"When the number of randomized MAC message bytes (M) entering the FEC process is less than K bytes, Operation B shall be performed"

row 16
delete B1

row 17
change B2) to "RS encode the first K bytes and append the R parity bytes".
Change the B-labels: B2 -> B1, B3 -> B2, B4 -> B3 and B5 -> B4

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

Reason   for   Recommendation

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

Ignore the above changes but do the following instead:

Change the sentence "When the number of bytes ....." to
"When the number of randomized MAC message bytes (M) entering the FEC process is greater than or equal to K bytes, Operation B shall be performed"

row 16
delete B1

row 17

change B2) to "RS encode the first K bytes and append the R parity bytes".
Change the B-labels: B2 -> B1, B3 -> B2, B4 -> B3 and B5 -> B4

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   Comment Date

Comment # **84**   **Comment submitted by:** Roger   Marks   2001/07/31

Comment   **Type** Technical, Non-binding   **Starting Page #** 269   **Starting Line #** 23   **Section** 8.2.4.4.5

{originated by Antonis Karvelas }

The DIUC mandatory exit threshold and the DIUC minimum entry threshold have no meaning because the DIUC=0 is the most robust burst profile. The SS if pass the DIUC mandatory exit threshold has no other burst profile to use. Also it can not be in a more robust profile in order to use the DIUC minimum entry threshold.

Suggested Remedy

Remove the "DIUC mandatory exit threshold" and "DIUC minimum entry threshold" entries of Table 98.

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **85**   **Comment submitted by:** Jay   Klein   2001/09/09

Comment   **Type** Technical, Non-binding   **Starting Page #** 269   **Starting Line #** 44   **Section** 8.2.4.4.7

This comment should be applied to section 8.2.5.5.3 as well:
(1) The text regarding the CAZAC sequence and its rotation is confusing. Rephrase text to reflect the fact that the sequence used is a rotated CAZAC sequence and there is no need to rotate the sequence further.
(2) It is suggested that when the preamble is only 16 symbols in length (i.e., DL-TDMA or UL with one repitition) a basic CAZAC sequence of length 8 should be used by repeating it twice. An explanation follows:

CAZAC sequences maintain a constant amplitude frequency domain response and have an all zero (cyclic) auto correlation response for non-overlapping sequences. In IEEE 802.16 the use of these sequences was adopted, specifically the use of a 16 symbol sequence (denoted CAZAC-16). In the case of the 32 symbol frame preamble, the CAZAC-16 sequence is repeated twice. The uplink preamble is a repetition of a CAZAC-16 sequence as well. The fact that the sequence is repeated allows for a 16 symbol correlator to perform indirectly a cyclic auto-correlation calculation and notice the all-zero effect when the correlator and the incoming sequence are not aligned.

In the case of the DL-TDMA preamble or in the case of an uplink preamble where there is only one repetition of the CAZAC-16 sequence, the cyclic auto-correlation calculation property is lost as the data after the preamble is random. ETSI BRAN/HIPERACCESS as solved this problem by introducing the use of 8 symbol CAZAC sequences (denoted CAZAC-8). ETSI decided that in the case where a 16 symbol preamble is required it will be 2 repetitions of a CAZAC-8 sequence while in all other cases a similar approach to IEEE was taken (repeating a CAZAC-16 sequence).

As there are only 2 basic CAZAC-8 sequences (which can be permuted to generate more sequences) it is suggested to use one basic sequence for the DL-TDMA case and the other for short (2*8=16 symbol) uplink preamble.

Suggested Remedy
(A)

8.2.5.5.3 Preamble
The preamble is based upon an integer number of repetitions of a length 16, +45 degrees rotated, CAZAC (constant amplitude zero auto-correlation) sequence [B16]. The sequence is transmitted so that the constellation points of the preamble coincide with the outmost constellation points of the modulation scheme in use. Table 110a defines the bit sequence for the base preamble. The base station defines the number of repetitions. In the case of a single repetition (e.g., total preamble length is 16 symbols) the sequence of Table 110a is replaced by the sequence of Table 110b, which is actually a length 8, +45 degrees rotated, CAZAC sequence repeated twice.

-Table 110 becomes Table 110a
-Insert new Table 110b:

Symbol I Q B(1) B(2)
1 1 1 0 0

```
2 1 1 0 0
3 -1 1 1 0
4 1 1 0 0
5 1 1 0 0
6 -1 -1 1 1
7 -1 1 1 0
8 -1 -1 1 1
9 1 1 0 0
10 1 1 0 0
11 -1 1 1 0
12 1 1 0 0
13 1 1 0 0
14 -1 -1 1 1
15 -1 1 1 0
16 -1 -1 1 1
```

(B)

Change the table text on pg. 284 ln. 23 to "Based on repetition of CAZAC sequences"

(C)

8.2.4.4.7 Frame and burst preambles
Table 100 and Table 101 define the preambles for the different downlink burst types. These preambles are based upon a +45 degrees rotated CAZAC (constant amplitude zero auto-correlation) sequences [B16] which are transmitted so that the constellation points of the preamble coincide with the outmost constellation points of the modulation scheme in use. The frame start preamble is always at the first part of a downlink frame and consists of a 32 symbol preamble (Burst Preamble 1), which is generated by repeating twice a CAZAC sequence of length 16 symbols. In the case of the TDMA mode on a downlink, user bursts are transmitted with a shortened preamble of 16 symbols (Burst Preamble 2), which is generated by repeating twice a 8 symbol CAZAC sequence.

-Change to contents of table 101 to:

```
Symbol I Q B(1) B(2)
1 1 1 0 0
2 1 1 0 0
3 1 1 0 0
4 -1 1 1 0
5 -1 -1 1 1
6 1 1 0 0
7 -1 -1 1 1
8 -1 1 1 0
```

9 1 1 0 0
10 1 1 0 0
11 1 1 0 0
12 -1 1 1 0
13 -1 -1 1 1
14 1 1 0 0
15 -1 -1 1 1
16 -1 1 1 0

Proposed   Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

Page 282, replace lines 44-50 with the following paragraph:

"The preamble is based upon a repetition of a +45 degrees rotated, CAZAC (constant amplitude zero auto-correlation) sequence [B16]. The preamble length is either 16 symbols or 32 symbols. In the 16 symbol case, the CAZAC sequence used is of length 8 and repeated once. In the 32 symbol case, the CAZAC sequence used is of length 16 and repeated once. The sequences are transmitted so that the constellation points of the preamble coincide with the outmost constellation points of the modulation scheme in use. Tables 110a and 110b define the bit sequence for the preambles (including the repetition). The base station defines the preamble length through the UCD message."

-Table 110 becomes Table 110a
-Insert new Table 110b:

Symbol I Q B(1) B(2)
1 1 1 1 0 0
2 1 1 1 0 0
3 -1 1 1 1 0
4 1 1 1 0 0
5 1 1 1 0 0
6 -1 -1 1 1
7 -1 1 1 1 0
8 -1 -1 1 1
9 1 1 0 0
10 1 1 0 0

11 -1 1 1 0
12 1 1 0 0
13 1 1 0 0
14 -1 -1 1 1
15 -1 1 1 0
16 -1 -1 1 1

Pg. 304 ln. 16 change "preamble repetition" to "preamble length" and on the same line change "the number of times the preamble pattern is repeated" to "the number of symbols in the preamble pattern"

(B)

Change the table text on pg. 284 ln. 23 to "Based on repetition of CAZAC sequences"

(C)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

For consistency, In Table 75 (SCHED_PARAM_VECTOR for 10-66 GHz PHY), changed:
Preamble length to "16 or 32 Symbols"

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **86**   **Comment submitted by:** Roger   Marks

Comment   **Type** Editorial   **Starting Page #** 269   **Starting Line #** 52   **Section** 8.2.4.4.7

"which is generated by repeating twice a CAZAC sequence of length 16 symbols." doesn't say what it means. The sequence is sent once, then repeated once.

The following sentence could be edited for clarity and simplicity.

Suggested Remedy
Change last two sentences of paragraph to

"The frame start preamble is always at the first part of a downlink frame and consists of a 32 symbol preamble (Burst Preamble 1) comprising two 16-symbol CAZAC sequences. In the case of the TDMA mode on a downlink, user bursts are transmitted with a shortened preamble (Burst Preamble 2) comprising a single 16-symbol CAZAC sequence."

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution
Change incorporated in another comment resolution.

Group's Notes
Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **87**   **Comment submitted by:** Jay   Klein   2001/09/09

Comment   **Type** Technical, Non-binding   **Starting Page #** 272   **Starting Line #** 19   **Section** 8.2.4.4.8

Currently the downlink transmits in a constant constellation peak power scheme, meaning that independent of modulation scheme used, corner points of the constellation use the same power. It is suggested to allow for another option which is constant mean power which means that the constellation of each modulation is expanded as modulation density increases keeping the mean power of the modulated signal constant independent of modulation scheme.

The reason is mainly a deployment trade-off. The constant peak scheme allows for increased coverage (as QPSK limits the power output) and is more conservative (and robust) regarding the co-channel interference assumptions (the interfernce peak power is predictable). The constant power scheme allows for increased capacity density as more users in a given sector are capable of using 16 and 64QAM. ETSI BRAN/HIPERACCESS uses a constant mean power scheme (coupled with a fixed set of burst profiles).

As this issue is deployment specific and may involve co-existence co-ordination process it is suggested to select peak or mean on a system basis.

The implementation complexity imapct of handling both cases by a terminal is minimal.

Suggested Remedy
- Include in the DCD message a global parameter (1 bit) indicating constant peak or constant mean
- language in line 19 should be modified to include both cases:
"The system will indicate the global use of a constant peak power scheme in which independent of the constellation used (according to the modulation type), corner points shall be transmitted at equal power levels or a constant mean power scheme in which independent of the constellation used (according to the modulation type), the signal shall be transmitted at equal mean power levels.
- In the DL-TDMA preamble discussion and in the UL preamble discussion the preamble power should be indicated as the same as the constellation used when a constant mean power scheme is used.

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

Reason for Recommendation

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

On page 305 line 22, insert a copy of lines 38-42 of page 303 (the "Power adjustment rule")

On page 303 line 43, change the value in "Type" field from "9" to "10"

Page 272, line 19 modify to include both cases:

"The system will, globally, make use of either a constant peak power scheme or a constant mean power scheme. In the constant peak power scheme, corner points are transmitted at equal power levels regardless of modulation type. In the constant mean power scheme, the signal is transmitted at equal mean power levels regardless of modulation type."

On page 270, line 3, add the following:
"In the case of constant peak power scheme (8.2.4.4.8), the DL TDMA preamble shall be transmitted such that the constellation points of the preamble coincide with the outmost constellation points of the modulation scheme in use. In the case of constant mean power scheme, the DL TDMA preamble shall be transmitted with the mean power of the constellation points of the modulation scheme in use."

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **88**   **Comment submitted by:** Roger   Marks   2001/08/02

Comment   **Type** Technical, Non-binding   **Starting Page #** 276   **Starting Line #** 54   **Section** 8.2.4.4.10

{originated by Lars Lindh }

The objective of this paragraph is to describe how to generate the output signal not to discuss spectral inversion which is not an included option in this standard.

Suggested   Remedy

row 54 Change "Spectral inversion" to "Output waveform"

row 57 Delete the text: "The transmitted signal must be compensated .... In other words,"

row 58 Change the "transmitted signal" to "The transmitted signal"

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

Reason for Recommendation

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

Don't do the above changes but make the following changes:

row 54 Change "Spectral inversion" to "Transmitted waveform"

row 57 Delete the text: "The transmitted signal must be compensated .... In other words,"

row 58 Change the "transmitted signal" to "The transmitted signal"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

   Document under Review: P802.16/D4   **Ballot Number: 0000166**   **Comment Date**

   Comment # 8 9   **Comment submitted by:** Wesley G   Brodsky

Comment   Type Editorial   **Starting Page #** 276   **Starting Line #** 60   **Section** 8.2.4.4.10

The sign convention used in the equation for S(t) could be ambiguous. Some texts use a different sign convention in defining the complex envelope. For example the Appendix to VanTrees; "Detection Estimation and Modulation Theory - Volume III" uses the convention S(t) = I(t)cos({2}{pi}{Fc}{t}) + Q(t)sin({2}{pi}{Fc}{t})

Suggested Remedy

Delete the second sentance of 8.2.4.4.10.

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

The equation is required to uniquely define the transmitted waveform by specifying the sign.

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **90**   **Comment submitted by:** Roger   Marks

Comment   **Type** Technical, Non-binding   **Starting Page #** 277   **Starting Line #** 38   **Section** 8.2.5.1

(Originally from Ken Stanwood) Should not be required to send default values. Uplink Symbol Rate and Frequency are implied by DL frequency for all implementations of this PHY. Tx/Rx and Rx/Tx Gaps are useless to the SS.

Suggested Remedy

Page 277, change lines 38-49 to:
"The following parameters shall be included in the UCD message:

- Preamble Pattern

The following parameters may be included in the UCD message and if absent shall have their default values:

- SS Transition Gap
- Roll-off Factor

Uplink Symbol Rate and Frequency are implied by DL frequency for all implementations of this PHY."

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

Reason for Recommendation

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

Ignore the above changes but do the following:

Page 277, change lines 38-49 to:
"The following parameters shall be included in the UCD message:

- Preamble Length

The following parameters may be included in the UCD message and if absent shall have their default values:

- SS Transition Gap
- Roll-off Factor

Uplink Symbol Rate and Frequency are implied by DL frequency for all implementations of this PHY."

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Changed the last sentence to "Uplink Symbol Rate and Frequency are implied by downlink frequency."

Editor's Questions and Concerns

Editor's Action Items

Document under Review: P802.16/D4   **Ballot Number:** 0000166   Comment Date

Comment # 91   **Comment submitted by:** Roger   Marks   2001/07/31

Comment   **Type** Technical, Non-binding   **Starting Page #** 279   **Starting Line #** 35   **Section** 8.2.5.3

{originated by Antonis Karvelas }

This ineffiency comes from the definition of the Uplink Map Information Elements. The UIUC determines not only the uplink PHY mode (modulation/FEC) but also the purpose of the uplink bandwidth allocated. It would be more flexible if the UIUC in the UL-MAP was 6 bits with the following functionality :
    * PHY mode : 3 bits for the definition of the uplink PHY mode (modulation/FEC)
    * Purpose : 3 bits for the definition of the purpose of the allocated uplink bandwidth

With this way the BS will have full flexibility when allocating bandwidth to the SS. It can define differently the PHY mode used (modulation/FEC) and the purpose of the allocated uplink bandwidth.
The only cost is 2 more bits for each entry of the UL-MAP message.
Using the above philosophy the BS can give to the SS uplink bandwidth using PHY mode=modulation/FEC that the SS can use to send to the BS and Purpose=Bandwidth Request.
With the same way the BS can allocate to a SS bandwidth for Station Maintenance using the best uplink profile for the specific SS and not the most robust uplink burst profile using PHY mode=best modulation/FEC for the SS and Purpose=Station Maintenance.

With the current definition of the UIUC for example all the SS must use the same PHY mode (modulation/FEC) when they send Bandwidth Requests to the BS because the UIUC=Request IE defines not only the purpose of the allocated bandwidth but also the PHY mode (modulation/FEC) to use. The same ineffiency arise for the Station Maintenance allocated bandwidth.

Suggested Remedy

The use of the Station Maintenance IE for the periodic ranging from the SS means that every SS use the most robust uplink burst profile when it sends RNG-REQ message for periodic ranging, even if the BS can receive from the SS with a less robust uplink burst profile. This is waste of bandwidth.

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution
The SM IE doen't need to be the most robust PHY mode. For GPSS terminals, they don't need to be exist at all. Request IE needed only for contention based polling.

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

  Document under Review: P802.16/D4   **Ballot Number: 0000166**   **Comment Date**

  Comment # 92   **Comment submitted by:**   Roger   Marks

Comment   **Type** Editorial   **Starting Page #** 280   **Starting Line #** 40   **Section** 8.2.5.5.1

Terms for scrambler seed are not used consistently. This is confusing.

Suggested Remedy

Page 280 line 40: change "a 15-bit programmable seed" to "the 15-bit programmable Scrambler Seed".
In two following sentences, change "seed value" to Scrambler Seed value".

Page 284 line 21: change "Initialization seed" to "Scrambler Seed".

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

changed "must" to "shall" in the page 280 paragraph

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   Comment Date

Comment # **93**   **Comment submitted by:** Roger   Marks

Comment   **Type** Technical, Non-binding   **Starting Page #** 282   **Starting Line #** 40   **Section** 8.2.5.5.2.4

(Originally from Ken Stanwood) Current ambiguity would require SS to handle hundreds of scheduled bursts per frame with no gain in performance.

Suggested Remedy

Page 282, line 40 add new header level 5 paragraph
"8.2.5.5.x Number of scheduled uplink bursts per frame
For GPSS SSs, only one scheduled burst (UIUC 4-9) per SS shall be included in the uplink map for any given frame."

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **9 4**   **Comment submitted by:** Roger   Marks

Comment   **Type** Technical, Non-binding   **Starting Page #** 282   **Starting Line #** 40   **Section** 8.2.5.5.2.4

(Originally from Ken Stanwood) Allows the BS to hear the initial access message under the same link conditions as the downlink control. Also, at the time of the message, the BS does not know if the SS supports shortened codewords.

Suggested Remedy

Page 282, line 40 add new header level 5 paragraph
"8.2.5.5.x Coding of the Initial Maintenance UIUC
The burst parameters for the Initial maintenance UIUC shall be the same as the downlink control message as defined in section 8.2.4.4.6"

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **95**   **Comment submitted by:** Jay   Klein   **2001/09/09**

Comment   **Type** Editorial   **Starting Page #** 284   **Starting Line #** 1   **Section** 8.2.5.5.7

pplink is more commonly known as Uplink

Suggested Remedy

Change "pplink" to "Uplink"

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **96**   **Comment submitted by:** Roger   Marks

Comment   **Type** Editorial   **Starting Page #** 284   **Starting Line #** 1   **Section** 8.2.5.5.7
"pplink"

Suggested Remedy
Change to "uplink"

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes   **Editor's Actions**   l) none needed
Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   Comment Date

Comment # **97**   **Comment submitted by:** Jay   Klein   2001/09/09

Comment   **Type** Technical, Non-binding   **Starting Page #** 284   **Starting Line #** 26   **Section** 8.2.8

64QAM will require an equalizer for demodulation hence no need to specify EVM number with no equalizer

Suggested Remedy

Remove "2% (64QAM)" from line 26 in table 113

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

Reason for Recommendation

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

Make the above change and also add "and" to the end of page 286 line 26.5

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **98**   **Comment submitted by:** Roger   Marks

Comment   **Type** Editorial   **Starting Page #** 286   **Starting Line #** 26   **Section** 8.2.8

16QAM and 64QAM should be hyphenated for self-consistency.

Suggested Remedy

Change to "16-QAM" and "64-QAM " (two places each)

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   Comment Date

Comment # **99**   **Comment submitted by:** Roger   Marks   2001/08/02

Comment   Type Technical, Non-binding   **Starting Page #** 286   **Starting Line #** 28   **Section** 8.2.8

{originated by Lars Lindh }

EVM shall not be specified with an equalizer. The equalizer is not mandatory and not even specified in this standard. It could potentially create an inter-operability problem as there might be terminals with and without an equalizer in the same sector. In addition to that it is not clear whether the sentences shall be interpreted as "ANDed" or "ORed" conditions.

Suggested Remedy

Delete the sentence "10%(QPSK) ..... linear distortion removed)" which describes an equalizer in the receiver.

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **100**   **Comment submitted by:** Jay   Klein   **2001/09/09**

Comment   **Type** Editorial   **Starting Page #** 287   **Starting Line #** 6   **Section** 8.2.8

The power level indicated has the wrong "sign". It should indicate +15 dBm
(This is probably due to the fact that we had a formula in the past instead of a number)

Suggested Remedy
Change power level in line 6 to +15 dBm

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes   **Editor's Actions**   k) done
Editor's Questions and Concerns

Editor's Action Items

Document under Review: P802.16/D4   **Ballot Number: 0000166**   **Comment Date**

Comment # 101   **Comment submitted by:** Jay   Klein   2001/09/09

Comment   Type Technical, Non-binding   **Starting Page #** 290   **Starting Line #** 16   **Section** 8.2.8.2

Power output definition as described in the draft leads to measurement difficulties

(1) The draft states the measurement at the Antenna input port; Actually the measurement will be done at the transmitter output (through an interface similar to the antenna connector)
(2) The draft states (line 26) that a root raised cosine filter is required for the measurement. This will forbid the use of a simple RF power meter and will require a receiver for measuring the power

Suggested Remedy

Change line 19 from "antenna input port" to "transmitter output port"
Remove the following text from line 26 "through the square root raised cosine filter".

Proposed Resolution   Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group   Decision of Group: Accepted

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes   Editor's Actions k) done

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **102**   **Comment submitted by:** Wesley G   Brodsky

Comment   Type Editorial   **Starting Page #** 292   **Starting Line #** 43   **Section** 8.2.8.2.3

The parameters N and Smax are not defined.

Suggested Remedy

Define them.

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

On page 292, line 49, add the following:

"where N is the number of symbols in the measurement period and Smax is the maximum constellation amplitude."

On page 293, line 1, change "should" to "shall"

On page 293, line 2, add to the end of the sentence "at maximum power settings"

On page 293, Figure 125, label axes as "I" (horiz) and "Q" (vert)

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   Comment Date

Comment # **103**   **Comment submitted by:** Roger   Marks

Comment   **Type** Technical, Non-binding   **Starting Page #** 295   **Starting Line #** 31   **Section** 9.2.2

(Originally from Ken Stanwood) the mere presence of vendor specific information for an SS implies it can process it.

Suggested Remedy

Page 295, delete lines 31-34 and make line 35 item f) in the list on lines 24-29.

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **104**   **Comment submitted by:** Stanley   Wang   2001/09/07

Comment   **Type** Technical, Non-binding   **Starting Page #** 302   **Starting Line #** 16   **Section** 10.4

CIDs for Primary Management connections shall be well-known as well.

Suggested Remedy

Line 16, add to the Description column "m is the number of SSs."
Line 17, add a new row as follows: "Primary Management CIDs ⏐ m+1 -- 2m ⏐ l"
Line 19, change the value column to read "2m+1 -- 0xFeFF"

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

Reason for Recommendation

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

Ignore the above changes but do the following changes:

Line 17, add a new row as follows: "Primary Management CIDs ⏐ m+1 - 2m ⏐ l"
Line 19, change the value column to read "2m+1 - 0xFeFF"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **105**   **Comment submitted by:** Roger   Marks

Comment   **Type** Technical, Non-binding   **Starting Page #** 303   **Starting Line #** 20   **Section** 11.1.1.1

(Originally from Ken Stanwood) The SS has absolutely no use for these parameters. There is a minimum specified elsewhere that the SS must be designed to handle. After that, it's the maps that tell the SS when to transmit or receive.

Suggested Remedy

page 303, delete lines 20-28.

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   Comment Date

Comment # **106**   **Comment submitted by:** Roger   Marks   2001/07/31

Comment   **Type** Editorial   **Starting Page #** 303   **Starting Line #** 25   **Section** 11.1.1.1

{originated by Antonis Karvelas }

Because the uplink bandwidth allocation is in units of mini-slots the Rx/Tx Gap must be in units of mini-slots.

Suggested Remedy

Replace the sentence :
"The time,expressed in PSs, ..."
with :
"The time,expressed in mini-slots, ..."

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   Comment Date

Comment # **107**   **Comment submitted by:** Roger   Marks   2001/07/31

Comment   **Type** Editorial   **Starting Page #** 303   **Starting Line #** 30   **Section** 11.1.1.1

{originated by Antonis Karvelas }

Because the uplink bandwidth allocation is in units of mini-slots the SS Transition Gap must be in units of mini-slots.

Suggested Remedy

Replace the sentence :
"The time,expressed in PSs, ..."
with :
"The time,expressed in mini-slots, ..."

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

The transition gap is not unit of BW allocations.

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **108**   **Comment submitted by:**   Roger   Marks

Comment   **Type** Editorial   **Starting Page #** 303   **Starting Line #** 43   **Section**   11.1.1.1

(Originally from Ken Stanwood) The current wording causes confusion with Initial Ranging.

Suggested Remedy

page 303, line 43 – change both occurrences of "Random Access" to "Contention-based reservation"

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: P802.16/D4   **Ballot Number:** 0000166   **Comment Date**

Comment # 109   **Comment submitted by:** Roger   Marks

Comment   Type Technical, Non-binding   **Starting Page #** 303   **Starting Line #** 44   **Section** 11.1.1.1

(Originally from Ken Stanwood) The SS should have independent state machines for each connection or we risk QoS violations.

Suggested Remedy

page 303, line 44 – add "for the same connection" to the end of the sentence.

Proposed Resolution   Recommendation: Recommendation by

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **110**   **Comment submitted by:** Roger   Marks

Comment   **Type** Editorial   **Starting Page #** 309   **Starting Line #** 1   **Section** 11.1.4.1

(Originally from Ken Stanwood) MCA-REQ and MCA-RSP are messages so they shouldn't be subsections under the RNG-RSP message.

Suggested Remedy

page 309, line 1 – Decrease paragraph indentation level so paragraph 11.1.4.1 becomes 11.1.5

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **111**   **Comment submitted by:** Stanley   Wang   2001/09/07

Comment **Type** Editorial   **Starting Page #** 315   **Starting Line #** 43   **Section** 11.2.13

The total length of the compound attribute should be >= 10 bytes, 6 bytes for Suite List, 4 bytes for version.

Suggested Remedy

Page 315, line 43, change ">=9" to ">=10"

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

Reason for Recommendation

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

Ignore the above change but do the following change:

Page 315, line 43, change ">=9" to "variable"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **112**   **Comment submitted by:** Stanley   Wang   2001/09/07

Comment   **Type** Editorial   **Starting Page #** 318   **Starting Line #** 35   **Section** 11.2.17

The total length of the compound attribute should be 15 bytes, 5 bytes for SAID, 4 bytes for SA Type, and 6 bytes for Suite.

Suggested Remedy

Page 318, line 35, change "14" to "15"

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **113**   **Comment submitted by:** Roger   Marks

Comment   **Type** Editorial   **Starting Page #** 326   **Starting Line #** 9   **Section** 11.4.1.7

(Originally from Ken Stanwood) clarity, it's easy to miss the text in an earlier section that says this is the default

Suggested Remedy

page 326, line 9 – change "bit #0: 4" to "bit #0: 4 (default)"

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **114**   **Comment submitted by:** Roger   Marks

Comment   **Type** Editorial   **Starting Page #** 326   **Starting Line #** 25   **Section** 11.4.1.8

(Originally from Ken Stanwood) 5.16 is already used on page 325, line 9

Suggested Remedy

page 326, line 25 – change "5.16" to "5.19"

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: P802.16/D4   **Ballot Number: 0000166**   **Comment Date**

Comment # 115   **Comment submitted by:** Roger   Marks

Comment   Type Technical, Non-binding   **Starting Page #** 326   **Starting Line #** 29   **Section** 11.4.1.8

(Originally from Ken Stanwood) This needs to be able to be limited like the UL CID.

Suggested Remedy

page 326, line 29 – add the following section:
"11.4.1.9 Multicast Polling Group CID Support
The field indicates the maximum number of simultaneous Multicast Polling Groups the SS is capable of belonging to.
Type   Length   Value   Scope
5.20   1   0-255   RNG-REQ
                      default = 4   RNG-RSP"

Proposed Resolution   Recommendation: Recommendation by

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **116**   **Comment submitted by:** Roger   Marks

Comment   **Type** Technical, Non-binding   **Starting Page #** 326   **Starting Line #** 62   **Section** 11.4.3

(Originally from Ken Stanwood) This is not a service flow parameter

Suggested Remedy

Page 326, line 62 – change "[24/25].28" to "8"

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   Ballot Number: **0000166**   Comment Date

Comment # **117**   Comment submitted by: Roger   Marks

Comment   Type   Starting Page # **327**   Starting Line #   Section

{originated by Carl Eklund}

Suggested   Remedy

delete sections 11.4.12.1.2.1 through 11.4.12.1.2.4

Insert 0.0.1 0.0.1.1, 0.0.1.2, and 0.0.1.3 below after section 11.4.4

Convergence layer capabilities
Convergence layer support
This parameter indicates which service specific sublayers the SS supports.
Type Length Value Scope
5.20 2 Bit#:
0: ATM
1: Packet, IPv4
2: Packet, IPv6
2: Packet, 802.3
3: Packet, 802.1Q VLAN
4: Packet, IPv4 over 802.3
5: Packet, IPv6 over 802.3
7: Packet, IPv4 over 802.1Q VLAN
8: Packet, IPv6 over 802.1Q VLAN
9-15 reserved, must be set to zero REG-REQ, REG-RSP

Maximum Number of Classifiers
This is the maximum number of admitted Classifiers that the SS is allowed to have.
Type Length Value Scope
5.21 2 Maximum number of simultaneous admitted classifiers REG-REQ, REG-RSP

The default value is 0 — no limit.
Payload Header Suppression Support
Indicates the level of Payload Header Suppression support..
Type Length Value Scope
5.22 2 Value :
0: no PHS support
1: ATM PHS
2: PacketPHS REG-REQ, REG-RSP

Default: 0- No PHS

Proposed Resolution   Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group   Decision of Group: Accepted

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes   Editor's Actions   k) done
Changed "Convergence layer" to "Convergence sublayer"
Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **118**   **Comment submitted by:** Stanley   Wang   2001/09/07

Comment   **Type** Editorial   **Starting Page #** 329   **Starting Line #** 1   **Section** 11.4.7.4
Typo

Suggested Remedy
Change the title to read "11.4.7.4 Service Flow Error Parameter Set"

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes   **Editor's Actions**   k) done
Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   Comment Date

Comment # **119**   **Comment submitted by:** Stanley   Wang   2001/09/07

Comment   **Type** Editorial   **Starting Page #** 329   **Starting Line #** 9   **Section** 11.4.7.4

Clarity

Suggested Remedy
Add to the "value" column the following content: "Compound field"

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes   **Editor's Actions**   k) done
Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **120**   **Comment submitted by:** Stanley   Wang   2001/09/07

Comment   **Type** Technical, Non-binding   **Starting Page #** 329   **Starting Line #** 9   **Section** 11.4.7.4

SF Error Parameter Set cannot be in DSx-REQ, which don't know if there is an error or not yet.

Suggested Remedy

Remove "DSx-REQ" from the "Scope" column
Make the same change for Page 329 Line 56, Page 330 Line 12, and Page 330 Line 32.

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

Reason for Recommendation

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

Note: 121 is a duplicate.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **121**   **Comment submitted by:** Roger   Marks

Comment   **Type** Technical, Non-binding   **Starting Page #** 329   **Starting Line #** 10   **Section** 11.4.7.4

(Originally from Ken Stanwood) Errors can't happen until the request is made.

Suggested Remedy

Page 329, line 10 – delete "DSx-REQ"
Page 329, line 56 – delete "DSx-REQ"
Page 330, line 12 – delete "DSx-REQ"
Page 330, line 32 – delete "DSx-REQ"

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

Reason for Recommendation

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

Superceded by duplicate comment (120).

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **122**   **Comment submitted by:** Stanley   Wang   2001/09/07

Comment   **Type** Editorial   **Starting Page #** 329   **Starting Line #** 15   **Section** 11.4.7.4

Typo

Suggested Remedy
Change "Confirmation Code" to "Error Code"
Make the same change for Line 28

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **123**   **Comment submitted by:** Stanley   Wang   2001/09/07

Comment **Type** Editorial   **Starting Page #** 329   **Starting Line #** 32   **Section** 11.4.7.4

Typo

Suggested Remedy

Change "Service Flow" to "Service Flows"

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: P802.16/D4   **Ballot Number:** 0000166   Comment Date

Comment # 124   **Comment submitted by:** Stanley   Wang   2001/09/07

Comment   Type Technical, Non-binding   **Starting Page #** 330   **Starting Line #** 12   **Section** 11.4.7.4.2
Clarity

Suggested Remedy
Change the "Value" column to read "Confirmation Code except okay (0)"

Proposed Resolution   Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group   Decision of Group: Accepted

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

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

Editor's Action Items

Document under Review: P802.16/D4   **Ballot Number:** 0000166   Comment Date

Comment # 125   **Comment submitted by:** Stanley   Wang   2001/09/07

Comment   Type Editorial   **Starting Page #** 330   **Starting Line #** 38   **Section** 11.4.7.4.3
Clarity

Suggested Remedy
Change Lines 38-43 to read "NOTE -- The length n includes the terminating zero.
Move note #2 to Page 329 Line 44 to read "NOTE -- The entire Service Flow Error Parameter Set encoding shall have a total length of less
than 256 octets."

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

Ignore the the above changes but do the following changes:

Change Lines 38-43 to read "NOTE -- The length n includes the terminating zero.
Move note #2 to Page 329 Line 44 and change it to read "NOTE -- The entire Service Flow Error Parameter Set encoding shall have a total
length of less than 256 octets."

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **126**   **Comment submitted by:** Roger   Marks   2001/07/31

Comment   **Type** Technical, Non-binding   **Starting Page #** 331   **Starting Line #** 1   **Section** 11.4.7.5

{originated by Antonis Karvelas }

The configuration file doesn't have Service Flow encodings. There is still confusion about the configuration file and the contents of it. This is caused by the use of the DOCSIS v1.1 text which in many cases is not applicable to the current standard.

Suggested Remedy

The phrase "For every Service Flow that appears in a configuration file ..." is not correct.

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

Reason for Recommendation

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

Page 331, line 1, change "that appears in a configuration file" to " that is pre-provisioned"

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # 127   **Comment submitted by:** Roger   Marks

Comment   Type Technical, Non-binding   **Starting Page #** 332   **Starting Line #** 40   **Section** 11.4.7.7
(Originally from Ken Stanwood) Consistency. There is no need for this one parameter to be separately specified for UL and DL.

Suggested Remedy
Page 332 - delete line 40
Page 332 – delete line 54 through page 333, line 2
Page 333 – delete lines 9-10
Page 333, line 16 – change "25" to "[24/25]"

Proposed Resolution   Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group   Decision of Group: Accepted

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

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

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **128**   **Comment submitted by:** Roger   Marks

Comment   **Type** Technical, Non-binding   **Starting Page #** 332   **Starting Line #** 46   **Section** 11.4.7.7

(Originally from Ken Stanwood) The spec does not allow data to be sent in contention slots.

Suggested Remedy

Page 332, line 46 – delete "including data sent in contention"

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **129**   **Comment submitted by:**   Roger   Marks

Comment   **Type** Technical, Non-binding   **Starting Page #** 334   **Starting Line #** 3   **Section** 11.4.7.10

(Originally from Ken Stanwood) Connections should have proper traffic parameters.

Suggested Remedy

Page 334 – delete lines 3-27
Page 335, line 58 – delete line 58 through page 336, line 18.
Page 336, line 48 – delete "Poll"
Page 336, replace lines 50-page 337, line 3 with "This parameter defines the Maximum delay variation (jitter) for the connection."
Page 337, line 8, replace "24" with "[24/25]"
Page 337, line 8, replace "us" with "ms"
Page 337 – delete lines 16-35
Page 337, line 36, delete "Downlink"
Page 337, line 38, change "by the BS on its BNI" to "by the BS or SS on its network interface"
Page 337, line 42-43 – replace all 3 instances of "BS" with "BS or SS"
Page 337, line 51, change "25" to "[24/25]"
Page 337, line 51, change "us" to "ms"

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **130**   **Comment submitted by:** Roger   Marks

Comment   Type Technical, Non-binding   **Starting Page #** 334   **Starting Line #** 30   **Section** 11.4.7.11

(Originally from Ken Stanwood) Connections should be explicitly transitioned from active to admitted via DSC messages.

Suggested Remedy

Page 334 – delete line 30 through page 335, line 17

Proposed Resolution   Recommendation: Recommendation by

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

Editor's Notes   Editor's Actions   k) done

To accommodate the change, make the following changes on p. 158:

delete all but first sentence of paragraph starting at line 4; combine result with following paragraph.

On line 14, change "this state shall be refreshed periodically for it to be maintained without the above timeout releasing the non-activated resources" to "this state shall be maintained without releasing the non-activated resources".

Replace the last sentence of the paragraph (lines 16-19) with "Changes may be signaled with a DSC-REQ message."

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **131**   **Comment submitted by:** Stanley   Wang   2001/09/07

Comment   Type Technical, Non-binding   **Starting Page #** 337   **Starting Line #** 8   **Section** 11.4.7.17

QoS parameters are not included in REG-xxx messages.

Suggested Remedy

Remove "REG-REQ" and "REG-RSP" for the "Scope" column.
Make the same change for Line 26.

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: P802.16/D4   **Ballot Number:** 0000166   Comment Date

Comment # 132   **Comment submitted by:** Stanley   Wang   2001/09/07

Comment   **Type** Technical, Non-binding   **Starting Page #** 338   **Starting Line #** 34   **Section** 11.4.7.22

Currently, TLVs required in order to handle the establishment of SAs between BS and SS are missing.

Suggested Remedy

Page 338, line 34, add a new level-4 section as follows:

"11.4.7.aa Target SA Descriptor

The Target SA Descriptor is a compound attribute whose sub-attributes describe the properties of a Security Association. These properties include the Target SAID, Target SA Type, and Target Cryptographic Suite employed within the SA.

Type	Length	Value	Scope
[24/25].26	15	The compound field contains the sub-attributes shown in Table bb.	DSA-REQ (BS initiated) DSA-RSP (SS initiated) DSC-REQ (BS initiated) DSC-RSP (SS initiated)"

Page 338, line 34, add the following new table (fix the cross-reference used above):

"Table bb --- Target SA Descriptor sub-attributes

Attribute	Contents
Target SAID	SAID onto which SF is mapped
Target SA Type	SA type of the target SA
Target Cryptographic Suite	Cryptographic suite for the target SA"

Page 338, line 45, change "[24/25].26" to "[24/25].27"

Page 338, line 45, add "DSC-REQ (BS initiated)" and "DSC-RSP (SS initiated)" to the scope.

Page 338, line 49, add a new level-4 section as follows:

"11.4.7.cc Target SA Type

The Target SA Type identifies the type of the SA, i.e., primary, static, or dynamic SA.

Type	Length	Value	Scope

[24/25].28	1	A one-byte code identifying the value of SA type as defined in Table 140.	DSA-REQ (BS initiated) DSA-RSP (SS initiated) DSC-REQ (BS initiated) DSC-REQ (BS initiated)"

Page 338, line 49, add a new level-4 section as follows (fix the cross-reference to the corresponding tables):

"11.4.7.dd Target Cryptographic Suite

The Target Cryptographic Suite identifies the cryptographic suite assigned to the SA.

Type	Length	Value		Scope
[24/25].29	1	A 24-bit integer identifying the cryptographic suite properties. The most significant byte, as defined in Table 134, indicates the encryption algorithm and key length. The middle byte, as defined in Table 135 indicates the data authentication algorithm. The least significant byte, as defined in Table 136, indicates the TEK Encryption Algorithm."		DSA-REQ (BS initiated) DSA-RSP (SS initiated) DSC-REQ (BS initiated) DSC-RSP (SS initiated)

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

Reason for Recommendation

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

Ignore the above changes. Instead:
Page 202 delete lines 24 -49
Page 215 delete lines 42-51
Page 215 line 35 delete ' with DSA'
Replace lines 37-41 by
" The BS may dynamically establish SAs by issuing an SA Add message. Upon receiving an SA Add message the SS shall start a TEK state machine for each SA listed in the message."

Page 87 line 31 Insert contents of file IEEE 802.16.1c-01/39" <http://ieee802.org/16/tg1/docs/802161c-01_39.pdf>.
Page 86 line 15 replace "0-3" with "0-2"
Page 86 line 16 insert new row in table with contents |3| SA Add | PKM-RSP|

Reason for Group's Decision/Resolution

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: P802.16/D4   **Ballot Number:** 0000166   **Comment Date**

Comment # 133   **Comment submitted by:** Roger   Marks

Comment   Type Technical, Non-binding   **Starting Page #** 338   **Starting Line #** 49   **Section**
{originated by Carl Eklund}

Suggested Remedy
Insert
Classifier rule parameters encoding
This compound parameter defines a classifer rule.
Type Length Value Scope
23 n DSA-REQ, DSC-REQ

PHS rule parameters encoding
This compound parameter defines a PHS rule.
Type Length Value Scope
22 n DSA-REQ, DSC-REQ

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

Fixed in another comment.

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **134**   **Comment submitted by:** Roger   Marks

Comment   **Type** Technical, Non-binding   **Starting Page #** 339   **Starting Line #** 28   **Section** 11.4.9

(Originally from Ken Stanwood) There is no use for this TLV

Suggested Remedy

13. Page 339 – delete lines 28-54

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   Comment Date

Comment # **135**   **Comment submitted by:**   Roger   Marks

Comment   Type   **Starting Page #** **341**   **Starting Line #** **25**   **Section**
{originated by Carl Eklund}

Suggested Remedy
Replace paragraph 11.4.12 with 0.0.1.4 and 0.0.1.5 below
Convergence Sublayer
This parameter specifies the convergence sublayer that the connection being set up shall use.
Type Length Value Scope
[24/25].32 2 0: ATM
1: Packet, IPv4
2: Packet, IPv6
2: Packet, 802.3
3: Packet, 802.1Q VLAN
4: Packet, IPv4 over 802.3
5: Packet, IPv6 over 802.3
7: Packet, IPv4 over 802.1Q VLAN
8: Packet, IPv6 over 802.1Q VLAN
9-255 reserved DSA-REQ

Convergence Sublayer Parameter Encodings
Each convergence sublayer defines a set of parameters that are encoded within a subindex under the type values listed below. In the
cases of IP over 802.x the relevant IP and 802.x parmeters shall be included in the DSx-REQ message
Type Convergence Sublayer
[24/25].99 ATM
[24/25].100 Generic Packet (applicable to convergence layer 101-104)
[24/25].101 Packet, IPv4
[24/25].102 Packet, IPv6
[24/25].103 Packet, 802.3
[24/25].104 Packet, 802.1Q VLAN

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Changed the headings:
"Convergence Sublayer" to "Convergence Sublayer Specification"
"Convergence Sublayer Parameter Encodings" to "Convergence Sublayer Parameter Encoding Rules"

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **136**   **Comment submitted by:** Roger   Marks

Comment   **Type** Technical, Non-binding   **Starting Page #** 343   **Starting Line #** 38   **Section**

{originated by Carl Eklund}
Current section on convergence sublayer parameters is confusing.

Suggested Remedy

Page 352 Delete section 11.4.12.1.8.1
Change p.346 line 43 to IP packet classification rule encodings.
P.346 L. 52 change 99.1.[22/23].9 to 23.1.[100/101]
P.347 L.12,28,46,59 change 99.1.[22/23].9 to 23.1.[100/101]
P.348 L.13,27,44,61 change 99.1.[22/23].9 to 23.1.[100/101]
P349 L.15,31,44,59 change 99.1.[22/23].9 to 23.1.[100/101]
P.350 L.11 ,45,57change 99.1.[22/23].10 to 23.1.[102/103]
P.351 L.13,36change99.1.[22/23].11 to 23.1.[103]
Pages 352 through page 356 Change every occurrence of "99.1.26" to "22"

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

Reason for Recommendation

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

Ignore the above changes but do the following changes:

Replace page 343 line 38 to page 356 line 57 with the contents of file "IEEE 802.16.1c-01/37"
<http://ieee802.org/16/tg1/docs/802161c-01_37.pdf>.

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **137**   **Comment submitted by:** Roger   Marks

Comment   Type   **Starting Page #** 343   **Starting Line #** 38   **Section**
{originated by Carl Eklund}

Suggested Remedy
Delete Page 343 line 38 through 344 line 14

Proposed Resolution   Recommendation: Recommendation by

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: P802.16/D4   **Ballot Number:** 0000166   **Comment Date**

Comment # 138   **Comment submitted by:** Roger   Marks

Comment   Type Technical, Non-binding   **Starting Page #** 344   **Starting Line #** 15   **Section** 11.4.12.1.6.1

{From Carl Eklund}

Suggested Remedy

Page 344 Delete section 11.4.12.1.6.1
Page 344 Delete section 11.4.12.1.6.3
Page 352 Delete section 11.4.12.1.8.1

Proposed Resolution   Recommendation: Recommendation by

Reason for Recommendation

Resolution of Group   Decision of Group: Accepted

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Superceded by 136.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   Comment Date

Comment # **139**   **Comment submitted by:** Stanley   Wang   2001/09/07

Comment   **Type** Editorial   **Starting Page #** 345   **Starting Line #** 16   **Section** 11.4.12.1.6.5

Typo

Suggested Remedy

Change the title to read "Classifier Error Parameter Set"

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # 140   **Comment submitted by:**   Stanley   Wang   2001/09/07

Comment   Type Editorial   **Starting Page #** 345   **Starting Line #** 29   **Section** 11.4.12.1.6.5

Typo

Suggested Remedy

Change "Confirmation Code" to "Error Code"
Make the same change for Line 39.

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   Comment Date

Comment # **141**   **Comment submitted by:** Stanley   Wang   2001/09/07

Comment   **Type** Editorial   **Starting Page #** 345   **Starting Line #** 52   **Section** 11.4.12.1.6.6
This shall be a sub-section of 11.4.12.1.6.5

Suggested Remedy
Make this section a level-7 section, a subsection of 11.4.12.1.6.5
Make the same change for Page 346 Line 6 and Page 346 Line 24.

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

Editor's Notes   **Editor's Actions**   l) none needed
Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **142**   **Comment submitted by:** Stanley   Wang   2001/09/07

Comment   **Type** Editorial   **Starting Page #** 346   **Starting Line #** 17   **Section** 11.4.12.1.6.7
Clarity

Suggested Remedy
Change the "Value" column to read "Confirmation Code except okay (0)"

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **143**   **Comment submitted by:** Stanley   Wang   2001/09/07

Comment   **Type** Editorial   **Starting Page #** 346   **Starting Line #** 41   **Section** 11.4.12.1.6.8
Clarity

Suggested Remedy
Change the line to read "NOTE -- The entire Classifier Error Parameter Set encoding shall have a total length of less than 256 octets." and move the note to Page 345 Line 51.

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **144**   **Comment submitted by:** Roger   Marks

Comment   Type   **Starting Page #** 354   **Starting Line #** 46   **Section**
{originated by Carl Eklund}

Suggested   Remedy
Page 354 Replace lines 46 through page 355 line 9 with
"The PHSF is a string of bytes containing the header information to be suppressed by the sending CL and reconstructed by the receiving CL. The MSB of the string corresponds to first byte of the CL-SDU."

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **145**   **Comment submitted by:** Roger   Marks

Comment   Type   **Starting Page #** 355   **Starting Line #** 24   **Section**

{originated by Carl Eklund}

Suggested   Remedy

Page 355 line 24-25 Delete "in the uplink .... downlink direction"

Proposed   Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **146**   **Comment submitted by:** Roger   Marks

Comment   **Type** Technical, Non-binding   **Starting Page #** 357   **Starting Line #** 1   **Section** 11.4.12.2.1

(Originally from Ken Stanwood) The above information is implied by various bit and pieces, but should be explicit to guard against erroneous parameter sets.

Suggested Remedy

Page 357, line 1, add section before current 11.4.12.2.1:

"11.4.12.2.1 ATM Switching Encoding

This field defines the switching methodology for the service. If the field = 0, at least one VPI, VCI pair shall be defined for classifying the service. If the field = 1, exactly one VPI and zero or one VCI shall be specified for classifying the service. If the field = 2, exactly one VPI and one VCI shall be defined for classifying the service. If the field = 0, PHS is not allowed and the SDU size TLV must shall 52. If the field = 1, and PHS is on for the service, the SDU size TLV shall equal 51, otherwise it shall be set equal to 52. If the field = 2, and PHS is on for the service, the SDU size TLV shall equal 49, otherwise it shall be set equal to 52.

Type	Length	Value
99.2.[22/23].1	1	0 = no switching methodology applied
		1 = VP switching
		2 = VC switching"

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

Reason for Recommendation

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

Ignore the above changes but do the following:

Page 357, line 1, add section before current 11.4.12.2.1:

"11.4.12.2.1 ATM Switching Encoding

This field defines the switching methodology for the service. If the field = 0, at least one VPI, VCI Classifier pair shall be defined for classifying the service. If the field = 1, exactly one VPI Classifier and zero or one VCI Classifier shall be specified for classifying the service.

If the field = 2, exactly one VPI Classifier and one VCI Classifier shall be defined for classifying the service. If the field = 0, PHS is not allowed and the SDU size TLV shall equal 52. If the field = 1, and PHS is on for the service, the SDU size TLV shall equal 51, otherwise it shall be set equal to 52. If the field = 2, and PHS is on for the service, the SDU size TLV shall equal 49, otherwise it shall be set equal to 52.

Type	Length	Value
[24/25].99.0	1	0 = no switching methodology applied
		1 = VP switching
		2 = VC switching"

Delete page 357, lines 1-12.

Page 357, line 14, decrease the header level by one to level 5, and change the title from "VPI" to "VPI Classifier"
Page 357, line 26, decrease the header level by one to level 5, and change the title from "VCI" to "VCI Classification"

On page 357, lines 22 & 35, replace "99.2.[22/23].9" with "[24/25].99"

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Changed heading from "VPI Classifier" to "VPI Classification", for consistency.

Minor grammar edits also:

This field defines the switching methodology for the service. If the field = 0, at least one VPI/VCI Classifier pair shall be defined for classifying the service. If the field = 1, exactly one VPI Classifier and zero or one VCI Classifier shall be specified for classifying the service. If the field = 2, exactly one VPI Classifier and one VCI Classifier shall be defined for classifying the service. If the field = 0, PHS is not allowed and the SDU size TLV shall equal 52. If the field = 1 and PHS is on for the service, the SDU size TLV shall equal 51; otherwise it shall be set equal to 52. If the field = 2 and PHS is on for the service, the SDU size TLV shall equal 49; otherwise it shall be set equal to 52.

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   Comment Date

Comment # **147**   **Comment submitted by:** Roger   Marks

Comment   **Type** Technical, Non-binding   **Starting Page #** 357   **Starting Line #** 29   **Section** 11.4.12.2.1.2

(Originally from Ken Stanwood) The above information is implied by various bit and pieces, but should be explicit to guard against erroneous parameter sets.

Suggested Remedy

Page 357, line 29 – add "This TLV shall immediately follow the VPI TLV with which it is associated."

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **148**   **Comment submitted by:**   Peter   Ecclesine

Comment   **Type** Technical   **Starting Page #** 358   **Starting Line #** 22   **Section** 12.2

Physical layer profiles vary in different regulatory domains, and radio propagation is different at 10GHz than 60GHz. Whichever you intend this clause to be (e.g. 802.11d is internationalization of a US base standard), the details are missing. I think you should address the different channelization rules for the different bands in the US as a minimum, and other major (Europe, Japan, China) domains in an internationalization supplement.

Suggested Remedy

Supply the descriptions for 12.2.1 for the US rules on 10-66 GHz.

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Subclause has been deleted.

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **149**   **Comment submitted by:** Jose   Costa

Comment   Type Editorial   **Starting Page #** 359   **Starting Line #** 13   **Section** 13. Bibliography

The reference for [B11] is incomplete. ITU-R Recommendations are grouped by series. Without the letter of the series the reference is ambiguous.

Suggested Remedy

This ITU-R Recommendation could be in the P-series, that is: Recommendation ITU-R P.452 "Prediction procedure for the evaluation of microwave interference between stations on the surface of the Earth at frequencies above about 0.7 GHz". If this is not the intended reference it should be replaced by the full reference to the correct one.

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

Change [B11] to:

ITU-R Recommendation P.452 ("Prediction procedure for the evaluation of microwave interference between stations on the surface of the Earth at frequencies above about 0.7 GHz")

Reason for Group's Decision/Resolution

Group's Notes

Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **150**   **Comment submitted by:**   Stanley   Wang   Member

Comment   **Type** Editorial   **Starting Page #** 35   **Starting Line #** 46   **Section** 3

Typo.

Suggested Remedy

Change "a uplink" to "an uplink"

Make the same change for Page 78 Line 64 and Page 133 Line 3.

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

Reason for Recommendation

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

Reason for Group's Decision/Resolution

Group's Notes
Group's Action Items

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

Editor's Questions and Concerns

Editor's Action Items

Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **151**   **Comment submitted by:** Stanley   Wang   Member

Comment   Type Editorial   **Starting Page #** 36   **Starting Line #** 56   **Section** 4

Typo.

Suggested Remedy

Remove ")" from the abbreviation.

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

Reason for Group's Decision/Resolution

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Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **152**   **Comment submitted by:** Stanley   Wang   Member

Comment   Type Editorial   **Starting Page #** 70   **Starting Line #** 32   **Section** 6.2.2.2.1
Clarity

Suggested   Remedy
Page 70, line 32, Change the title of Table 7 to read "Fragmentation Sub-header Format"

Page 72, line 3229, Change the title of Table 11 to read "Packing Sub-header Format"

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

Reason for Recommendation

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

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

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Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **153**   **Comment submitted by:** Stanley   Wang   Member

Comment   **Type** Technical   **Starting Page #** 152   **Starting Line #** 35   **Section** 6.2.13.1

SFID is a system-wide identifier and should not be assigned by the BS.

Suggested Remedy

Delete the sentence "Service Flows have a 32-bit Service Flow Identifier (SFID)."

Change the next sentence to read "All Service Flows have a 32-bit Service Flow Identifier (SFID);"

Also on page 152, line 50, delete "by the BS"

Also on page 154, line 52, delete "assigned by the BS"

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

Reason for Recommendation

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Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **154**   **Comment submitted by:** Stanley   Wang   Member

Comment   Type Editorial   **Starting Page #** 203   **Starting Line #** 37   **Section** 7.2.4

All transitions must be labeled with event/action.

Suggested Remedy

Line 37, change "Timeout" to "Timeout /"

Line 41, change "Auth Reject" to "Auth Reject /"

Lines 42 & 43, change "Perm Auth Reject" to "Perm Auth Reject /"

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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Editor's Notes   Editor's Actions k) done

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Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **155**   **Comment submitted by:**   Stanley   Wang   Member

Comment   Type Editorial   **Starting Page #** 207   **Starting Line #** 19   **Section** 7.2.4.5

Clarity.

Suggested Remedy

Change "<event/rcvd message> - <state>" to "<event> (<rcvd message>) --> <state>"

Make sure the same chage is also made on page 207, line 19.

Proposed Resolution   Recommendation: **Recommendation by**

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Made same change on page 213, line 19 (see157)

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Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **156**   **Comment submitted by:** Stanley   Wang   Member

Comment   **Type** Editorial   **Starting Page #** 208   **Starting Line #** 31   **Section** 7.2.4.5

Typo.

Suggested Remedy

Underline "5-E"

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

Reason for Recommendation

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

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

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Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **157**   **Comment submitted by:** Stanley   Wang   Member

Comment   **Type** Editorial   **Starting Page #** ?   **Starting Line #** 19   **Section** 7.2.5.5

Clarity.

Suggested Remedy

Make a copy of page 207 line 19 and copy it to page 213 line 19.

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

Reason for Recommendation

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

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

modified per 155

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Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **158**   **Comment submitted by:** Stanley   Wang   Member

Comment   **Type** Editorial   **Starting Page #** 213   **Starting Line #** 39   **Section** 7.2.5.5

Typo.

Suggested Remedy

Add space before "(Stop)"

Make the same change on line 47.

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

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

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

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Document under Review: P802.16/D4   **Ballot Number:** 0000166   Comment Date

Comment # 159   **Comment submitted by:** Stanley   Wang   Member

Comment   **Type** Editorial   **Starting Page #** 214   **Starting Line #** 57   **Section** 7.2.5.5

All key exchange messages are authenticated by HMAC. Adding a specific note to this particular transition misleads the reader and makes the reader belive that it is the only trasition that HMAC is validated.

Suggested Remedy

Page 214, line 57, delete the entire note.

Page 215, line 3, delete the entire note.

Page 215, line 14, delete the entire note.

Proposed Resolution   Recommendation: **Recommendation by**

Reason for Recommendation

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

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

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Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **160**   **Comment submitted by:** Stanley   Wang   Member

Comment   **Type** Editorial   **Starting Page #** 215   **Starting Line #** 25   **Section** 7.2.5.5

Typo.

Suggested Remedy

Change "remove CID" to "remove SAID"

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

Reason for Recommendation

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

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

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Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # 161   **Comment submitted by:**   Stanley   Wang   Member

Comment   **Type** Technical   **Starting Page #** 293   **Starting Line #** 53   **Section** 9.1.1

Per Clause 9.13 of RFC 2132, "DHCP Options and BBOTP Vendor Extensions", option #60 is "Vendor Class Identifier".

Suggested Remedy

Change "(Vendor Specific Option)" to "(Vendor Class Identifier)"

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

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

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Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **162**   **Comment submitted by:** Stanley   Wang   Member

Comment   **Type** Technical   **Starting Page #** 302   **Starting Line #** 34   **Section** 11

Current definition of the length field of a TLV encoding limits the length of the value field. For example, for a 1-byte length field, the maximum length for the value field is 255 bytes. In addition, TLVs for PKM messages use 2-byte length field while others use 1-byte length field.

This can causes some troubles such as the value field is longer than the maximum length allowed by the length field.

There is a standard way of handling the encoding rules, re: ITU-T X690.

Suggested Remedy

Page 31, line 35, add the following normative reference:

"[ITU-T X690] ITU-T Recommendation X.690, "Information Technology -- ASN.1 Encoding Rules: Specification of Basic Encoding Rules (BER), Canonical Encoding Rules (CER), and Distinguished Encoding Rules (DER)," December 1997."

Page 302, line 34, add the following paragraph:

The format of the length field shall be per the "definite form" of [ITU-T X690]. Specifically, if the actual length of the value field is less than or equal to 127 bytes:

 . the length of the length field shall be one byte,
 . the msb of the length field shall be set to 0, and
 . the other 7 bits of the length field shall be used to indicate the actual length of the value field in bytes.

If the length of the value field is more than 127 bytes:

 . the length of the length field shall be one byte more than what is actually used to indicate the length of the value field in byte,
 . the msb of the first byte of the length field shall be set to 1,
 . the other 7 bits of the first byte of the length field shall be used to indicate the number of additional bytes of the length field (i.e., excluding the first byte), and
 . the remaining bytes (i.e., excluding the first byte) of the length field shall be used to indicate the actual length of the value field."

Page 303, line 11, remove "(1 byte}" from the "Length" field title. Make the same change for all TLV tables (e.g., page 304 line 11, page 305 line 9, etc)

Page 309, line 31, change "2 byte" to "variable"

Page 309, line 44, delete "is 2 bytes, and"

Page 313, line 26, change "33" to "variable"

Page 315, line 43, change ">=9" to "variable"

Page 317, line 26, change "6*n" to "5*n"

Page 318, line 35, change "14" to "variable"

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Reason   for   Recommendation

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Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # 163   **Comment submitted by:**   Stanley   Wang   Member

Comment   Type Technical   **Starting Page #** 309   **Starting Line #** 48   **Section**   11.2

The statement on line 48 applies only to PKM messages. There is no similar statement that applies to other messages.

Suggested Remedy

Page 309, line 48, delete the entire line.

Page 302, line 36, add to the end of the paragraph "MAC management messages that do not contain all required encodings or contain encoding(s) with invalid length(s) shall be silently discarded."

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

Reason for Recommendation

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Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **164**   **Comment submitted by:** Roger   Marks   Member   2001-10-10

Comment   Type Editorial   **Starting Page #**   **Starting Line #**   **Section**

On page 155, lines 47-48 (item b): this capability is inherent to the system and is not enabled by service classes.

The note on Page 155, Line 54 hard to understand.

Suggested Remedy

Delete page 155, lines 47-48 (item b).

On Page 155, Line 54: Change the note to read
"NOTE - Service classes are merely identifiers for a specific set of QoS parameter set values. Hence, the use of service classes is optional.
A service identified by a service class is treated no differently, once established, than a service that has the same QoS parameter set
explicitly specified."

Proposed Resolution   Recommendation: Recommendation by

Reason for Recommendation

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

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Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   Comment Date

Comment # **165**   **Comment submitted by:** Roger   Marks   Member   2002-10-11

Comment   **Type** Editorial   **Starting Page #** 222   **Starting Line #** 64   **Section**

Footnote at the bottom of page 222 indicates cause for concern but does not fully address it.

Suggested Remedy

Change note to:
"If two or more PDUs with less than 8 byte payloads are transmitted in the same frame using the same SA, the XOR of the payload plaintexts can be found easily. In practice, this situation is very unlikely to occur, as payloads are typically larger than 8 bytes. In the case that multiple payloads of less than 8 bytes are to be transmitted in the same frame on the same SA and service, packing of the short SDUs into a single PDU will eliminate this weakness. If the SDUs are for different services, packing the SDUs with zero-length fictitious SDUs allows the use of the packing subheader to extend the size of the PDU to at least 8 bytes."

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

Reason for Recommendation

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Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   **Comment Date**

Comment # **166**   **Comment submitted by:** Roger   Marks   Member   2001-10-12

Comment   **Type** Editorial   **Starting Page #** 129   **Starting Line #** 50   **Section** 6.2.8

Clause 6.2.8 contains leftovers that should have been updated when the contention resolution algorithm was made to be used for both initial ranging and bandwidth requests.

Suggested Remedy

Page 299, line 63, add a new entry to the table that reads:

"SS | T15 | Wait for bandwidth request grant | 10 ms | | service QoS dependent |"

Replace clause 6.2.8 (including 6.2.8.1) with the content of IEEE 802.16.1c-01/40" <http://ieee802.org/16/tg1/docs/802161c-01_40.pdf>.

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

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

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In revised version of 6.2.8:
deleted "However, this is just an instructional tool", because the subclause is normative, not informative.
changed "service queue" to "service QoS" because "service queue" is not defined in document

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Document under Review: **P802.16/D4**   **Ballot Number:** **0000166**   Comment Date

Comment # **167**   **Comment submitted by:** Roger   Marks   Member   2001-10-12

Comment   **Type** Editorial   **Starting Page #** 357   **Starting Line #** 47   **Section** 12.1

The introductory paragraph in 12.1 is inconsistent because 12.1 includes profiles on the MAC CPS as well as the CS, and there are no PHY profiles. Also, the idea that the MAC and PHY profile are independent is probably not appropriate; if PHY profiles are later added, they will cross boundaries (e.g., with PHY X you use ARQ; with PHY Y you don't).

Suggested Remedy

Change the opening to:

12) System profiles
This subclause defines system profiles which lists set of features and functions to be used in typical immplementation cases.

Delete:

Convergence Sublayer profiles
Convergence sublayer profiles define the mandatory and optional features for the convergence sublayer aspects of a system intended for a particular networking scenario.

Move "Basic ATM system profile" up a heading level to 12.1.

At the end of 12.1.1, change: "For the MAC sublayer itself:" to "For the MAC CPS"

Change "MAC sublayer CRC is optional" to "CRC is optional."

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

Reason for Recommendation

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Document under Review: P802.16/D4   **Ballot Number: 0000166**   Comment Date

Comment # 168   **Comment submitted by:** Roger   Marks   Member   2001-10-12

Comment   **Type** Editorial   **Starting Page #** 129   **Starting Line #** 50   **Section** 6.2.8

 Some of the definitions in Clause 3 are unused in the text, inconsistent with the text, or grammatically incorrect.

Suggested Remedy

Edit the definitions in general. In particular, make the following changes:

fixed wireless access: Wireless access application in which the location of the base station and subscriber station are fixed in location during operation.

Information Element (IE): A component of the downlink oruplink maps that defines the starting address associated with an IUC.

Interval Usage Code (IUC): A code identifying a particularburst profile that can be used by a downlink or uplink transmission interval.

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

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