

2007-03-16

IEEE 802.16-07/022

# P802.16g to RevCom: Conditional Approval

16 March 2007

# Rules

Motions requesting conditional approval to forward where the prior ballot has closed shall be accompanied by:

- Date the ballot closed
- Vote tally including Approve, Disapprove and Abstain votes
- Comments that support the remaining disapprove votes and Working Group responses.
- Schedule for confirmation ballot and resolution meeting.

# Date the ballot closed: **10 March 2007**

Stage	Open	Close	
Sponsor Ballot	13 Dec	15 Jan	2007
Sponsor Ballot Recirc #1	29 Jan	13 Feb	2007
Sponsor Ballot Recirc #2	23 Feb	10 Mar	2007

# Vote tally including Approve, Disapprove and Abstain votes

- 132 Approve 98%
- 3 Disapprove
- 14 Abstain 9%
  
- Return 76%
  
- However:
  - Only 2 comments from 1 Disapprove voter in last recirc; on same matter

# Comment resolution

		Editorial	Technical	Total	Outstanding Disapprove Comments	Disapprove Voters
<b>SB</b>	802.16-07/002r4	101	115	216	12	3
<b>Recirc#1</b>	802.16-07/012r3	21	52	73	9	2
<b>Recirc#2</b>	802.16-07/018r3	39	117	156	2	1
		<b>161</b>	<b>284</b>	<b>445</b>	<b>23</b>	<b>3</b>

# Comments that support the remaining disapprove votes and Working Group responses

- attached

# Schedule for confirmation ballot and resolution meeting

- Mar 28                      Complete D9
- Mar 30:                      Issue D9
- Apr 3:                        Open First Recirculation
- Apr 18:                      Close First Recirculation
- May 7-10:                    comment resolution at  
802.16 Session #49, if  
necessary

# 802.16 WG Motion

802.16 Closing Plenary: 15 Mar 2007:

Motion: To authorize the Working Group Chair to request conditional approval for P802.16g/D9 to be submitted to Revcom.

- Proposed: Phillip Barber
- Seconded: Erik Colban
- Approved 56-0-1.



# Motion

To grant conditional approval, under Clause 20, to forward P802.16g to Revcom.

Moved: Roger Marks

Seconded:

Approve:

Disapprove:

Abstain:

Comment by:

GIESBERTS, PIETER-PAUL

Membership Status:Date: 01/12/2007Comment # 53Document under Review: P802.16g/D6Ballot ID: P802.16g/D6Comment      Type Technical      Part of Dis  Satisfied       Page 14      Line 34      Fig/Table#      Subclause 6.3.2.3.63

The current NSP request/response mechanism is unnecessary complex, badly documented (no 6.x section describes the behavior), not negotiated (there are no capability bits that indicate whether or not a BS or MS supports these messages) and it may generate unnecessary (partial) network entries by MS' looking for a network. NSP TLVs should be communicated through DCD messages, rather than through the SII-ADV and SBC-REQ/RSP messages. That is much simpler for both the MS and the BS, it is more in line with the current network entry procedures and it is more flexible as it makes it possible for a BS to inform an MS of its' neighbours NSPs (through the MOB\_NBR-ADV and the DCD settings TLV).

**Suggested Remedy**

Remove 6.3.2.3.63 (SII-ADV message, page 14), 11.1.8.2 (NSP Change Count TLV, page 21) and 11.8.9 (SIQ TLV, page 23) and change the scope of the NSP List TLV (11.1.8.1) to DCD only; change the section number of 11.1.8.1. to 11.4.3 and remove 11.1.8. In Section 11.1.8.1 remove the line "When an SBC-REQ message with an SIQ TLV (with bit 1 set) is received, the BS should respond with an SBC-RSP message with an NSP List TLV.". Optionally add the following note to that section: "In case NSP TLV is not present in DCD, the only NSPID that is available is equal to the NAPID (Operator ID)".

**Group Resolution****Decision of Group: Disagree****Reason for Group's Decision/Resolution**

The commenter may be correct that the proposed remedy may reduce overhead and be more efficient, but it is unclear at this time. The group would prefer to see additional validation/simulation justifying the proposed method, especially demonstrating improved efficiency over the current solution, prior to approving the revised method. Additionally, the group proposes a revised remedy, should the commenter's proposal be proven:

Remove 6.3.2.3.63 (SII-ADV message, page 14)

Remove 11.1.8.2 (NSP Change Count TLV, page 21)

Remove 11.8.9 (SIQ TLV, page 23)

In the table in 11.1.8.1, change the scope of NSP List TLV (11.1.8.1) to DCD only

In the table in 11.1.8.1, add "Assignment method, administration, and usage of NSP Ids are outside the scope of this standard." to the end of the paragraph in for 'value'

Move the content of the table in section number of 11.1.8.1 to insert into Table 358

At the end of 6.3.2.3.2, add text:

"If the BS has a list of NSP IDs to transmit, it shall include the NSP List TLV in the DCD. If the BS has no list of NSP IDs to transmit, NSP List TLV shall be omitted."

Remove 11.1.8

**Group's Notes**

Approved without opposition

**Editor's Notes**

**Editor's Actions**

**2007/07/16**

**IEEE 802.16-07/001**

**Comment by:**

GIESBERTS, PIETER-PAUL

**Membership Status:**

**Date:** 01/12/2007

**Comment #** 54

**Document under Review:** P802.16g/D6

**Ballot ID:** P802.16g/D6

**Comment**      **Type** Technical      **Part of Dis**  **Satisfied**       **Page** 15      **Line** 1      **Fig/Table#**      **Subclause** 6.3.2.3.64

The proposed Location Based Services message is unnecessary and a needless complication: it requires the BS to transmit yet another message with its own and neighbours' information. There is no reason why the only currently proposed TLV couldn't be included in the DCD instead - the DCD and MOB\_NBR-ADV messages can in that case transfer all required information and this message can be removed.

**Suggested Remedy**

Remove section 6.3.2.3.64 (LBS-ADV message) and change the scope of the BS Coordinate Broadcast (11.21) to DCD; change its section number to 11.4.4.

**GroupResolution**

**Decision of Group:** Disagree

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

It is unnecessary and incurs substantial overhead penalty to transmit the LBS info with the same frequency as DCD. LBS can be transmitted at much longer intervals. Transmitting LBS in a separate broadcast message is the only other reasonable option. It may be that we could engineer a way to put it into NBR-ADV instead of creating an all new broadcast MAC management message, but that has not been proposed, and we are concerned about backwards compatibility of message parsing.

**Group's Notes**

Approved without opposition

**Editor's Notes**

**Editor's Actions**

Comment by:

GIESBERTS, PIETER-PAUL

Membership Status:Date: 01/12/2007Comment # 55Document under Review: P802.16g/D6Ballot ID: P802.16g/D6Comment    Type Technical    Part of Dis  Satisfied     Page 15    Line 51    Fig/Table#    Subclause 6.3.25

Section 6.3.25 currently does not contain any normative text and seems to be pretty much useless. Either extend the section or remove it altogether.

Suggested Remedy

Remove Section 6.3.25 (page 15)

GroupResolutionDecision of Group: Principle

Replace the text of 6.3.25 as:

MIH handover function is the support of IEEE Std 802.21 specific features and functions.

The 802.16 entity may send or receive the MOB\_MIH-MSG message to or from the peer 802.16 entity in order to convey MIHF Frames carrying the 802.21 MIH protocol messages.

In 6.3.2.3.62, modify the text before the table as:

[BEGIN DELETE]~~The 802.16 entity may send or receive the MOB\_MIH-MSG message to or from the peer 802.16 entity in order to convey MIHF Frames carrying the 802.21 MIH protocol messages. The~~[END DELETE][BEGIN INSERT]This[END INSERT] message shall be transmitted on the Primary Management connection.

Reason for Group's Decision/ResolutionGroup's Notes

Approved without opposition

Editor's NotesEditor's Actions

Comment by:

GEIPEL, MICHAEL D

Membership Status:

Date: 01/12/2007

Comment # 82

Document under Review: P802.16g/D6

Ballot ID: P802.16g/D6

<u>Comment</u>	<u>Type</u> Editorial	<u>Part of Dis</u> <input checked="" type="checkbox"/>	<u>Satisfied</u> <input type="checkbox"/>	<u>Page</u> 9	<u>Line</u> 32	<u>Fig/Table#</u>	<u>Subclause</u> 5.3
----------------	-----------------------	--	---	---------------	----------------	-------------------	----------------------

Incorrect reference

Suggested Remedy

Replace "11.13.19.3.3.20" with "11.13.19.5.1" on line 32.

GroupResolution

Decision of Group: Agree

Replace "11.13.19.3.3.20" with "11.13.19.5.1" on line 32.

Reason for Group's Decision/Resolution

Group's Notes

Approved without opposition

Editor's Notes

Editor's Actions

Comment by:

GEIPEL, MICHAEL D

Membership Status:

Date: 01/12/2007

Comment # 83

Document under Review: P802.16g/D6

Ballot ID: P802.16g/D6

Comment    Type Editorial    Part of Dis  Satisfied     Page 9    Line 48    Fig/Table#

Subclause 5.3

grammar error

Suggested Remedy

Change the second word ("require") in line 48 as follows:

... the GPCS require the upper layer ...

to

... the GPCS requires the upper layer ...

GroupResolution

Decision of Group: Agree

Change the second word ("require") in line 48 as follows:

... the GPCS require the upper layer ...

to

... the GPCS requires the upper layer ...

Reason for Group's Decision/Resolution

Group's Notes

Approved without opposition

Editor's Notes

Editor's Actions

Comment by: Vladimir Yanover

Membership Status: Member

Date: 1/15/2007

Comment # 1125

Document under Review:

Ballot ID: P802.16g/D6

Comment      Type Technical      Part of Dis  Satisfied       Page 9      Line 16      Fig/Table#      Subclause 5.3

There is a concern with regard to utility of this feature alone in absence of certain framework (like upper layer protocol between the network and the terminal). For example, to use GPCS Service Flows the terminal has to apply certain classifiers at UL connections. The classification happens in this case above MAC, but anyway there should be some [upper layer] protocol to communicate the classification rules to the terminal. Currently there is no definition of such protocol. Particularly NWG spec does not have such function. Another example is negotiation of exact encapsulation format.

It was noticed by some members that this feature is actually out of the scope of 16g project defined as follows:

“This document provides enhancements to the MAC and PHY management entities of IEEE Standard 802.16-2004, as amended by P802.16e, to create standardized procedures and interfaces for the management of conformant 802.16 devices.”

Recommendation: Define GPSC support as optional in 802.16g

#### Suggested Remedy

Change

#### 5.3 Generic Packet Convergence Sublayer (GPCS)

The Generic Packet CS (GPCS) is an upper layer protocol-independent packet convergence sublayer that supports multiple protocols over 802.16 air interface.

#### Implementation of GCPS is optional.

It is defined as follows:

#### GroupResolution

Decision of Group: Disagree

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

All convergence sublayers are optional. Selection of the specific CS employed in an implementation is specified by bit selection, negotiated in REG-REQ/RSP. See 11.7.7.1 Classification/PHS options and SDU encapsulation support, Table 440. This bit selection makes support of the feature optional for the SS and optional for the BS.

#### Group's Notes

Approved without opposition

Editor's Notes

Editor's Actions

**2007/07/16**

**IEEE 802.16-07/001**

Comment by:

Vladimir Yanover

Membership Status: Member

Date: 1/15/2007

Comment # **1126**

Document under Review:

Ballot ID: **P802.16g/D6**

Comment    Type **Technical**    Part of Dis  Satisfied     Page **15**    Line **51**    Fig/Table#    Subclause

No need to specify MIH feature as mandatory

Suggested Remedy

6.3.25 MIH handover Function

MIH handover function is the support of IEEE Std 802.21 specific features and functions.

Implementation of MIH handover function is optional.

GroupResolution

Decision of Group: **Disagree**

Reason for Group's Decision/Resolution

The requested optionality is already present in the text.

The use of the term 'may' does not impose a requirement on either the BS or the MS.

Note that the capability negotiation for the feature specifically calls out that MS and BS may indicate 'Not Support'

From 11.7.26

The "MIH Capability Supported" TLV indicates if MIH is supported. MS and BS that support the MIH handover function shall identify themselves by inclusion of the MIH capability supported. MS and BS that do not support the 802.21 MIH handover function shall not support the MOB\_MIH-MSG management message.

From 6.3.2.3.62

The 802.16 entity **may** send or receive the MOB\_MIH-MSG message to or from the peer 802.16 entity in order to convey MIHF Frames carrying the 802.21 MIH protocol messages.

Group's Notes

Approved without opposition

Editor's Notes

Editor's Actions



**Comment by:** Vladimir Yanover**Membership Status:** Member**Date:** 1/15/2007**Comment #** 1127**Document under Review:****Ballot ID:** P802.16g/D6

<b>Comment</b>	<b>Type</b> Technical	<b>Part of Dis</b> <input checked="" type="checkbox"/>	<b>Satisfied</b> <input type="checkbox"/>	<b>Page</b> 14	<b>Line</b> 34	<b>Fig/Table#</b>	<b>Subclause</b> 6.3.2.3.63
----------------	-----------------------	--	---	----------------	----------------	-------------------	-----------------------------

Advertisement of Service providers IDs makes sense only for mobile and may be nomadic systems. It should be defined as optional in the standard to make it "required" in specific profiles

**Suggested Remedy*****Change***

6.3.2.3.63 Service Identity Information (SII-ADV) message

A BS may use the SII-ADV message to broadcast a list of Network Service Provider (NSP) Identifiers. The message may be broadcast periodically without solicitation or could be solicited by an (M)SS. This message is sent from the BS to all MSs on a broadcast CID.

Assignment method, administration, and usage of NSP IDs are outside the scope of this standard.

Implementation of SII-ADV message is optional for both BS and MS.

**Change in p.20, line 35**

11.1.8 NSP List encodings

11.1.8.1 NSP List TLV

The NSP LIST TLV is a TLV that contains one or more Network Service Provider 24-bit Identifiers. When an SBC-REQ message with an SIQ TLV (with bit 1 set) is received, the BS should respond with an SBC-RSP message with an NSP List TLV.

Implementation of NSP List TLV is optional for both BS and MS.

**GroupResolution****Decision of Group:** Disagree**Reason for Group's Decision/Resolution**

The requested optionality is already present in the text.

The text only requires support for the specified messages and TLVs when NSP IDs are used on the BS. No NSP IDs, no messages need be supported. And there is no requirement that any network or BS support NSP IDs.

**Group's Notes**

Approved without opposition

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

Comment by: Vladimir Yanover

Membership Status: Member

Date: 1/15/2007

Comment # 1128

Document under Review: IEEE P802.16g-06/D6

Ballot ID: P802.16g/D6

Comment      Type Technical      Part of Dis  Satisfied       Page 15      Line 1      Fig/Table#      Subclause 6.3.2.3.64

Some 802.16 members noticed that more analysis needed, particularly about PHY features to be used in locating the terminal's position. Meanwhile it should be defined as optional.

**Suggested Remedy**

6.3.2.3.64 Location Based Services (LBS-ADV) message

A BS may use the LBS-ADV message to broadcast the LBS information. The message may be broadcast periodically without solicitation. This message is sent from the BS to all MSs on a broadcast CID.

Implementation of LBS-ADV message is optional for both BS and MS.

**GroupResolution**

Decision of Group: Disagree

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

The requested optionality is already present in the text.

The use of the term 'may' does not impose a requirement on either the BS or the MS.

**Group's Notes**

Approved without opposition

**Editor's Notes**

**Editor's Actions**

Comment by: Vladimir YanoverMembership Status: MemberDate: 1/15/2007Comment # 1129Document under Review: IEEE P802.16g-06/D6Ballot ID: P802.16g/D6Comment   Type Technical   Part of Dis  Satisfied    Page 20   Line 13   Fig/Table#   Subclause 11.1.13

There are several problems in MAC version encoding (11.1.3).

1. The text says [about TLV value]:

6: Indicates conformance with IEEE Std 802.16-2004, IEEE Std 802.16e-2005 and IEEE Std 802.16f-2005

7: Indicates conformance with IEEE Std 802.16-2004, IEEE Std 802.16e-2005, IEEE Std 802.16f-2005 and IEEE Std 802.16g-2007

The problems:

- needs clarification as there is no "conformance with IEEE Std 802.16e-2005" (which is a combination of amendment and corrigenda to IEEE Std 802.16-2004)
- Conformance to IEEE Std 802.16-2004 + IEEE Std 802.16e-2005 is surprisingly bound to the conformance to IEEE Std 802.16f-2005 (MIB for fixed OFDM applications)
- Value 7 indicates conformance to 802.16g-2007 as a whole. Unfortunately the 16g standard includes so many topics not related to each other (ND&S, LBS, MIH, RRM, management primitives) that the only reasonable way of handling them is to make all optional and select features using profiles mechanism. It means that there should not be mandatory features in 802.16g. In this sense any system will be conformant to 802.16g, so no need to indicate conformance in the TLV

#### Suggested Remedy

Change to

6: Indicates conformance with IEEE Std 802.16-2004 **as amended and corrected** by IEEE Std 802.16e-2005 ~~and IEEE Std 802.16f-2005~~

7: Indicates conformance with IEEE Std 802.16-2004, IEEE Std 802.16e-2005, IEEE Std 802.16f-2005 ~~and IEEE Std 802.16g-2007~~

~~78-255: Reserved~~

#### Group Resolution

Decision of Group: Disagree

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

IEEE documents are not separable and severable. Implementers cannot pick and choose which 'Amendments' to the standard they may enjoy implementing. The standard is specifically written so that it is the combination of all published standards documents, taken together as a whole, that yields the complete standard definition.

The presentation of the MAC version selection is dictated by the standard document publication sequence.

If the commenter wishes to select a set of features for a specific implementation, he should provide a remedy that includes a profile of such a set of features.

**Group's Notes**

Approved without opposition

**Editor's Notes**

**Editor's Actions**

Comment by: Vladimir Yanover

Membership Status: Member

Date: 1/15/2007

Comment # 1130

Document under Review: IEEE P802.16g-06/D6

Ballot ID: P802.16g/D6

Comment      Type Technical      Part of Dis  Satisfied       Page 26      Line 23      Fig/Table#      Subclause 11.13.38

Problems:

The following text in 802.16g is inconsistent and does not fit the scope of 16g project.

It leaves to the implementation to choose if the reported value is before or after HARQ applied, so no way for proper interpretation by the peer device:

“This TLV indicates the target packet error rate (PER) for the service flow as defined below. This PER could either be the PER as seen by the application (post ARQ and/or HARQ processing) or as seen on the airlink (before the application of ARQ and/or HARQ). The particular use of this TLV is left open to implementations and vendor differentiations. “

Suggested Remedy

Remove 11.13.38

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

The problem statement is incorrect. There is no confusion on the part of the peer.

In 11.13.38 Packet Error Rate (PER), bit #7 (value of 0 – PER measured by the application, 1 – PER measured on the airlink) disambiguates the interpretation.

On the air interface, the peer always knows that the reported PER value is before ARQ and/or HARQ. At the application layer, the application always knows that the reported PER value is after ARQ and/or HARQ.

Group's Notes

Accpeted without objection

Editor's Notes

Editor's Actions

Comment by: Vladimir Yanover

Membership Status: Member

Date: 1/15/2007

Comment # 1131

Document under Review: IEEE P802.16g-06/D6

Ballot ID: P802.16g/D6

Comment      Type Technical      Part of Dis  Satisfied       Page 31      Line 1      Fig/Table#      Subclause 14

Section 14 "Management interfaces and procedures" must be informative as it addresses management primitives, which are not visible in the air interface.

Suggested Remedy

Make section 14 an informative addendum

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

Section 14 forms the basis for the normative model for 802.16 to provide a method for base station-to-NCMS-to-base station communications essential for mobility, as well as other features, to function. As such, while the primitives defined in section 14 are not conformantly testable (outside of a protocol implementation) on the air interface, they provide the essential key to mobility and other features.

Group's Notes

Accpeted without objection

Editor's Notes

Editor's Actions

2007/07/16

IEEE 802.16-07/012

Comment by:

YANOVER, VLADIMIR

Membership Status:

Date: 02/11/2007

Comment # 1

Document under Review:

Ballot ID: P802.16g/D7

<u>Comment</u>	<u>Type</u>	<u>Technical</u>	<u>Part of Dis</u>	<input checked="" type="checkbox"/> <u>Satisfied</u>	<input type="checkbox"/>	<u>Page</u>	<u>Line</u>	<u>Fig/Table#</u>	<u>Subclause</u>
----------------	-------------	------------------	--------------------	--	--------------------------	-------------	-------------	-------------------	------------------

The comments in "Commentary" format required in 802.16 WG have been uploaded to 802.16 WEB site at [http://dot16.org/CSUpload/upload/NetMan\\_db/16g\\_D7\\_Yanover\\_Vladimir.cmtb](http://dot16.org/CSUpload/upload/NetMan_db/16g_D7_Yanover_Vladimir.cmtb)

Suggested Remedy

GroupResolution

Decision of Group: Agree

No action required

Reason for Group's Decision/Resolution

Comments incorporated into the commentary database for individual comment resolution

Group's Notes

Accepted without opposition

Editor's Notes

Editor's Actions

Comment by:

GIESBERTS, PIETER-PAUL

Membership Status:Date: 02/12/2007Comment # 2Document under Review:Ballot ID: P802.16g/D7

<u>Comment</u>	<u>Type</u>	<u>Technical</u>	<u>Part of Dis</u>	<input checked="" type="checkbox"/> <u>Satisfied</u>	<input type="checkbox"/>	<u>Page</u>	<u>17</u>	<u>Line</u>	<u>Fig/Table#</u>	<u>Subclause</u>	<u>6.3.2.3.63</u>
----------------	-------------	------------------	--------------------	--	--------------------------	-------------	-----------	-------------	-------------------	------------------	-------------------

I do not agree with the resolution of comment #53 in the 80216-07\_002r5 dbase.

The current NSP mechanism using SII-ADV and SBC messages is unnecessarily complex, badly documented and it may generate unnecessary (partial) network entries by MS' looking for a network. NSP TLVs should be communicated through DCD messages, rather than through the SII-ADV and SBC-REQ/RSP messages. That is much simpler for both the MS and the BS, it is more in line with the current network entry procedures and it is more flexible as it makes it possible for a BS to inform an MS of its' neighbours NSPs (through the MOB\_NBR-ADV and the DCD settings TLV).

Chair changed the Comment Type to 'Technical' from 'General'.

Suggested Remedy

Adopt contribution C80216g-07\_027.doc.

GroupResolutionDecision of Group: DisagreeReason for Group's Decision/Resolution

The analysis is useful, but flawed. The underlying assumptions are likely wrong. Assume that DCD in mobile networks is transmitted at least 1x per second; that SII-ADV is transmitted 1x per 60 seconds; MS will wait for SII-ADV before attempting initial network entry. Partial entries are eliminated.

Group's Notes

Vote:

In Favor: 1

Richard van Leeuwen

Against: 4

David Johnston

Peretz Feder

Achim Brandt

Joey Chou

Abstain: 1

Sang-Youb Kim

Comment Rejected



Comment by: Vladimir YanoverMembership Status: MemberDate: 2/11/2007Comment # 17Document under Review: P802.16g/D7Ballot ID: P802.16g/D7

<u>Comment</u>	<u>Type</u> Technical	<u>Part of Dis</u> <input checked="" type="checkbox"/>	<u>Satisfied</u> <input type="checkbox"/>	<u>Page</u> 9	<u>Line</u> 18	<u>Fig/Table#</u>	<u>Subclause</u> 5.3
----------------	-----------------------	--	---	---------------	----------------	-------------------	----------------------

There is a concern with regard to utility of this feature alone in absence of certain framework (like upper layer protocol between the network and the terminal). For example, to use GPCS Service Flows the terminal has to apply certain classifiers at UL connections. The classification happens in this case above MAC, but anyway there should be some [upper layer] protocol to communicate the classification rules to the terminal. Currently there is no definition of such protocol. Particularly NWG spec does not have such function. Another example is negotiation of exact encapsulation format.

It was noticed by some members that this feature is actually out of the scope of 16g project defined as follows:

"This document provides enhancements to the MAC and PHY management entities of IEEE Standard 802.16-2004, as amended by P802.16e, to create standardized procedures and interfaces for the management of conformant 802.16 devices."

Recommendation: Define GPSC support as optional in 802.16g

Chair changed the Comment Type to 'Technical' from *empty*.

#### Suggested Remedy

Change

#### 5.3 Generic Packet Convergence Sublayer (GPCS)

The Generic Packet CS (GPCS) is an upper layer protocol-independent packet convergence sublayer that supports multiple protocols over 802.16 air interface. Implementation of GCPS is optional.

It is defined as follows:

#### GroupResolution

Decision of Group: Disagree

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

The place to specify mandatory or optional features is a PICS.

The support of this feature is already optional via indication using the REG-REQ/RSP (See 11.7.7.1), through capabilities negotiation. The commenter gives no specific rationale why this feature should be singled-out for such declarative language, while similar features including IP CS and Ethernet CS do not have similar language, while being similarly negotiated. There are in fact many negotiated

parameters throughout the standard that do not have such specific declarative language, but are negotiated in capability negotiation as optional features.

**Group's Notes**

Vote:

In Favor: 1

Sang-Youb Kim

Against: 5

Peretz Feder

David Johnston

Achim Brandt

Richard van Leeuwen

Joey Chou

Abstain: 0

*none*

Comment rejected

**Editor's Notes**

**Editor's Actions**

**Comment by:** Vladimir Yanover

**Membership Status:** Member

**Date:** 2/11/2007

**Comment #** 20

**Document under Review:** P802.16g/D7

**Ballot ID:** P802.16g/D7

**Comment**      **Type** Technical      **Part of Dis**  **Satisfied**       **Page** 17      **Line** 50      **Fig/Table#**      **Subclause** 6.3.2.3.63

Advertisement of Service providers IDs makes sense only for mobile and may be nomadic systems. It should be defined as optional in the standard to make it "required" in specific profiles

Chair changed the Comment Type to 'Technical' from *empty*.

#### **Suggested Remedy**

#### ***Change***

6.3.2.3.63 Service Identity Information (SII-ADV) message

A BS may use the SII-ADV message to broadcast a list of Network Service Provider (NSP) Identifiers. The message may be broadcast periodically without solicitation or may be solicited by an SS during network entry by including the SIQ TLV in the SBC-REQ message (see section 6.3.2.3.23). This message is sent from the BS to all SSs on the broadcast CID.

Implementation of SII-ADV message is optional for both BS and MS. Assignment method, administration, and usage of NSP Ids are outside the scope of this standard. The list of NSP Ids to be included in this message and the message transmission frequency are programmable

#### ***Change in p.27, line 4***

11.1.8 NSP List encodings

11.1.8.1 NSP List

The NSP LIST TLV contains one or more 24-bit Network Service Provider Identifiers. **Implementation of NSP List TLV is optional for both BS and MS.**

11.1.8.2 NSP Change Count

The NSP Change Count TLV indicates a change of the NSP list. Its value shall be increased by one (modulo 256) whenever the NSP list changes. **Implementation of NSP Change Count TLV is optional for both BS and MS.**

#### **GroupResolution**

**Decision of Group:** Disagree

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

The place to specify mandatory or optional features is a PICS.

The support of this feature is already optional via usage of 'MAY' in its invocation. There is no requirement that either a BS or SS support this message, and no failure in communication will result if either does not support the message.

**Group's Notes**

Vote:

In Favor: 0

*none*

Against: 6

Peretz Feder

David Johnston

Achim Brandt

Richard van Leeuwen

Sang-Youb Kim

Joey Chou

Abstain: 0

*none*

Comment Rejected

**Editor's Notes**

**Editor's Actions**

**Comment by:** Vladimir Yanover

**Membership Status:** Member

**Date:** 2/11/2007

**Comment #** 24

**Document under Review:** P802.16g/D7

**Ballot ID:** P802.16g/D7

**Comment**      **Type** Technical      **Part of Dis**  **Satisfied**       **Page** 19      **Line** 1      **Fig/Table#**      **Subclause** 6.3.2.3.64

Some 802.16 members noticed that more analysis needed, particularly about PHY features to be used in locating the terminal's position. Meanwhile it should be defined as optional.

Chair changed the Comment Type to 'Technical' from *empty*.

#### **Suggested Remedy**

6.3.2.3.64 Location Based Services (LBS-ADV) message

A BS may use the LBS-ADV message to broadcast the LBS information. The message may be broadcast periodically without solicitation. This message is sent from the BS to all MSs on a broadcast CID.

Implementation of LBS-ADV message is optional for both BS and MS.

#### **GroupResolution**

**Decision of Group:** Disagree

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

The place to specify mandatory or optional features is a PICS.

The support of this feature is already optional via usage of 'MAY' in its invocation. There is no requirement that either a BS or SS support this message, and no failure in communication will result if either does not support the message.

#### **Group's Notes**

Vote:

In Favor: 0

*none*

Against: 5

Peretz Feder

David Johnston

Achim Brandt

Richard van Leeuwen

Sang-Youb Kim

Abstain: 0

*none*

Comment Rejected

**Editor's Notes**

**Editor's Actions**

Comment by: Vladimir Yanover

Membership Status: Member

Date: 2/11/2007

Comment # 26

Document under Review: P802.16g/D7

Ballot ID: P802.16g/D7

Comment    Type Technical    Part of Dis  Satisfied     Page 21    Line 16    Fig/Table#    Subclause 6.3.25

No need to specify MIH feature as mandatory

Chair changed the Comment Type to 'Technical' from *empty*.

**Suggested Remedy**

6.3.25 MIH handover Function

MIH handover function is the support of IEEE Std 802.21 specific features and functions. The 802.16 entity may send or receive the MOB\_MIH-MSG message to or from the peer 802.16 entity in order to convey MIHF Frames carrying the 802.21 MIH protocol messages.

Implementation of MIH handover function is optional.

**GroupResolution**

Decision of Group: Disagree

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

The place to specify mandatory or optional features is a PICS.

The support of this feature is already optional via usage of 'MAY' in its invocation. There is no requirement that either a BS or SS support this message, and no failure in communication will result if either does not support the message. Support of this MIH function is negotiated in 11.8.10, capability negotiation.

**Group's Notes**

Vote:

In Favor: 0

*none*

Against: 5

Peretz Feder

David Johnston

Achim Brandt

Sang-Youb Kim

Abstain: 0

*none*

Comment Rejected

Editor's Notes

Editor's Actions



Comment by: Vladimir YanoverMembership Status: MemberDate: 2/11/2007Comment # 30Document under Review: P802.16g/D7Ballot ID: P802.16g/D7

<u>Comment</u>	<u>Type</u> Technical	<u>Part of Dis</u> <input type="checkbox"/>	<u>Satisfied</u> <input type="checkbox"/>	<u>Page</u> 26	<u>Line</u> 42	<u>Fig/Table#</u>	<u>Subclause</u> 11.1.13
----------------	-----------------------	---	---	----------------	----------------	-------------------	--------------------------

There are several problems in MAC version encoding (11.1.3).

1. The text says [about TLV value]:

6: Indicates conformance with IEEE Std 802.16-2004, IEEE Std 802.16e-2005 and IEEE Std 802.16f-2005

7: Indicates conformance with IEEE Std 802.16-2004, IEEE Std 802.16e-2005, IEEE Std 802.16f-2005 and IEEE Std 802.16g-2007

The problems:

- needs clarification as there is no "conformance with IEEE Std 802.16e-2005" alone (which is a combination of amendment and corrigenda to IEEE Std 802.16-2004)
- Conformance to IEEE Std 802.16-2004 + IEEE Std 802.16e-2005 is surprisingly bound to the conformance to IEEE Std 802.16f-2005 (MIB for fixed OFDM applications)
- Value 7 indicates conformance to 802.16g-2007 as a whole. Unfortunately the 16g standard includes so many topics not related to each other (ND&S, LBS, MIH, RRM, management primitives) that the only reasonable way of handling them is to make all optional and select features using profiles mechanism. It means that there should not be mandatory features in 802.16g. In this sense any system will be conformant to 802.16g, so no need to indicate conformance in the TLV

Chair changed the Comment Type to 'Technical' from *empty*.

#### Suggested Remedy

Change

6: Indicates conformance with IEEE Std 802.16-2004 **as amended and corrected** IEEE Std 802.16e-2005

~~7: Indicates conformance with IEEE Std 802.16-2004, IEEE Std 802.16e-2005, IEEE Std 802.16f-2005 and IEEE Std 802.16g-2007~~

~~78-255: Reserved~~

#### GroupResolution

Decision of Group: Disagree

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

The proposed remedy in all ways is inconsistent with practice and precedence in IEEE 802 for identification of MAC version support.

The proposed changes to line 6 fails to be backwards compatible with previous amendments.

Commenter's argument regarding the optionality of supporting 802.16g features is inaccurate. While some changes introduced in 802.16g, such as fundamental changes to the 802.16 architecture and reference model are not overly testable, compliance is required to ensure proper support for future 802.16 activity. Thus, compliance with 802.16g is material, and identification of MAC support is important.

**Group's Notes**

Vote:

In Favor: 0

*none*

Against: 6

Peretz Feder

David Johnston

Achim Brandt

Richard van Leeuwen

Sang-Youb Kim

Joey Chou

Abstain: 0

*none*

Comment Rejected

**Editor's Notes**

**Editor's Actions**

Comment by:

Vladimir Yanover

Membership Status: MemberDate: 2/11/2007Comment # 38Document under Review: P802.16g/D7Ballot ID: P802.16g/D7CommentType TechnicalPart of Dis Satisfied Page 37Line 1Fig/Table#Subclause 11.13.38

Problems:

The following text in 802.16g is inconsistent and does not fit the scope of 16g project.

It leaves to the implementation to choose if the reported value is before or after HARQ applied, so no way for proper interpretation by the peer device:

“This TLV indicates the target packet error rate (PER) for the service flow as defined below. This PER could either be the PER as seen by the application (post ARQ and/or HARQ processing) or as seen on the airlink (before the application of ARQ and/or HARQ). The particular use of this TLV is left open to implementations and vendor differentiations. “

Chair changed the Comment Type to 'Technical' from *empty*.

Suggested Remedy

Remove 11.13.38

GroupResolutionDecision of Group: Principle

On page 37, in 11.13.38, in the Table, In the 'value' field, modify as:

'0 – PER measured by the application[BEGIN INSERT]. post -ARQ and post-HARQ process[END INSERT]'

'1 – PER measured on the airlink[BEGIN INSERT]. before the application of ARQ and HARQ[END INSERT]'

Reason for Group's Decision/ResolutionGroup's Notes

Accepted without opposition

Editor's NotesEditor's Actions

Comment by: Vladimir Yanover

Membership Status: Member

Date: 2/11/2007

Comment # 41

Document under Review: P802.16g/D7

Ballot ID: P802.16g/D7

Comment      Type Technical      Part of Dis  Satisfied       Page 41      Line 1      Fig/Table#      Subclause 14

Section 14 "Management interfaces and procedures" must be informative as it addresses management primitives, which are not visible in the air interface.

Chair changed the Comment Type to 'Technical' from *empty*.

Suggested Remedy

Make section 14 an informative addendum

GroupResolution

Decision of Group: Disagree

Reason for Group's Decision/Resolution

Section 14 forms the basis for the normative model for 802.16 to provide a method for base station-to-NCMS-to-base station communications essential for mobility, as well as other features, to function. As such, while the primitives defined in section 14 are not conformantly testable (outside of a protocol implementation) on the air interface, they provide the essential key to mobility and other features.

Group's Notes

Vote:

In Favor: 0

*none*

Against: 6

Peretz Feder

David Johnston

Achim Brandt

Richard van Leeuwen

Sang-Youb Kim

Joey Chou

Abstain: 0

*none*

Comment Rejected

Comment by:

GIESBERTS, PIETER-PAUL

Membership Status: MemberDate: 03/10/2007Comment # 1Document under Review: P802.16g/D8Ballot ID: 16gD8

Comment    Type Technical    Part of Dis  Satisfied     Page 17    Line 50    Fig/Table#    Subclause 6.3.2.3.63

I don't agree with the resolution of my comment #2 in the 80216-07\_012r4 database.

DCDs will not be transmitted any more often in mobile networks than in fixed networks, which will be on the order of once every 10 seconds. There is no need since they are static, and they are too big to send often.

Furthermore with the current document the MS will NOT wait for SII-ADV before attempting initial network entry, because it will use the SBC mechanism to request the info.

The current mechanism is ambiguous, flawed and overly complex.

If the group for some reason wants to keep a separate message for the SII-ADV in stead of transmitting the information in the DCD than that is suboptimal but fine. But the information should in any case be removed from the scope of the SBC-REQ/RSP.

#### Suggested Remedy

Solution 1:

Move SII to DCD, by adopting contribution C80216g-07\_027r1.doc.

Solution 2:

Remove only the SBC SII mechanism and keep a non-solicited broadcast by means of the SII-ADV message (instead of DCD):

\* Change second sentence on page 17, section 6.3.2.3.63 as follows:

"The message may be broadcast periodically without solicitation" (i.e. remove "or may be solicited by an SS during network entry by including the SIQ TLV in the SBC-REQ message (see section 6.3.2.3.23).")

\* Remove all changes as listed in section 6.3.2.3.24 in this draft

\* Remove SBC-RSP from scope field in Section 11.1.8.1 and 11.1.8.2

\* Delete section 11.8.9.

#### GroupResolution

Decision of Group: Disagree

Remove only the SBC SII mechanism and keep a non-solicited broadcast by means of the SII-ADV message (instead of DCD):

\* Change second sentence on page 17, section 6.3.2.3.63 as follows:

"The message may be broadcast periodically without solicitation" (i.e. remove "or may be solicited by an SS during network entry by including the SIQ TLV in the SBC-REQ message (see section 6.3.2.3.23).")

\* Remove all changes as listed in section 6.3.2.3.24 in this draft

\* Remove SBC-RSP from scope field in Section 11.1.8.1 and 11.1.8.2

\* Delete section 11.8.9.

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

As previously reported, Members believe that DCD will be transmitted with substantially more frequency than commenter assumes, at least 1x per second.

While it is true that the information could be periodically included in DCD, there is no specific benefit of putting the information in DCD

versus in the broadcast SII-ADV message. And since the SII-ADV may be transmitted with substantially less frequency, and since elimination of the SII-ADV message is not possible as there are other information types that SII-ADV may convey, there is no specific advantage to choosing to put the information in the DCD. So, the proposed change does not convey any specific advantage over the current mechanism.

Finally, Members believe that the current method of allowing SS to request transmission of the NSP List may be useful in certain deployment scenarios. Specifically, after a recent change in the NSP List, the network may need to transmit the SII-ADV message unsolicited and with some frequency, say every 10 seconds. But after some period of time, perhaps a few weeks or so, when the vast majority of SS have received the updated list, the network may discontinue unsolicited transmission of SII-ADV and rely on solicited request via SBC-REQ. The network may then go for many months without another change in the NSP List.

**Group's Notes**

Vote:

In Favor: 1 Against: 3 Abstain: 2

Comment Rejected

**Editor's Notes**

**Editor's Actions**

Comment by:

GIESBERTS, PIETER-PAUL

Membership Status: MemberDate: 03/10/2007Comment # 2Document under Review: P802.16g/D8Ballot ID: 16gD8Comment    Type General    Part of Dis  Satisfied     Page 17    Line 50    Fig/Table#    Subclause 6.3.2.3.63

Right now, the spec does not mandate that all BS with the same NAPID support the same NSPs. It is not clear that this flexibility is actually required, and to improve scanning & roaming for MS it is beneficial if the MS can assume that all BS from the same operator provide access to the same NSPs.

**Suggested Remedy**

In the first section of 6.3.2.3.63:

\* Fix the typo in "transmission" in the sentence "The list of NSP Ids to be included in this message and the message transmsion frequency are programmable."

Add the following text immediately after that sentence:

"All BS that use the same Operator ID shall list the same NSP Ids in their SII-ADV message."

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

In the first paragraph, change the misspelled instance of 'transmsion' to 'transmission'

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

Based on this comment, the group made modification to the remedy in comment 119, Contribution C802.16g-07/047r2. The change made the value of NSP Change Count TLV programmable. While this does not directly address the commenter's intent, it does address an aspect. As to the commenter's remedy to make NSP List common across Operator ID, the group reasoned that there are specific implementations where such constraint would be undesirable.

**Group's Notes**

Accepted without opposition

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