

Project	<b>IEEE 802.16 Broadband Wireless Access Working Group</b> < <a href="http://ieee802.org/16">http://ieee802.org/16</a> >	
Title	<b>Minutes of the GRIDMAN meeting during session #66, Draft</b>	
Date Submitted	3/18/10	
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Re:	GRIDMAN meeting during session #66, Orlando	
Abstract	Draft minutes	
Purpose		
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# GRIDMAN SG meeting minutes, Orlando, March 2010

The SG was convened Tuesday 3/16/10 AM and remained in session till Wednesday PM. We have had up to approximately 25 attendees at times.

A joint session with the project planning adhoc group took placed Tuesday 4-6PM and is not covered by these minutes.

## 1 Tuesday

Chair has read the IEEE patent policy statement and gave an opportunity for attendees to respond to the related questions. There was no response.

Agenda C802.16gman-10/0015r3 has been approved unanimously.

Agenda for Tuesday 3/16 08:00-17:00

- Approve agenda
- Approve minutes from last meeting
  - 10/09, 10/11, 10/12, 10/13, 10/14
- Attendance reminder
- Review patent slides
- Review of 80216-10/0013 (draft GRIDMAN PAR)
- Contribution presentations
- Disposition of 802.16m inputs to NIST PAP2
  - 802.16gman-10/0010r5
- Special Orders
  - 12 Lunch Recess
  - 4 PM Joint meeting with Project Planning Ad Hoc

Draft minutes of San Diego & CC's in 10/09, 10/11, 10/12, 10/13, 10/14 Approved

SG has discussed C80216-10/0022 (Jose, Intel) contributions regarding the draft PAR:

Partial list of the points that were raised:

- Tim Godfrey explained that Smart Grid applications require enhanced low duty ratio capabilities. Jose clarified that he intends to incorporate the topic into the scope of a new M2M PAR intended to be started later this year.
- Eldad requested to remove specific reference to IP interface from Jose proposal pending further study. Jose agreed to that.
- Low power issue deferred to joint session.

Following these modifications the following text was proposed:

Moved: Marianna Goldhammer, Seconded: Tim Godfrey

~~“This amendment specifies changes to the most recently approved version of the IEEE 802.16 MAC with its management and data interfaces for~~ **enabling operation of 802.16 network infrastructure (composed of basestations and relay stations) with increased robustness in when it is degraded infrastructure and alternate radio path establishment is needed to support continued connectivity. It will make no Limited OFDMA PHY extensions are included for enabling operation of the infrastructure with radio path redundancy. Infrequent or intermittent operation is supported. This amendment will support path redundancy, mobile and local relaying, multi hop relaying, Mobile Base Station, Low Duty Ratio, as well as** ~~o~~ **Also mobile base stations and relay stations are supported. Operation in licensed, unlicensed and lightly licensed spectrum bands below 6 GHz with means and mechanisms to coexist with other radio access technologies (RATs) is supported. Support for enabling application specific specialized security suites is also provided.”**

No objections, motion approved by unanimous consent.

Regarding purpose in PAR: (EZ Note: Purpose is part of the PAR, not 5C, this was a note taking mistake on my part)

Vote on modified purpose for 5c, Moved Tim Godfrey, Seconded Jose Puthenkulam

~~“This amendment enhances IEEE Standard 802.16 by providing additional capabilities needed to support the applications described in section 5.5 below.”~~ **This amendment is intended to address higher reliability requirements that are not supported by IEEE Std. 802.16 presently.**

In the need, modify the following statement as shown:

~~“Recently introduced legislation in U.S. and other countries encourages and funds a wide range of activities in communications technologies supporting Smart Grid applications such as monitoring and control of generation, transmission, distribution and consumption of energy resources.~~ **This project is expected to support communication with higher reliability that may be used in some Smart Grid applications.”**

No objections adopted by unanimous consent

Regarding some project details, the following text was Moved by Jose Puthenkulam, Seconded by Tim Godfrey

- **In section 1.1, Project number is empty, needs to be “P802.16n”**
- **In Section 7.1 Are there other standards or projects with a similar scope?**  
Explanation: Not sure the response is accurate. Because this PAR does not address Smart Grids. Instead enables higher reliability that may be used for Smart Grid applications also, but then does not constitute an overlap in its scope. So the answer should be “No”
  - Limited potential overlap with p802.15.4g and 802.11 (“Smart Grid”)

No

No objections adopted by unanimous consent

Next the SG has discussed a target timetable for the project. Straw Polls were taken through the discussion. Chair intends to present the following timetable to the WG. No objections were raised to this timetable or to its presentation.

- Today March 2010
- Start of TG                      May 2010
- App SRD                              Sept 2010
- CFP issued                            Sept 2010
- Interim Doc                          March 2011
- WG LB issued                        July 2011
- Recirc 1                                Sept 2011
- Recirc 2                                Nov 2011
- Sponsor                                Jan 2012
- App Std                                 March 2013

Contribution C80216gman-10/0009 (Satoshi Imata, KDDI) regarding use of heterogeneous network for Smart Grid has been presented. No specific PAR changes were requested.

Changes requested for land mobile radio (LMR) were discussed next. One proposal was to add "group communications" to PAR scope. Tim G. has explained that this capability is covered by the existing PAR scope, which has been confirmed by straw poll. Other text changes have been proposed and withdrawn after discussion.

Further text changes were discussed, the following text has been moved by Inbar Bratspies, seconded by Upkar Dhaliwal:

"This amendment specifies ~~changes~~ **protocol enhancements** to the ~~most recently approved version of the IEEE 802.16 MAC with its management and data interfaces for~~ **enabling increased robustness and alternate radio path establishment in degraded network conditions. It will make no Limited OFDMA PHY extensions are included for enabling operation with radio path redundancy. Infrequent or intermittent operation is supported. This amendment will support path redundancy, mobile and local relaying, multi-hop relaying, Mobile Base Station, Low Duty Ratio, as well as o **Also mobile base stations and relay stations are supported. Operation in licensed, unlicensed and lightly licensed spectrum bands below 6 GHz with means and mechanisms to coexist with other radio access technologies (RATs) is supported. Support for enabling application specific specialized security suites is also provided.**"**

No objection adopted by unanimous consent

SG has recessed at 1200 till 1600 – at 1600 joint session with PP adhoc, not covered by these minutes.

## 2 Wednesday

Continued discussion of PAR addressing comments received from 802.16 Chair, 802.11 as well as several IEEE 802 officials.

The Chair has explained that some comments indicated that the PAR should be more generic. Others that it will be made more specific. Attempting to respond to all received comments, SG has discussed and introduced changes in to the draft PAR.

Changes based on the GRIDMAN/PP adhoc joint session have also been discussed and introduced.

One of the external comments has been that terms used in the scope are not precisely defined. The group has discussed and added definitions PAR section 8.1. A Straw Poll was taken regarding the definition of “robustness”.

Straw poll taken on the issue of coexistence with other RATs, proposed by Tim Godfrey. Proposal to remove from PAR scope rejected.

Straw Poll taken on deleting “intermittent and infrequent operation”, failed.

On the same topic, another Straw Poll taken to insert addressing of large population of devices remained inconclusive at 6:6.

Following discussions above chair suggested motions to propose changes to the PAR as approved the day before.

- a) A motion to remove the sentence “infrequent or intermittent operation is supported”. Moved Kerstin Johnsson, seconded Jose Puthenkulam accepted 11:1.
- b) A motion to add “and direct communication between subscriber stations”. Moved Jose Puthenkulam, seconded Eldad Zeira, accepted 14:0.
- c) A motion to add “mobile” before “relay STA” for clarity – Moved Kerstin Johnsson, seconded Mariana Goldhammer, no objections, approved by unanimous consent

This is the scope as last modified by the motions above:

“This amendment specifies protocol enhancements to the IEEE 802.16 MAC for enabling increased robustness and alternate radio path establishment in degraded network conditions. Limited OFDMA PHY extensions are included for enabling operation with radio path redundancy and direct communication between subscriber stations. ~~Infrequent or intermittent operation is supported.~~ Also mobile base stations and mobile relay stations are supported. Operation in licensed, unlicensed and lightly licensed spectrum bands below 6 GHz with means and mechanisms to coexist with other radio access technologies (RATs) is supported. Support for enabling application specific specialized security suites is also provided.”

A proposal was discussed to specifically add local forwarding, was withdrawn after explanation (Jose) that it is already covered by the agreed PAR.

More detailed discussion of definitions in section 8.1.

The following text was moved by Jose, seconded Scott Migaldi and includes friendly amendments:

**Degraded Network:** The failure of one or more 802.16 network infrastructure nodes or network connectivity.

**Robustness:** The capability of the network to withstand and automatically recover from degradation to provide the required availability to support mission critical applications (essential to the core function of society and the economy). E.g. the ability to recover from a single point of failure.

**Mobile Base Station:** A base station which is capable of maintaining service while moving.

**Radio Path Redundancy:** The ability to provide alternative paths between base stations, relay stations, and subscriber stations.

Accepted by unanimous consent

SG has recessed at 1200, reconvened at around 1300

Motion to approve response to 802.11:

Moved Tim, Sec Inbar, no objections, approved by unanimous consent  
(contents 10/0017, displayed but not posted at time of vote)

Motion to approve response to 802 EC Chair:

Moved Inbar, Sec Tim, no objections, approved by unanimous consent  
(contents 10/0017, displayed but not posted at time of vote)

Motion to approve response to IEEE SA Standard group Chair:

Moved Tim, Sec Inbar, no objections, approved by unanimous consent  
(contents 10/0017, displayed but not posted at time of vote)

Motion to authorize GRIDMAN chair to update the PAR and 5C to reflect the changes approved by the SG and any additional editorial changes required and post the PAR and 5C

Moved Scott Migaldi second Tim Godfrey

No objection, adopted by unanimous consent

PAR was posted under "my project" during the SG meeting

SG chair intends to move at the WG a Motion to request renewal of the GRIDMAN SG  
(no motion taken)

Motion to authorize the GRIDMAN chair to make editorial changes to and post document 80216gman-10/0017 "Response to comments on GRIDMAN PAR and 5C"

Moved Inbar, second Tim

No objections, approved by unanimous consent

SG has recessed between 3-4 PM to allow the chair to make some editorial work.

Motion:

To approve the content of documents 10/0017, 10/0018r1, and 10/0019r1 for forwarding to the WG, Move Tim 2nd Arnaud, Adopted by unanimous consent.

Motion to Adjourn

Moved Dan (?)

Second: Craig Rodine

Approved with unanimous consent

Adjourned at 4:15 PM.