

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 IEEE 802.16 Session #32</b>	
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Re:	IEEE 802.16 Session #32 Minutes (Portland, OR, USA)	
Abstract		
Purpose	To record meeting minutes.	
Notice	This document has been prepared to assist IEEE 802.16. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) reserve(s) the right to add, amend or withdraw material contained herein.	
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Patent Policy and Procedures	The contributor is familiar with the IEEE 802.16 Patent Policy and Procedures < <a href="http://ieee802.org/16/ipr/patents/policy.html">http://ieee802.org/16/ipr/patents/policy.html</a> >, including the statement "IEEE standards may include the known use of patent(s), including patent applications, provided the IEEE receives assurance from the patent holder or applicant with respect to patents essential for compliance with both mandatory and optional portions of the standard." Early disclosure to the Working Group of patent information that might be relevant to the standard is essential to reduce the possibility for delays in the development process and increase the likelihood that the draft publication will be approved for publication. Please notify the Chair < <a href="mailto:chair@wirelessman.org">mailto:chair@wirelessman.org</a> > as early as possible, in written or electronic form, if patented technology (or technology under patent application) might be incorporated into a draft standard being developed within the IEEE 802.16 Working Group. The Chair will disclose this notification via the IEEE 802.16 web site < <a href="http://ieee802.org/16/ipr/patents/notices">http://ieee802.org/16/ipr/patents/notices</a> >.	

# Minutes of IEEE 802.16 Session #32

IEEE 802.16 Working Group

Portland Oregon US

12-15 July 2004

## Opening Plenary

### Call to Order

Roger Marks called the meeting to order at 1:07 pm, July 12, 2004.

### IEEE 802.16 Working Group Officers

Chair: Roger Marks

Vice Chair: Ken Stanwood

Secretary: Dean Chang

### Members

Here is the current membership status as of this meeting.

90 members

79 Potential members (those here at Session #32 become a member)

[after Session, the membership stood at 150; see Annex A)]

Registration for this session:

248 registered as primary

160 registered as secondary

[Final attendance by close of Session #32: 332 (see Annex B)]

### Attendance

There are two attendance books this week: #1 and #2. People are requested to sign just one of the books during the week.

Attendance Book procedure:

Attendance Intervals: 9 [Mon pm; Tue am; Tue pm; Tue night; Wed am; Wed pm; Thu am; Thu pm; Thu night]

"Participation" Requirements: 6 intervals

Attendance credit granted to 802.16 members for participation in IEEE 802.18, 802.19, and 802.21; you are responsible to note this in the IEEE 802.16 attendance book and forward proof of participation to WG Chair by Friday 16 July.

### Agenda

Motion 1: Mariana Goldhamer, to approve the [Opening Plenary Meeting Agenda](#) as presented, 2<sup>nd</sup> DJ Johnston.

Motion 1: carries by unanimous voice vote.

Motion 2: David Johnston, to approve as the Minutes of Session #31 (*IEEE 802.16-04/29*), as amended (*IEEE 802.16-04/29r1*) by the addition of the attendance list currently on the website for that session, and decisions therein, 2<sup>nd</sup> Mariana Goldhamer.

Motion 2: carries by unanimous voice vote.

### Chair's Status Report (IEEE 802.16-04/40)

Roger presented a few of the rules as to how IEEE 802.16 meetings are run.

## **Copyright Procedures**

The Chair reviewed copyright procedures and referred to the following link, which covers information regarding copyrights for documents submitted to IEEE 802.16:

<http://iee802.org/16/ipr/copyrights>

## **IEEE-SA Rules (Patents)**

The following advice was provided by the Chair:

The IEEE's Patent Policy is consistent with the ANSI patent policy and is described in Clause 6 of the IEEE SA Standards Board Bylaws;

Early disclosure of patents which may be essential for the use of standards under development is encouraged;

Disclosures made of such patents may not be exhaustive of all patents that may be essential for the use of standards under development, and that neither the IEEE, the WG nor the WG Chairman ensure the accuracy or completeness of any disclosure or whether any disclosure is of a patent that in fact may be essential for the use of standards under development.

Slide #1 ("IEEE-SA Standards Board Bylaws on Patents in Standards") and Slide #2 ("Inappropriate Topics for IEEE WG Meetings") were shown.

An opportunity was provided for WG members to identify or disclose patents that the WG member believes may be essential for the use of that standard.

No responses were given regarding this announcement.

## **IEEE 802 SA Actions**

There is nothing to discuss at this time.

### **TG2**

Coexistence

IEEE 802.16.2-2004 was published on 17 March 2004.

Awards were announced to Phil Whitehead, Remi Chayer, Jack Garrison, James Glib for their effort in the development of this standard.

### **TGC**

Ken Stanwood: Chair

Gordon Antonello, Vice Chair

TGC is developing a series of conformance standards.

P802.16/Conformance03 was published 25 June 2004.

Awards were to Ken Stanwood and Lars Lindh for their effort in the development of this standard.

No responses were received to TGC's Call for Contributions regarding P802.16/Conformance04. Therefore, meetings on this topic were cancelled for the week. The Call for Contributions will be reissued.

## 802.19 Coexistence TAG

The group is proposing a rule change ballot to require a Coexistence Assurance document with some projects [doc 802.19/04-0010r4]

A few people made comments about this document.

- David Johnston made a number of comments then suggested they broaden their scope past wireless.
- Roger Marks expressed concern with this rule change because too many unanswered questions remain. A discussion last night covered the fact that it should not cover licensed bands, but some ambiguity remains. Another question is what happens with new revisions of existing documents?
- Mariana Goldhamer – Agrees that there are many problems in this document. There is no need for this approach and it is not logical since the systems are so different between different working groups. We should also review changes to current standards and not just future standards work.
- Phil Barber – would be opposed to something that restricts development of future standards by a review through 802.19. They need to identify successful coexistence structure first and then compare the standards to this. Without some kind of codification with 802.19 this could stop all standards development. This would force the WG's to develop coexistence work but will have 802.19 review the actual document before it is released.

Roger asked for volunteers to help develop some comments on this document. The following two expressed interest in working on the comments:

Phil Barber  
Mariana Goldhamer

## 802 Architecture Group

802.1 Chair Tony Jeffree had proposed the formation of an 802 architecture group. This group would review the overall 802 architecture on Sunday before each plenary. The group would like to have two representatives from each working group attending on a regular basis.

David Johnston was the representative from 802.16 at the first meeting. He shared that there was a lot of discussion focused on the problems with 802 architecture. For example, with bridging, two standards do not comply with 802.1 bridging standards. Also security and a few other issues, some from 802.1 and others from 802.11. The voting would be open to two representatives from each WG. The group's charter is to apply pressure to the WG's on things that they need to fix or address and to offload handling of issues like security to this group rather than having each WG duplicate the effort with a different standard.

Roger Marks asked for names for people to participate with this group, two people volunteered.

DJ Johnston  
Phillip Barber

## PARs under Consideration

The deadline is Tuesday tomorrow at 5pm to make comments on the new PARs.

802.3 802.3ar Frame Expansion  
802.11 802.11p Wireless Access for the Vehicular Environment

802.11 802.11T Wireless Performance Prediction  
802.16 802.16e modification  
802.16 802.16f MIB  
802.16 802.16g Management Plane Procedures and Services  
802.18 TV Band Air Interface

No comments were made about the first three PARs.

802.18 TV Band Air Interface

There are concerns that this PAR is in direct conflict with 802.16.

Mariana Goldhamer is a member of the 802.18 group and her impression is that this work should be done in 802.16. Others attending from 802.11 would like to use this new group to develop the work. 802.16 should have an amendment that has information about TV for this band.

Roger Marks stated that this project seems to include two pieces: 1. A proposed set of regulatory rules to allow unlicensed use while protecting the current users in the band 2. New air interface standard.

DJ Johnston was present at the drafting session for this PAR. The rationale for developing this in a different group was due to the fact that there are some special requirements that may need a different PHY and MAC to address.

Roger Marks asked for people who would be willing to draft comments to this PAR and asked that this group can act on behalf of 802.16. There were no objections.

These are the people that were willing to get together to discuss comments to this new PAR.

Mariana Goldhamer  
Phil Barber  
Shlomo Ovadia  
DJ Johnston  
Roger Marks

Roger will gather this group together and submit comments by 5pm tomorrow.

## **Tutorials**

The tutorials for the week , as shown on the agenda, were reviewed.

## **Schedule for the Week**

The agenda of the week was reviewed at the meeting.

## **Task Groups**

### **TGd**

Gordon Antonello, Chair

IEEE Standard 802.16-2004 was approved on 24 June 2004

The standard is being edited by an IEEE professional editor. Publication is expected in August.

If there are errors in the standard, we can develop a Corrigendum PAR.

The group reviewed a proposed Corrigendum PAR to IEEE Std. 802.16-2004. This corrigendum would contain substantive corrections to IEEE Standard 802.16-2004. It would correct errors, inconsistencies, and ambiguities in the standard. It would not contain new material.

Ken Stanwood would Chair the project, and Itzik Kitroser would serve as editor.

Motion 3: Brian Kiernan to submit a corrigendum PAR to the EC for approval at this meeting, as reflected in IEEE C802.16-04/16r1, 2<sup>nd</sup> David Johnston.

Motion 3: carries 55-0-0.

## Contribution Procedures

<http://wirelessman.org/submit.html>

Submittals that violate the procedures will not be accepted.

## TGe

Brian Kiernan, Chair  
Ron Murias, Technical Editor

PAR approved 11 Dec 2002.

Comments submitted in WG Ballot recirculation are recorded in comment database 802.16-04/38r1  
287 comments  
2 late comments  
716 reply comments  
Received 16 reply resolutions posted to TG3 ballot upload server.

Received 122 contributions during the ballot process.

The schedule was reviewed and the plan is still to complete Sponsor Ballot by December 2004.

Comments will be reviewed by categories.

Expected Closing Plenary Motion: *"To accept IEEE 802.16-04/XX as the resolutions of WG Recirc Ballot #14b comments, develop Draft P802.16e/D4 based on those resolutions, and initiate Recirculation"*

The following motion was made because there is not a midweek plenary meeting.

Motion 4: Brian Kiernan, to authorize TGe to make the final revisions to the modified 802.16e PAR and to forward the modified PAR to the 802 EC 2<sup>nd</sup> Philip Barber

Motion 4: carries by unanimous voice vote.

## TGC

Ken Stanwood, Chair

No contributions were made so TGC will not meet this week.

Motion Carl Eklund, since there are no contributions to disband TGC. No 2<sup>nd</sup> was received.

Gordon Antonello would like one more call for contributions. This was supported by Ken Stanwood.

## **Ad Hoc Committee on Licensed-Exempt Coexistence**

Mariana Goldhamer, Chair

This week the group will discuss coexistence analysis and any further work to be handled by the group. This group will meet Tuesday at 10:30am jointly with the 802.19 WG. On Tuesday 8pm, the group will discuss LE Ad Hoc contributions. Mariana is recommending that a Study Group be created.

The chair asked for a show of hands as to how many people would attend this meeting. About 6-7 hands were raised.

## **Network Management Study Group**

DJ Johnston, Chair

Phillip Barber, Vice Chair

This group will meet Wed 8am-5pm. The Commentary database will be available Tuesday afternoon. The goal is to resolve comments received and issue new PARs and 5 criteria for 802.16f and 802.16g.

## **Liaison**

A letter was received by IEEE 802 from CCSA (IEEE L802.16-04/18). This letter was from Madame Cao Shumin, who attended Session #31 in Shenzhen, China. She expressed that they had a good meeting with IEEE-SA President Jim Carlo, Ms Terry deCourcelle, and Roger Marks in China and would like to extend their relationship in the future. Roger would like to have a reply letter sent and suggested that we consider a liaison relationship.

Irving Wang volunteered to be the liaison to CCSA if it were decided to make an appointment.

## **ETSI**

Mariana Goldhamer (ETSI BRAN Liaison) presented.

Input was received to IEEE 802 from ETSI BRAN in three letters (IEEE L802.16-04/19; L802.16-04/20; L802.16-04/21).

On some of the legal issues, we need to discuss the work with IEEE.

- Zion Hadad would prefer to limit cooperation between the two groups since not everyone is a member of both groups and IEEE is an international organization.
- Vladimir Yanover speaks in support of cooperation between ETSI and IEEE.

Ad hoc drafting group to respond to ETSI

- Mariana Goldhamer
- Roger Marks

The third document mentions the ITU-R Study Group 9

## **ITU-R**

José Costa (ITU-R Liaison) presented.

Document 19 contains some information in this area. José has had some discussions with 802.18 as well to review the document before it is sent to ITU-R.

ITU-R WP9B Input Statement: IEEE L802.16-04/07 and IEEE L802.16-04/08

Mariana Goldhamer commented that IEEE is now an ITU-R member. In the last meeting, regulators jumped into the process and want to see the requirement to assess other standards in this area.

A draft contribution to ITU-R will be prepared for review at the Closing Plenary. It will also be sent to 802.18 by late Wednesday for review.

Drafting Committee members include:

José Costa  
Mariana Goldhamer  
Mike Lynch  
Remi Chayer  
Margaret LaBrecque  
Roger Marks

This group has the authority from the WG to send it to 802.18 for approval.

## ***TTA***

Yung Hahn (TTA Liaison) presented.

Liaison Letter from TTA PG302 (IEEE L802.16-04/22)

There is a desire to harmonize with specific aspects of 802.16, in particular mobile aspects, in phase 2. Panyuh Joo is the liaison from the TTA to IEEE 802.16. Yung will meet with Joo and others from TTA this week to discuss harmonization.

## ***Liaison with other 802 Groups***

It would be useful to designate liaison officials to IEEE 802.18, 802.19, and 802.21.

David Johnston is appointed the liaison to 802.21.

Mike Lynch is appointed the liaison to 802.18.

Volunteer to liaison to 802.19? No response was made at this time.

## **Future Sessions**

Session #33:

30 Aug - 2 Sep 2004 in Seoul, Korea, hosted by Samsung. The session is scheduled a few weeks earlier than usual so as to allow startup of the P802.16e Sponsor Ballot with completion before Session #34.

Panyuh Joo presented more information about the session in Seoul. Reservations need to be made before 15 August 2004. The initial reservation was for 80 rooms which is probably not enough space.

Session #34:

15-18 November 2004 at the Hyatt Regency San Antonio, TX, USA with the IEEE 802 Plenary Session



Session #35:

Decision to be made at the Closing Plenary. Target date is Jan 24<sup>th</sup>. The other wireless groups are meeting on Monterey CA the week before.

The Chair calls for proposals. There was only one response:

Aditya Agrawal – Meeting in Bangalore, India.

Session #36:

13-18 March 2005 at the Hyatt Regency Atlanta, GA, USA with the IEEE 802 Plenary Session

## **New Business**

Nothing discussed.

## **Closing**

Motion 5: Itzik Kitroser, to adjourn the meeting 2<sup>nd</sup> Brian Kiernan.

Motion 5: carries by unanimous voice vote.

The meeting was adjourned at 4:45 pm on 12 July 2004.

## Closing Plenary

### Opening

Chair Roger Marks called the meeting to order at 8:12 pm on 15 July 2004. This was an hour later than originally planned, due to the lateness of the prior Task Group e meeting.

### Agenda

Motion 6: David Johnston, to approve the Closing Plenary Meeting Agenda as presented, 2<sup>nd</sup> Tal Kaitz.

Motion 6: carries by unanimous voice vote.

## IEEE 802 Issues

### 802.18

802.18 Chair Carl Stevenson was invited to present.

A contribution to ITU-R WP 9B was drafted by the appointed 802.16 ad hoc committee led by José Costa. It was approved by the 802.18 working group to forward to the IEEE 802 EC.

Motion7: Carl Stevenson, to approve document C802.16-04/20, 2<sup>nd</sup> Zion Hadad.

Motion7: carries by unanimous voice vote.

### IEEE 802.18 Proposal for TV Band PAR

802.16 had submitted comments (IEEE 802.16-04/42) to 802.18 regarding this proposed PAR..

The 802.18 group developed a response (in IEEE 802.16-04/42r1) to the 802.16 comments on the TV Band PAR

The Study Group respectfully disagreed that cognitive radio and air interfaces are separate or separable elements. 802.18 studies have shown that a specialized interface system will yield the best, most practical, most cost-effective, and most robust solution to this unique “unlicensed under licensed” sharing situation.

The SG reviewed and debated rejected all of 802.16’s comments. No changes to the PAR and 5 criteria were made due to comments from other working groups either.

Straw Poll of members to get a sense of where the group stands.

Roger to vote in favor of the PAR: 6

Roger to vote against the PAR: 38

Roger to vote his conscience: 6

### 802.19

802.19 Chair Steve Shellhammer presented, with the assistance of 802.19 Vice Chair Tom Siep

Steve described some plans for the 802.19 coexistence TAG. The plan going forward is to make a motion to hold an EC letter ballot on some P&P (rules) changes. All of the 802 EC members will be able to vote and at the November plenary there will be a motion to approve these changes.

Details are listed in document 802.19 document 10 r7

The following check boxes will be added to the PAR:

- Working will create a CA [Coexistence Assurance] documentation as a part of the ballot process
- Working Group will not create a CA document

Procedure for Coexistence Assurance document will be developed with relevant 802 groups working in unlicensed bands. The 802.19 TAG will have one vote on documents that include CA documents.

The group is developing a CA methodology document as a guide to the working groups.

Straw Poll

Roger to vote to approve these rule change ballot: 15

Roger to vote not to approve the rule change ballot: 0

## Maintenance Ad Hoc

Chair's Report: Ken Stanwood

PAR for Corrigendum to IEEE Std. 802.16-2004) was submitted (IEEE 802.16-04/41; updated as IEEE 802.16-04/41r1).

206 comments received. 189 to corrigendum, 17 from TGe  
14 contributions

The database will stay open. Assuming the PAR is approved, there is a Plan for a Call for Comments.

Reviewed 93 comments.

85 in scope

8 out of scope.

Comments ruled in scope do not imply that the group accepted the comments; the 8 out of scope were clearly enhancements.

## License-Exempt Ad Hoc Committee

Chair's Report: Mariana Goldhamer

There were two meetings this week: Tuesday with 802.19. Intended Policy and Procedure changes presented by Steve Shellhammer, 802.19 Chair. A presentation was made on the LE Ad-hoc work and further intentions.

The Tuesday evening meeting had 16 participants from 802.11, 802.16, and 802.19 This group developed an ad-Hoc Report listed in C802.16-04/14.

The group developed a contribution on potential solutions (C802.16-04/17).

The group proposed the creation of a study group on the License Exempt bands.

Study group scope is to access the feasibility of a coexistence protocol, PHY independent and adapted to the 802.16 MAC protocol.

[The group's minutes are attached in Annex C.]

Motion 8: Mariana Goldhamer, To create an 802.16 Working Group Study Group on License-Exempt Coexistence 2<sup>nd</sup> Vladimir Yanover

Motion 8: carries 27-0-9.

## Network Management Study Group

Chair's Report: DJ Johnston

The group met and reviewed 3 comments on 802.16f PAR. All were accepted.

802.16g PAR received 3 comments; accepted 1 and rejected 2.

Submitted PAR 802.16f (IEEE 802.16-04/34r2) and 802.16g (IEEE 802.16-04/35r2)

802.20 submitted comments but directed their chair to not approve 802.16e (modified) and 802.16g PARs.

Motion 9: DJ Johnston, To approve the 802.16f “MIB” PAR (IEEE 802.16-04/34r2) and the associated five criteria (IEEE 802.16-04/45) for forwarding to the 802 EC for approval and forwarding to NesCom, 2<sup>nd</sup> Lei Wang

Motion 9: carries 49-0-0.

Motion 10: DJ Johnston approve the 802.16g “Network Management” PAR (IEEE 802.16-04/35r2) and the associated five criteria (IEEE 802.16-04/44) for forwarding to the 802 EC for approval and forwarding to NesCom, 2<sup>nd</sup> Philip Barber.

Motion 10: carries 50-0-0.

Roger’s intent is to create one NetMan Task Group to work on both PARs. Ideally the group should meet as a TG at Session #33. A Call for Contributions is expected.

## **Task Group e**

Chair’s Report: Brian Kiernan

For details see the chair’s report 802.16e-04/14

Reviewed 287 comments

The group received 126 contributions, 2 late ones and 4 reply contributions

Formed a Preamble Ad Hoc chaired by Peiyong Zhu to consolidate all of the preamble issues.

Discussions were held on revising the modified TGe PAR. New version (C802.16-04/33r2) was approved 80-0-1.

Response to comments on this PAR from 802.20 (IEEE C802.16-04/43) was approved 84-0-0.

Motion 11: Brian Kiernan, to accept IEEE 802.16-04/38r3 as the resolutions of WG Ballot #14b comments, develop Draft P802.16e/D4-2004 based on these resolutions and initiate Recirculation #14c to close on August 16, 2004 with reply comments due by August 23, 2004, 2<sup>nd</sup> Philip Barber.

Motion 11: carries 65-0-0

## **Liaison**

### ***ETSI BRAN***

Presentation: Mariana Goldhamer –(ETSI BRAN Liaison)

Motion 12 Mariana Goldhamer, to deliver the letter to ETSI BRAN (IEEE L802.16-04/23), amended by the addition of an acknowledgement of ETSI’s IEEE 802.16-04/20, 2<sup>nd</sup> Jose Costa.

Motion 12: carries by unanimous voice vote.

### ***TTA***

Presentation by Yung Hahn –(TTA Liaison)

Yung had a meeting with representatives from various equipment and service providers affiliated with TTA. The action item was that the TTA will call a key items meeting next week to review items.

### ***CCSA***

Roger Marks drafted a response letter to Madame Cao Shumin at CCSA. This is listed in L802.16-04/24.

Motion 13: to forward this letter in L802.16-04/24 to CCSA 2<sup>nd</sup> Greg Phillips

Motion 13: carries by unanimous voice vote.

## **Future Sessions <<http://ieee802.org/16/calendar.html>>**

Session #33:

30 Aug - 2 Sep 2004 in Seoul, Korea, hosted by Samsung.

Motion 14: DJ Johnston, to authorize the Working Group to conduct business and Session #33 with or without a formal quorum, 2<sup>nd</sup> Mariana Goldhamer.

Motion 14: 35-0-0.

Session #34:

15-18 November 2004 at the Hyatt Regency San Antonio, TX, USA with the IEEE 802 Plenary Session

Session #35:

January 2005; site to be determined during Session #32

The chair requested possible proposals. There were two

Bangalore, India proposal, by Aditya Agrawal of Beceem Communications (IEEE C802.16-04/21)

Sanya, China, proposed by Yuehua (Lucy) Chen of Huawei Tech (IEEE C802.16-04/23)

Motion 15: Remi Chayer to open the site selection for session #35 to everyone in the room, 2<sup>nd</sup> Pierre Lamoureux

Motion: 15 carries by unanimous voice vote.

Straw Poll

Bangalore India: 47

Sanya China: 66

Session #35 will be held in Sanya, China, hosted by Yuehua (Lucy) Chen of Huawei Technologies Co., Ltd.

Session #36:

13-18 March 2005 at the Hyatt Regency Atlanta, GA, USA with the IEEE 802 Plenary Session

## **Closing**

Motion 16: David Johnston, to adjourn the meeting, 2<sup>nd</sup> Ron Murias.

Motion 16: carries by unanimous voice vote.

The meeting was adjourned at on 15 July 2004 at 11:03 pm.

# The IEEE 802.16 Working Group on Broadband Wireless Access Standards

## IEEE 802.16 Members

**Update: 21 July 2004**

Number of members: 150

Next scheduled update: following Session #34

See also:

- [Rights of Membership](#)
- [Acquiring and Retaining IEEE 802.16 Membership](#)
- [Potential Members](#)
- [those recently losing membership](#)
- [Members in Peril](#)
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<b>Name\Given</b>	<b>Name\Family</b>	<b>Company</b>	<b>City</b>	<b>State \Province</b>	<b>Country</b>
Edward	Agis	Intel Corp.	Newbury Park	CA	USA
Aditya	Agrawal	Beceem Communications, Inc.	Santa Clara	CA	USA
Baraa	Al-Dabagh	Intel Corp.	San Jose	CA	USA
Mario	Aliotta	Siemens Mobile Communications	Cassina de Pecchi (MI)		Italy
Dov	Andelman	Intel Corp.	Raanana		Israel
Gordon	Antonello	Wi-LAN Inc.	Calgary	AB	Canada
Sanjeev	Athalye	Qualcomm Inc.	San Diego	CA	USA
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Brian	Banister	Comtech AHA Corp.	Pullman	WA	USA

Phillip	Barber	Broadband Mobile Technologies	Frisco	TX	USA
Kevin	Baum	Motorola, Inc.	Schaumburg	IL	USA
Izhar	Bentov	Adavcom	San Diego	CA	USA
Rajesh	Bhalla	ZTE San Diego	San Diego	CA	USA
Sean	Cai	ZTE San Diego	San Diego	CA	USA
David	Castelow	Airspan Networks Inc.			UK
Giulio	Cavalli	Siemens Mobile Communications	Cassina de' Pecchi (MI)		Italy
Dean	Chang	Aperto Networks	Milpitas	CA	USA
Jae Hwan	Chang	Samsung Electronics Co., Ltd.	Suwon-si	Gyeonggi-do	Korea
Yong	Chang	Samsung Electronics Co., Ltd.	SuwonSi		Korea
Naftali	Chayat	Alvarion Ltd.	Tel Aviv		Israel
Remi	Chayer	Harris Corporation	Dollard-des-Ormeaux	PQ	Canada
Aik	Chindapol	Siemens	Princeton	NJ	USA
Jaeweon	Cho	Samsung Electronics Co., Ltd.	Suwon	Gyeonggi	Korea
Seokheon	Cho	ETRI	Daejeon		Korea
Hyoung-Jin	Choi	TTA	Seongnam city		Korea
Joey	Chou	Intel Corp.	Chandler	AZ	USA
Jin Yong	Chung	SOLiD Technologies, Inc.	Seoul		Korea
Jose	Costa	Nortel Networks	Ottawa	ON	Canada
Mark	Cudak	Motorola, Inc.	Schaumburg	IL	USA
Frank	Draper	Wavesat Inc.	Dorval	PQ	Canada
John	Dring	Consultant	San Jose	CA	USA
Lester	Eastwood	Motorola, Inc.	Schaumburg	IL	USA
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Yigal	Eliaspur	Intel Corp.	Jerusalem		Israel

Roger	Eline	Intel Corp.	San Jose	CA	USA
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Mariana	Goldhamer	Alvarion Ltd.	Tel Aviv		Israel
Reza	Golshan	Fujitsu Microelectronics America, Inc.	Sunnyvale	CA	USA
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Zion	Hadad	Runcom Technologies Ltd.	Rishon Le Zion		Israel
Yung	Hahn	Intel Corp.	Hillsboro	OR	USA
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David	Hartman	CarrierComm	Encinitas	CA	USA
John	Haskin	Microsoft	Redmond	WA	USA
Seung Ku	Hwang	ETRI	DaeJeon		Korea
Prakash	Iyer	Intel Corp.	Beaverton	OR	USA
Moo Ryong	Jeong	DoCoMo USA Labs	San Jose	CA	USA
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The list includes the 332 people who attended Session #32.

Updated 04/07/26

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Yes	Eric	Reifsnider	Wireless Valley Communications			USA
Yes	Douglas	Reudink	Kaon Systems			
No	Hoseyn	Rhabar	LSI Logic Corp.			
Yes	Maximilian	Riegel	Siemens	Munich		Germany
No	Benno	Ritter	Infineon Technologies			USA
Yes	Chris	Rogers	Intel Corp.	Hillsboro	OR	USA
Yes	Shane	Rogers	Wi-LAN Inc.	Calgary	AB	Canada
Yes	Wonil	Roh	Samsung Electronics Co., Ltd.	Suwon-City	Gyeonggi-do	Korea
No	Herbert	Ruck				USA
Yes	Byung-Han	Ryu	ETRI	Daejeon		Korea
Yes	Kiseon	Ryu	LG Electronics Inc.	Anyang-shi	Gyeonggi-do	Korea
Yes	Andrew	Sago	BT Exact	Ipswich	Suffolk	UK



Yes	Atul	Salvekar	Intel Corp.	San Jose	CA	USA
Yes	Gregory	Schumacher	Nextel Communications	Reston	VA	USA
Yes	Randall	Schwartz	Intel Corp.			USA
Yes	Christian	Seagren	Sprint	Overland Park	KS	USA
Yes	Yossi	Segal	Runcom Technologies Ltd.	Rishon Le Zion		Israel
No	Radu	Selea	Redline Communications Inc.	Markham	ON	Canada
Yes	Mohammad	Shakouri	Alvarion Ltd.	San Jose	CA	USA
Yes	Eli	Shasha	Runcom Technologies Ltd.	Rishon Le Zion		Israel
No	Donald	Shaver	Texas Instruments, Inc.	Dallas	TX	USA
Yes	Manyuan	Shen	Kaon Systems			USA
No	Dong-Jye	Shyy	MITRE	Mclean	VA	USA
Yes	James	Simkins	Xilinx	Salt Lake City	UT	USA
No	Brian	Slosson	Mercyhurst College			USA
Yes	Kyung Yeol	Sohn	ETRI	Daejeon		Korea
Yes	Jung Je	Son	Samsung Electronics Co., Ltd.	Seoul		Korea
Yes	Yeong Moon	Son	Samsung Electronics Co., Ltd.	Suwon-si	Gyeonggi-do	Korea
Yes	Kenneth	Stanwood	Cygnus Multimedia Communications	Carlsbad	CA	USA
Yes	Kenneth	Stewart	Motorola, Inc.	Libertyville	IL	USA
Yes	Shilpa	Talwar	Intel Corp.	Santa Clara	CA	USA
No	Satoshi	Tamaki	Hitachi			Japan
Yes	Kazuki	Tani	KDDI Corporation	Chiyoda-ku		JAPAN
Yes	Shawn	Taylor	Wi-LAN Inc.	Calgary	AB	Canada
Yes	Yongjoo	Tcha	KT Corp.	Seoul		Korea
No	Lai king	Tee	Samsung Telecommunications America			USA
Yes	Paul	Thompson	Paul Thompson Associates	Eugene	OR	USA
No	William	Thomson	Comtech AHA Corp.	Pullman	WA	USA



Yes	Wen	Tong	Nortel Networks	Ottawa	ON	Canada
Yes	Rainer	Ullmann	Wavesat Inc.	Dorval	PQ	Canada
Yes	Mano	Vafai	Aperto Networks	Milpitas	CA	USA
Yes	Subramanian	Vasudevan	Lucent Technologies			USA
Yes	Eyal	Verbin	Airspan Networks Inc.	Airport City		Israel
Yes	Frederick	Vook	Motorola, Inc.	Schaumburg	IL	USA
Yes	Arthur	Wang	Linquest	Oceanside	CA	USA
Yes	Guo Qiang	Wang	Nortel Networks	OTTAWA, ON	ON	Canada
Yes	Irving	Wang	ZTE San Diego	San Diego	CA	USA
Yes	Jing	Wang	ZTE San Diego	San Diego	CA	USA
Yes	Lei	Wang	Wi-LAN Inc.	Calgary	AB	Canada
Yes	Stanley	Wang	CyberTAN Technology, Inc.	Hsinchu		Taiwan
No	Fujio	Watanabe	DoCoMo USA Labs	San Jose	CA	USA
Yes	Yasuyuki	Watanabe	KDDI Corporation			Japan
Yes	Matthew	Welborn	Motorola, Inc.			USA
Yes	Alfred	Wieczorek	Motorola, Inc.	Plantation	FL	USA
Yes	Frank	Wu	Universal Scientific Industrial Co., Ltd.	Santa Clara	CA	USA
Yes	Geng	Wu	Nortel Networks	Richardson	TX	USA
Yes	Jun	Wu	ZTE San Diego	San Diego	CA	USA
Yes	W. Michael	Xin	Battery Ventures			USA
Yes	Ming	Xu	Panasonic Mobile Communications Co., Ltd.	Kanagawa		Japan
No	Hassan	Yaghoobi	Intel Corp.	Santa Clara	CA	USA
Yes	Weidong	Yang	Navini Networks	Richardson	TX	USA
Yes	Yu-Ren	Yang	Industrial Technology Research Institute (ITRI)	Hsinchu		Taiwan
Yes	Ran	Yaniv	Alvarion Ltd.	Tel-Aviv		Israel
Yes	Vladimir	Yanover	Alvarion Ltd.	Herzlya		Israel
Yes	Choong-Il	Yeh	ETRI	Deajeon		Korea
Yes	Kunmin	Yeo	ETRI	Daejeon		Korea

Yes	Chulsik	Yoon	ETRI	Daejeon		Korea
Yes	Changwahn	Yu	ETRI			Korea
Yes	Jungnam	Yun	Posdata			USA
Yes	Jianzhong (Charlie)	Zhang	Nokia Inc.			USA
Yes	Wenzhong	Zhang	ZTE San Diego	San Diego	CA	USA
Yes	Frank	Zhou	Nokia Inc.	San Diego	CA	USA
Yes	Keqiang (Kevin)	Zhu	ZTE San Diego	San Diego	CA	USA
Yes	Peiying	Zhu	Nortel Networks	Ottawa	ON	Canada

\*Session #32 "participation" credit was granted to those participating in six session intervals, provided that registration fees were paid. Subject to change depending on session credit in other Working Groups.

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## IEEE 802.16 Session #32 Report



### Summary

Session #32 of the IEEE 802.16 Working Group on Broadband Wireless Access took place on 12-15 July 2004 in Portland, OR, USA. The attendance of 332 people broke the 802.16 record of 228 set at Session #31.

### Approval of New Revision of WirelessMAN Standard: IEEE Standard 802.16-2004

On 24 June, the IEEE-SA Standards Board approved IEEE Standard 802.16-2004. This is a consolidated revision of IEEE Standard 802.16-2001 along with its 802.16a and 802.16c amendments. The draft had been developed under the temporary designation IEEE P802.16-REVd. The new standard represents the technical development of WirelessMAN air interface for fixed broadband wireless access systems. A PAR for a corrigendum, to quickly correct errors that may be found in the 915-page draft, was initiated and forwarded to NesCom. Initial discussions on such maintenance issues were held. The corrigendum will be handled by a new Maintenance Task Group.

### Comment Resolution on Mobile WirelessMAN (P802.16e) Draft

Comments were resolved following the second recirculation of the Working Group Letter Ballot regarding the IEEE P802.16e draft, which will enhance the WirelessMAN air interface to support mobile as well as fixed users. This activity will lead Task Group e to the development of Draft 4 for a third recirculation. A modification of the 802.16e Project Authorization Request (PAR), to address some obsolete language and allow for more flexibility, was forwarded by the 802 EC to NesCom for 22 September consideration. The Task Group issued a closing report and minutes.

### Two Network Management Study Group PARs Forwarded

The IEEE 802.16 Network Management Study Group reviewed two PARs, one to develop a Management Information Base for fixed service and another to develop Management Plane Procedures and Services to include both fixed and mobile service. The IEEE 802 EC forwarded both PARs to

NesCom for August 12 approval. The projects will be handled by a new Network Management Task Group.

### **New IEEE 802.16 Study Group on Licensed-Exempt Coexistence**

The Working Group's Ad Hoc Committee on Licensed-Exempt Coexistence met in its effort to provide the Working Group with recommendations regarding the advisability of initiating standardization in this area. It issued a report proposing the creation of an IEEE 802.16 Study Group on Licensed-Exempt Coexistence. The proposal was accepted, and the Working Group, with 802 EC approval, chartered the Study Group until the end of Session #35.

### **Conformance Standards**

IEEE Standard 802.16/Conformance03 ("Standard for Conformance to IEEE Standard 802.16 - Part 3: Radio Conformance Tests (RCT) for 10-66 GHz WirelessMAN-SC Air Interface") was published on 25 June 2004. This is the IEEE 802.16 Working Group's eighth published standard. No input was received concerning the project to draft the fourth document in the series, P802.16/Conformance04 (PICS Proforma for frequencies below 11 GHz). Therefore, a new Call for Contributions was issued.

### **Working Group Liaison Activities**

- The WG sent a letter to Technical Committee TC5 of the China Communication Standards Association (CCSA) in response to a letter from CCSA
- The WG sent a letter to ETSI BRAN in response to a liaison letter from ETSI and a proposed MOU, as well as in response to a liaison letter from ETSI BRAN to ITU-R SG9
- In response to an earlier invitation, the Working Group drafted a Contribution to ITU-R WP9B regarding its "Radio interface specifications for fixed broadband wireless access (BWA) systems". The draft was approved by IEEE 802 and will be submitted on behalf of IEEE, as an ITU-R Sector Member.
- The WG received a liaison letter from TTA PG302.

### **Future Meetings**

- IEEE 802.16's Session #33 will take place in Seoul, Korea on 30 August - 2 September 2004. The host will be Panyuh Joo of Samsung Corporation.
- IEEE 802.16's Session #34 will take place on 15-18 November 2004 in conjunction with the IEEE 802 Plenary Session. The session is currently planned for San Antonio, TX, USA
- The Working Group decided to hold IEEE 802.16's Session #35 in Sanya, Hainan, China on 24-27 January 2005. The choice was based on a hosting proposal by Lucy Chen of Huawei Technologies Co. The site selection process also considered a proposal to hold the session in Bangalore, India.

## Documents

The [Session #32 document list](#) includes references to over 150 session documents.

## Minutes and Motions

The Working Group minutes will be available as [IEEE 802.16-04/48](#). Significant motions drafted for presentation at the Closing Plenary are embedded in the [Closing Plenary Agenda](#). All of the Working Group's [requests at the 802 LMSC Executive Committee meeting of 16 July](#) were approved.

## New "802.16 News" Mailing List

A new "802.16 News" mailing list ("stds-802-16-news") has been established, with the sole purpose of distributing major announcements related to the Working Group. Those interested in following the progress of the group but not in the day-to-day details may wish to [subscribe](#). Only the Working Group Chair is eligible to post to the list, and mailings will be rare: once after each bimonthly session and additionally for major news, such as the approval of a new standard. Those subscribing to the stds-802-16 mailing list, for active Working Group participants, need not subscribe to stds-802-16-news since the postings will be redundant.

## About IEEE 802.16

The [IEEE 802.16 Working Group on Broadband Wireless Access Standards](#) has developed and is enhancing the **WirelessMAN**<sup>TM</sup> Standard for wireless metropolitan area networks. IEEE 802.16 is a unit of the [IEEE 802 LAN/MAN Standards Committee](#), the premier transnational forum for wired and wireless networking standardization. A [list of IEEE 802.16 standards and drafts](#) is available on-line, as is a [project milestone summary](#) and an archive of previous [Session Reports](#).

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With the approval of the IEEE 802.16 Working Group, this report was drafted and edited (21 July 2004 edition) by:

Roger Marks ([marks@nist.gov](mailto:marks@nist.gov))

Chair, IEEE 802.16 Working Group on Broadband Wireless Access Standards

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## **Annex D: Minutes of License Exempt Ad Hoc Committee**

13 July 2004

Chair: Mariana Goldhamer

Secretary: Barry Lewis

Meeting opened at 20:10

Contributions: C802.16-04/14; C802.16-04/15; C802.16-04/17.

Coexistence problem

Contribution C802.16-04/14: Presented by Mariana Goldhamer.

Contribution C802.16-04/17: Presented by Mariana Goldhamer.

These documents present the coexistence problem and preliminary conclusions lead the ad-hoc to conclude that a Study Group is justified.

Study Group definition

Contribution C802.16-04/18: LE Ad Hoc results.

The document was edited as C802.16-04/18r1 and approved by unanimous consent.

Meeting closed 21:30

Attendance :

Andrew Gowans - OFCOM-UK

Andy Sago - British Telecom

Barry Lewis - Redline

Byoung-Jo Kim - AT&T

Jayne Stancavage - Intel

Mariana Goldhamer - Alvarion

Mathilde Benveniste -

Michael Lynch - Nortel

Nada Golmie - NIST

Noman Rangwala - Analog Devices

Phillip Barber - Broadband Mobile Technologies

Remi Chayer - Harris

Roger Marks - NIST

Steve Shellhammer - Intel

Vitay Patel - Motorola