802.16h License-Exempt Task Group Meeting Minutes – Session #44

IEEE 802.16 Session #44 – San Diego, CA.

Chair: Mariana Goldhamer, Alvarion
Vice Chair: Paul Piggin, NextWave Broadband
Editor: Xuyong Wu, Huawei
Secretary (Acting): Paul Piggin, NextWave Broadband

Tuesday 18 July 2006

Day one: The meeting opened at 8:15am.
Manchester Grand Hyatt San Diego,
One Market Place,
San Diego, CA.
USA

1. Opening of the LE TG Sessions

Planned meetings:
Tuesday 18 July: 8am-12noon.
Wednesday 19 July: 8am-12noon, 1pm-6pm.
Thursday 20 July: 8am-12noon, 1pm-6pm.

2. Revision and approval of the License-Exempt Task Group agenda

The agenda for the week (document IEEE 802.16h-06/017) was discussed and finalized accordingly:

- **Opening of the LE TG Sessions.**
- **Revision and approval of the LE TG Agenda for the week.**
  - Timing info.
- **Approval of the Minutes for Session #43 – doc. IEEE 802.16h-06/014.**
- **Secretary position.**
- **Comment/reply comment resolution.**
  - Including contributions related to the comments in 802.16h-06/12r2.
  - C802.16h-06/046…068.
    - Many of them late, even if the number reservation has been done by the dead-line.
- **Remaining contributions (also late).**
  - 1 contribution C802.16h-06/069.
  - Motion to accept the late contribution and the late comments (also not correctly filled).
- **Motion:** Adopt the document IEEE 802.16h-06/015, modified as reflected by the 802.16h Session #44 minutes, as the first 802.16h draft and submit it for Working Group Letter Ballot.
Discussion regarding the scope of the 802.16h PAR, which will be an amendment to 802.16-2004 + 802.16e-2005 (current 802.16).

- Implication: 802.16e +802.16h will support mobile operation in LE / shared bands.

A.O.B.
Close the meeting.

Note: the schedule may be changed, for better time usage – as required.

- Ad-Hoc Reports:
  - 057-TOC (numbering problem, not uploaded yet).
  - 069-BS2BS (numbering problem, not uploaded yet).
  - 0xx- INTERF_ID + CX_OVR.

- Contributions proposing text for the WD and the related comments.
  - To give time for eventual modifications.
  - 046r1, 048, 049, 051, 052, 053, 057, 058, 059, 061?, 62r1, 63r1, 067.

- Remaining comments.
- Remaining contributions.
  - 050r1, 054, 055, 056, 060, 064?, 065r1, 068, 069.

- 5 meetings.
  - 4 for comments and contributions.
  - 15 min for presentations 15*24= 6 hours.
  - 4 min for comments 4*120 = 8 hours.
  - 7 hours/day – 14 hours.
  - Thursday afternoon, second slot – motions, PAR discussion.

There was discussion about the potential for PAR changes. Ed Agis stated he would seek no changes to the PAR and specifically any changes should relate to shared and license-exempt bands only. Ed further suggested that the task group should work to this PAR and continue additional work after seeking approval of a further PAR.

Dan Gal suggested that the group dedicate some meeting time to define terms such as light license and uncoordinated bands. In addition Dan suggested that a study group should undertake analysis of license-exempt band usage.

The agenda was approved by unanimous voice vote.

3. Approval of the Minutes for Session #43 – IEEE 802.16h-06/014

The meeting reviewed the draft minutes from session #43 – IEEE 802.16h-06/014.

Motion: Accept minutes of the session #43.
Proposer: Ed Agis
Second: Xuyong Wu

The minutes for the last meeting at session #43 in Tel Aviv, Israel, were approved with no objection.
4. Secretary position

There were no volunteers to take over the role of secretary from Paul Piggin – as he is now the vice chair. Paul agreed to keep the position of acting secretary until an appropriate replacement could be found.

5. Working Group Review: comment/reply comment resolution of recirculation

Mariana Goldhamer (Chair) proposed accepting the late contributions.

*There was no objection to accepting the late contribution.*

The Commentary database (IEEE C802.16h-06/12r2) contained review comments and reference to contributions following the Working Group Review recirculation. Comments with associated contributions were considered first.

*Comment: 1000*

**Editorial Changes in Document IEEE 802.16h-06/15**
Avi Freedman
Hexagon

Contribution: IEEE C802.16h-06/067

This contribution proposed a set of editorial changes in the current working document.

The contribution IEEE C802.16h-06/067r1 was accepted with no objection.

*Comment: 1037*

**MAC Frame numbering and synchronization**
Mariana Goldhamer
Alvarion

Contribution: IEEE C802.16h-06/057

This contribution proposed clarification to MAC frame synchronisation and numbering issues.

The contribution IEEE C802.16h-06/057r1 was accepted with no objection.

~ ~ ~ The meeting adjourned at 10:24am ~ ~ ~

~ ~ ~ The meeting reconvened at 10:46am ~ ~ ~
Comment: 1043

**Text for general MAC structures – sub-frames**
Mariana Goldhamer
Alvarion

Contribution: IEEE C802.16h-06/051r1

This contribution proposed the introduction of the Master/Slave MAC sub-frames concept.

The contribution IEEE C802.16h-06/051r1 was accepted with no objection.

Comment: 1044

**Consolidation of CSI-CMI - output of 16h_INTERF_ID Ad-Hoc**
Mariana Goldhamer
Alvarion
John Sydor
Communication Research Center

Contribution: IEEE C802.16h-06/060

This presentation was for information only and to forge consensus in the group.

However the resolution and discussion provided the following action items:

- Action Item: John Sydor and Mariana Goldhamer to provide 'Control Channel' clarification in section 15.1.1.4.1 (referenced to the new document structure).
- Action Item: Soma Bandyopadhyay to provide the attributes for the CXZ.

Comment: 1063

**Changes to chapter 15.2.1.1.2 in the Working Document**
Mariana Goldhamer
Alvarion

Contribution: IEEE C802.16h-06/052

This contribution proposed the consolidation of the text and replacement of figures.

The contribution IEEE C802.16h-06/052 was accepted with no objection.

~ ~ ~ The meeting adjorned at 12:02pm ~ ~ ~

Wednesday 19 July 2006
Day two: The meeting opened at 8:05am.
Manchester Grand Hyatt San Diego,
Resolution of comments with contribution in Commentary database (IEEE C802.16h-06/12r2) continued.

Comment: 1092

**Clarifications of some Coexistence Protocol messages**
Mariana Goldhamer
Alvarion

Contribution: IEEE C802.16h-06/059r2

This contribution proposed a more logical structure which would allow better understanding of the existing co-existence mechanisms.

The contribution IEEE C802.16h-06/059r2 was accepted with no objection.

Comment: 1094

**MAC support and the general structure of the Coexistence Protocol messages**
Mariana Goldhamer
Alvarion

Contribution: IEEE C802.16h-06/058r3

There was debate concerning the acceptance of this contribution.
Strawpoll 4 to 1 in favour of resolving this comment at this point in the meeting.
The vice-chair’s recommendation was to resolve the contribution at this point in the meeting.
There were no objections to accepting the contribution.

The contribution IEEE C802.16h-06/058r4 was accepted with no objection.

Action Items were isolated in the resolution and added to the Commentary database.

~ ~ ~ The meeting adjorned at 9:57pm ~ ~ ~

~ ~ ~ The meeting reconvened at 10:22am ~ ~ ~

Comment: 1046

**Modified structure of the 802.16h Working Document**
Wu Xuyong, Huawei,
Mariana Goldhamer, Alvarion
David Grandblaise, Motorola
This contribution proposed a more logical working document structure. This is to be achieved with a reordering of the sections contained within the document.

**802.16h Working Document Structure Reorganization**

Wu Xuyong, Huawei,
Mariana Goldhamer, Alvarion
David Grandblaise, Motorola
John Sydor, CRC
Avi Freedman, Hexagon

This contribution implemented contribution IEEE C802.16h-06/046 to present a new structure for the working document.

The contributions IEEE C802.16h-06/046r1 and IEEE C80216h-06_048r1 were accepted with no objection.

The group thanked Wu Xuyong for his diligent work in this area. With many thanks.

*Comment: 1077*

**Proposed text about sub-frame distribution optimization**

Wu Xuyong
Huawei

This contribution proposes text for a new section for sub-frame distribution optimization. The sub-frame distribution optimization mechanism is similar to channel distribution optimization. However the contribution deals with the sub-frame rather than the channel allocation.

The contribution IEEE C802.16h-06/053 was accepted with no objection.

*Comment: 1067*

**Discussion on implementing the energy pulse**

Wu Xuyong,
Huawei

Contribution: IEEE C802.16h-06/054
The contribution was deferred for further discussion within an ad hoc to be chaired by Wu Xuyong. **Action Item: Wu Xuyong.**

*Comment: 1066*

**Discussion on the CTS duration**

Wu Xuyong,  
Huawei

**Contribution: IEEE C802.16h-06/055**

This contribution discussed the CTS duration, regarding QoS and fairness, and consolidated the WirelessMAN-CX mechanisms.

The contribution IEEE C802.16h-06/055 was accepted with no objection.

Comments were resolved as part of the *Commentary* database (IEEE C802.16h-06/12r2).

~ ~ ~ The meeting adjorned at 12:02pm ~ ~ ~

~ ~ ~ The meeting reconvened at 1:13pm ~ ~ ~

Comment resolution (IEEE C802.16h-06/12r2).

~ ~ ~ The meeting adjorned at 3:05pm ~ ~ ~

~ ~ ~ The meeting reconvened at 3:45pm ~ ~ ~

Comment resolution (IEEE C802.16h-06/12r2).

~ ~ ~ The meeting adjorned at 6:30pm ~ ~ ~

**Thursday 20 July 2006**

Day three: The meeting opened at 8:20am.  
Manchester Grand Hyatt San Diego,  
One Market Place,  
San Diego, CA.

*Comment: 1104*

**Some consideration on the credit token principle**
Wu Xuyong, 
Huawei

Contribution: IEEE C802.16h-06/056

This presentation was for information only.

An Action Item for David Grandblaise: Clarify the case given in the presentation on how to avoid conflicts of co-existence with the token protocol.

The contributions with no related comment in the Commentary database (IEEE C802.16h-06/12r2) were now considered by the meeting.

Action items from session #43 and new introductory material for the Working Draft (80216h-06_015)
Paul Piggin
NextWave Broadband

Contribution: IEEE C802.16h-06/049r1

This document contained 1) Suggested remedies to action items from session #43 from Working Group Review 2) New material pertaining to the introductory sections of the Working Draft.

The contribution IEEE C802.16h-06/049r3 was accepted with no objection.

Text remedies for credit token based co-existence protocol section
David Grandblaise
Motorola Labs

Contribution: IEEE C802.16h-06/062r1

This contribution provided remedies to comment #3 of the session #43’s Working Group Review. The text remedies for credit token based co-existence protocol were proposed for section 15.6.2.2.6 of the TG working document.

The contribution IEEE C802.16h-06/062r2 was accepted with no objection.

CP messages definition for credit token based co-existence protocol
David Grandblaise
Motorola Labs
Contribution: IEEE C802.16h-06/063r1

This contribution provided remedies to comment #121 of the session #43’s Working Group Review. This contribution defined CP messages for credit token based co-existence protocol. The proposed text was intended for inclusion in section 15.5.2 of the working document.

The contribution IEEE C802.16h-06/063r1 was accepted with no objection.
Output from review of document IEEE 802.16h May, 2006
Soma Bandyopadhyay
TATA Consultancy Services Limited

Contribution: IEEE C802.16h-06/050r1
This contribution was provided to give contextual ideas for further exploration and understanding.

Energy Keying as a Modulation Technique for IEEE 802.16h Coexistence Applications
John Sydor, Wayne Brett
Communication Research Center

Contribution: IEEE C802.16h-06/069
This contribution provided detailed analysis of the Energy Keying concept in the working document. The contribution was for information supporting comment 1111.

Considerations on Connection Based Over-the-air Inter Base Station Communications: Logical Control Connection and its Application to Credit Token Based Coexistence Protocol
Wendong Hu, STMicroelectronics
David Grandblaise, Motorola

Contribution: IEEE C802.16h-06/065r2
This contribution was for information only.
A straw poll indicated that the group would welcome future contributions on this topic.

Clarification on the mandatory/optional status for CMI/CSI procedures
Mariana Goldhamer
Alvarion
Contribution: IEEE C802.16h-06/061

This presentation was for information only.

Comment resolution from the Commentary database (IEEE C802.16h-06/12r2) were used to create a new Commentary database version (IEEE C802.16h-06/12r3).

4. Meeting report out

The meeting report (IEEE 802.16h-06/018) for the Working Group closing plenary was discussed in the meeting.

The following motion was discussed.

Motion: Adopt the document IEEE 802.16h-06/015, modified as reflected by the 802.16h Session#44 minutes and database 802.16h-06/12r3, as the first 802.16h draft and submit it for Working Group Letter Ballot

Following discussion with no consensus a vote was proposed.

Proposed: Wu Xuyong.
Second: Avi Freedman.

For: 6, Against: 0, Abstain: 2.

~ ~ ~ The meeting adjorned at 3:27pm ~ ~ ~

~ ~ ~ The meeting reconvened at 4:07pm ~ ~ ~

The meeting discussed a proposal for TGh PAR changes.

TG LE proposal on IEEE 802.16h PAR change
Mariana Goldhamer
LE TG Chair

Contribution: IEEE C802.16h-06/070

During the ensuing discussion the following points were made:

- Dan Gal stated that it would be of benefit to the working document to provide a succinct defintion of the following terms: license-exempt, shared bands, uncoordinated bands, non-exclusive licensed, and light-license.

- Frank Draper suggested to leave the “license-exempt” term in the PAR and add a suitable definition in 16h working document. The motivation for this would ensure a generic term is inserted in the PAR and more specific explanation can be provided in the standard document.
• Dan Gal suggested that the task group study the implications of a PAR change and present the findings to the 802.16 WG in September at session #45.

Without objection the meeting agreed to add elements of contribution IEEE C802.16h-06/070 into the meeting report out for the closing plenary, contribution IEEE 802.16h-06/018.

A summary of action items produced from comment resolution were provided in contribution IEEE C802.16h-06/047r1.

5. AOB

There was no other business.

6. Close the meeting

Motion: To adjorn.
Proposed: John Sydor.
Second: Avi Freedman.

Carried by unanimous voice vote at 6:08pm.

~ ~ ~ The meeting adjorned at 6:08pm ~ ~ ~