DRAFT

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 up-loaded yet).*
  - *069-BS2BS (numbering problem, not up-loaded 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 adjorned 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,

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San Diego, CA.

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

John Sydor, CRC
Avi Freedman, Hexagon

Contribution: IEEE C802.16h-06/046r1

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

Contribution: IEEE C802.16h-06/048

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

Contribution: IEEE C802.16h-06/053

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.

~ ~ ~ The meeting adjorned at 9:56pm ~ ~ ~

~ ~ ~ The meeting reconvened at 10:25pm ~ ~ ~

Comment: 1113

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.

Comment: 1111

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.

~ ~ ~ The meeting adjorned at 12:56pm ~ ~ ~

~ ~ ~ The meeting reconvened at 13:25pm ~ ~ ~

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 concensus 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 ~ ~ ~