

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 #31</b>	
Date Submitted	<b>2004-06-24</b>	
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Re:	IEEE 802.16 Session #31 Minutes (Shenzhen, China)	
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 #31

IEEE 802.16 Working Group  
Shenzhen, China  
17-20 May 2004

## Opening Plenary

### Call to Order

Roger Marks called the meeting to order at 1:18 pm, May 17, 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  
40 Potential members  
57 Official observers

218 people registered in advance for this meeting. {Note: The final attendance was 228.}

### Attendance

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

Session participation credit requires participation in 6 of the 8 intervals for this session.

### Agenda

Motion 1: Shawn Taylor, to approve Opening Plenary agenda as it stands on the 802.16 server with an addition of an ETSI discussion, 2<sup>nd</sup> Phillip Barber.

Motion 1: carries by unanimous voice vote.

Motion 2: Itzik Kitroser to approve Minutes of Session #30 (IEEE 802.16-04/16), 2<sup>nd</sup> Marianna Goldhammer.

Motion 2: carries by unanimous voice vote.

### Chair's Status Report (**Report**)

Roger presented a few of the rules as to how IEEE 802 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://ieee802.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 disclosures were made regarding this announcement.

## IEEE 802 SA Actions

IEEE 802.16.2/2004 ("Recommended Practice for Local and Metropolitan Area Networks - Coexistence of Fixed Broadband Wireless Access Systems") was published on March 17, 2004. Phil Whitehead was Chair, Roger Marks was the last Editor.

IEEE 802.16/Conformance03 is now a standard following approval last week. This is the IEEE 802.16 working group's eighth standard. Ken Stanwood was Chair and Lars Lindh was the editor.

PAR for new Project P802.16/Conformance04 (PICS for frequencies <11 GHz) was approved as well.

## Agenda for the Week

The agenda of the week was reviewed at the meeting.

## Active Projects

802.16REVd is currently in recirculation ballot and will not be discussed at this meeting.

802.16e is currently in Working Group ballot and the work is expected to be completed by the end of this year.

## Task Groups

### TGC

Ken Stanwood, Chair, Task Group C

Gordon Antonello, Vice Chair

At this time, there were no contributions so there will be no meetings of this group during the week.

### TGd

Gordon Antonello, Chair

The group went through a tremendous amount of effort, but was very productive, in resolving comments between sessions. This may be a new model as to how work is done in the future outside of a meeting.

The group reviewed the schedule for TGD. This will become a standard on June 24<sup>th</sup> assuming that there are no problems in the current recirculation ballot. If there are problems, the next available date will be in September.

## TGe

Brian Kiernan, Chair  
Ron Murias, Technical Editor

There were 270 comments with 52 contributions in WG Recirculation Ballot #14a.

## Network Management Study Group

DJ Johnston, Chair  
Philip Barber, Vice Chair

This group is meeting twice this week and will review the contributions made.

## Ad Hoc Committee on Licensed-Exempt Coexistence

Marianna Goldhammer, Chair

A number of solutions have been suggested in this area and will be discussed this week. This group will meet Tuesday night this week.

The meeting recessed from 2:55-3:30pm.

## Liaison

The Chair presented a letter from he had written to CCSA: [IEEE L802.16-04/13](#).

Jose Costa presented “Characteristics of Wireless Metropolitan Area Networks - Follow up to contribution to ITU-R”(IEEE L802.16-04/14). Jose Costa said that he would be glad to help out in this area.

The Chair presented “Reply to IEEE 802.16 on ANT Standardization and Work Plan” from ITU-T SG 15 ([IEEE L802.16-04/15](#)). This document is for information only and no response is needed. A liaison relation with SG 15 may be useful in the future.

Marianna Goldhammer made a presentation on ETSI Testing. The group currently developed a number of test cases for IEEE 802.16 REVd; it is focussing on conformance to that draft rather than on the HIPERMAN specification.

DJ Johnston gave a quick report on IEEE 802.21. The group will create different interfaces on top of the MAC and the PHY to be able to handle handoff issues. See diagram referenced by DJ Johnston.

## Future Sessions

Session #32:

12-15 July 2004 at the Portland Hilton, Portland, OR, USA with [IEEE 802 Plenary Session](#)

[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.

2004-07-05

IEEE 802.16-04/29

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

Possible proposals:

Aditya Agrawal

Shlomo Ovatia – Israel

Possible WCA co-location proposal for San Jose, CA

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 3: Carl Eklund, to adjourn the meeting 2<sup>nd</sup> Shawn Taylor.

Motion 3: carries by unanimous voice vote.

The meeting was adjourned at 4:22 pm on 17 May 2004.

## Closing Plenary

### Opening

Chair Roger Marks called the meeting to order at 7:17 pm on 20 May 2004.

### Agenda

Motion 4: Brian Kiernan, to approve the agenda as presented, 2<sup>nd</sup> Brian Johnston.

Motion 4: carries by unanimous voice vote.

### Host Thank You Letter

Roger Marks said that everyone had enjoyed this meeting and felt very welcome here. It was a big meeting with many new people and new faces. The chair proposed a letter to Mr. Xie of the ZTE Corporation.

Motion 5: Brian Johnston to send the letter to ZTE Corporation, document IEEE 802.16-04/32, 2<sup>nd</sup> Marianna Goldhammer.

Motion 5: carries by unanimous voice vote.

### Task Group C

Chair Report:: Ken Stanwood

We expect some input to the PICs that can be reviewed at the July meeting.

### Task Group d

Chair's Report: Gordon Antonello

Comments will be entertained only by the Sponsor Ballot Group members in this recirculation ballot. The group needs to adopt a schedule and a method to resolve these comments if they do arise. Without objection, the Working Group empowered the Chair and the Vice Chair to develop the procedure and implement a system similar to what was used on the last recirculation.

### Task Group e

Chair's Report: Brian Kiernan

See the closing report IEEE 802.16e-04/10r1 for details.

270 comments were submitted.

Received 53 contributions during ballot cycle. All comments associated with late contributions were rejected and contributors were instructed to resubmit the comments during the next cycle.

Two ad hoc groups were formed:

Security, Jeff Mandin, Chair

Handoff, Prakash Iyer, Chair

Motion 6: To accept IEEE802.16-04/23r2 as the resolution of WG Ballot #14a comments, develop Draft P802.16e/D3-2004 based on these resolutions, and initiate a Recirculation to close on June 25 with reply comments due by July 2, 2004, 2<sup>nd</sup> Phillip Barber

Motion 6: carriers 34-0-0

Motion 7: That the scope of the Recirculation be increased to constitute the entire Draft, 2<sup>nd</sup> DJ Johnston.

2004-07-05

IEEE 802.16-04/29

Motion 7: carries by unanimous voice vote.

Motion 8: That the current TGe PAR be revised in accordance with C802.16e-04/98r4 and submitted to 802 EC for approval, 2<sup>nd</sup> DJ Johnston.

Motion 8: carries 31-1.

Motion 9: Phillip Barber To submit the revised PAR to the IEEE 802 EC subject to the edits made by Working Group Chair and Task Group Chair 2<sup>nd</sup> Brian Kiernan.

Motion 9: carries 21-0.

Here is a record of people who had voted Disapprove but announced at this time that they had changed their vote to Approve based on this week's comment resolution:

Marianna Goldhammer  
Zion Hadad  
Tal Kaitz  
Changhoi Koo  
Ron Murias  
Ken Stanwood  
Vladimir Yanover  
Roger Eline  
DJ Johnston

## **Network Management SG**

Chair's Report: DJ Johnston

The group approved the forwarding of two draft PARs

MIB PAR (P802.16f)  
Management Plane PAR (P802.16g)

Motion 10: DJ Johnston, Approve the PAR and five criteria for a MIB amendment, contained in 802.16f\_par\_and\_5C\_r1.zip and empower the 802.16 WG chair to forward it to the IEEE 802 EC for approval subject to editorial changes by the chair, 2<sup>nd</sup> Brian Johnson.

Motion to Amend: Marianna Goldhammer, Change section 15 to "ETSI BRAN HiperMan is developing a MIB standard", 2<sup>nd</sup> Yossi Segal

Motion to Amend: carries 5-0

Motion 10: carries 11-0.

Motion 11: DJ Johnston, Approve the PAR and five criteria for a management plane amendment, contained in 802.16g\_par\_and\_5C\_r1.zip and empower the 802.16 WG chair to forward it to the IEEE 802 EC for approval To submit the Management Plane PAR to the IEEE 802 EC, subject to editorial changes by the chair, 2<sup>nd</sup> Lei Wang.

Motion 11: carries 12-0.

## **Licensed-Exempt Study Group**

Chair's Report: Marianna Goldhammer

Barry Lewis served as Secretary

19 people attended the meeting. Details are included in IEEE 80216-04/12r1.

## **Liaison**

### ***China Communications Standards Association CCSA***

2004-07-05

IEEE 802.16-04/29

A report from CCSA was provided by Meimei Dang of the China Academy of Telecommunications Research. She provided an overview of CCSA, with an emphasis on CCSA's Wireless Communications Technical Committee. She noted that CCSA hopes to enhance cooperation with IEEE 802 standardization groups and that TC5 would like to establish a liaison relationship and maintain close cooperation with IEEE 802.16.

Roger reported that he had a good meeting with CCSA this week and that there are plans to have liaison relationships between CCSA and IEEE-SA.

## **TTA**

Roger drafted a letter to TTA302 Chair Dr. Hong. In summary, it said it would be good to have a relationship between the two groups. In addition, the letter announced Yong Hahn as IEEE 802.16's liaison to TTA. The letter (IEEE L802.16-04/17) was approved without objection.

## **ITU-R**

Jose Costa presented IEEE L802.16-04/16 on the Global Radio Standards Collaboration..

The Chair asked Mr. Costa to take the lead in developing a reply to the liaison letter IEEE L802.16-04/08 from ITU-R WP 9B. Such a reply needs to be completed during Session #32. Mr. Costa agreed. Those agreeing to assist were:

Marianna Goldhammer  
Barry Lewis

The following had volunteered at Session #30:

Remi Chayer  
Greg Phillips  
Mike Lynch

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

Session #32:

12-15 July 2004 at the Portland Hilton, Portland, OR, USA with [IEEE 802 Plenary Session](#). People are encouraged to reserve their hotel room as soon as possible.

[Session #33:](#)

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

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

Possible proposals:

Aditya Agrawal

Shlomo Ovatia – Israel

Possible WCA co-location proposal for San Jose, CA

Comments on WCA proposal:

It was suggested that all interim sessions be held outside the U.S., since 802 plenaries are always in North America and usually in the U.S.

One participant would like to meet on the East coast of the U.S.

Some people would like to co-locate with the WCA. Others are concerned that they would be overcommitted in such a setting.



2004-07-05

IEEE 802.16-04/29

Session #36:

13-18 March 2005 at the Hyatt Regency Atlanta, GA, USA with the [IEEE 802 Plenary Session](#)

## **Publicity**

The chair was authorized, without objection, to create the Session #31 Report. See Annex, and <http://ieee802.org/16/meetings/mtg31/report.html>.

## **Closing**

Motion 12: Ron Murias, to adjourn the meeting, 2<sup>nd</sup> Itzik Kitroser.

Motion 12: carries by unanimous voice vote.

The meeting was adjourned at on 20 May 2004 at 10 pm.

## **Registration List: IEEE 802.16 Session #31**

### **17-20 May 2004, Shenzhen, China**

The list includes the 228 people who attended Session #31.

Updated 04/06/08, 00:04 (US MT)

Preregistration opened 2 April and closed 30 April. For a list of people who preregistered during this time, see the [preregistration list](#).

<b>"Participated*"</b>	<b>Name \Given</b>	<b>Name \Family</b>	<b>Company</b>	<b>City</b>	<b>State \Province</b>	<b>Country</b>
Yes	Ray	Abrishami	Fujitsu Microelectronics America	Sunnyvale	CA	USA
Yes	Edward	Agis	Intel Corporation	Newbury Park	CA	USA
Yes	Aditya	Agrawal	Beceem Communications, Inc.	Santa Clara	CA	USA
Yes	Jong Guk	Ahn	SK Telecom	seoul		korea
Yes	Mario	Aliotta	Siemens Mobile Communications	Cassina de Pecchi (MI)		Italy
Yes	Dov	Andelman	Envara	Raanana		Israel
Yes	Gordon	Antonello	Wi-LAN Inc.	Calgary	AB	Canada
Yes	Tadashi	Araki	Sumitomo Electric Industries	Osaka	Osaka	Japan
Yes		Armstrong	Shenzhen Powercom Co., Ltd	Shenzhen	GuangDong	China
Yes	Sanjeev	Athalye	Qualcomm Incorporated	San Diego	CA	USA
Yes	Sung Kwan	Baek	POSDATA/PIRC	Seoul	Kyeonggi- do	Korea
Yes	Phillip	Barber	Broadband Mobile Technologies	Frisco	TX	USA

Yes	Kevin	Baum	Motorola	Schaumburg	IL	USA
Yes	Izhar	Bentov	Adavcom	San Diego	CA	USA
Yes	Inon	Beracha	Xsilio Networks	Kfar Saba		Israel
Yes	Rajesh	Bhalla	ZTE San Diego	San Diego	CA	USA
No	Zhiyong	Bu	Shanghai Research Centre for Wireless Technologies	Shanghai		China
Yes	Sean	Cai	ZTE San Diego	San Diego	CA	USA
No	Abel	Cao	picoChip Design Ltd.	Shenzhen		China
Yes	David	Castelow	Airspan Networks Inc.			UK
Yes	Giulio	Cavalli	Siemens	Cassina de' Pecchi (MI)		Italy
Yes	Jaesun	Cha	ETRI	Daejeon		Korea
Yes	Dean	Chang	Aperto Networks	Milpitas	CA	USA
Yes	SungCheol	Chang	ETRI	Daejeon		Korea
Yes	Yong	Chang	Samsung Electronics	SuwonSi		Korea
Yes	Yuehua	Chen	Huawei Technologies Co., Ltd.	Beijing		China
No	Jacqueline	Cheuk	PowerCom Network Hong Kong Limited			Hong Kong
Yes	Mary	Chion	ZTE San Diego	San Diego	CA	USA
Yes	Jaehae	Cho	Samsung Electronics Ltd.	Suwon	Kyunggi-do	Korea
Yes	Jaeweon	Cho	Samsung Electronics Co., Ltd.	Suwon	Gyeonggi	Korea
Yes	Hyoung-Jin	Choi	TTA	Seongnam city		Korea
Yes	Joey	Chou	Intel Corp.	Chandler	AZ	USA
Yes	José	Costa	Nortel Networks	Ottawa	ON	Canada

Yes	Mark	Cudak	Motorola, Inc.	Schaumburg	IL	USA
No	Chunfeng	Cui	China Mobile Communications Corporation	Beijing		China
Yes	Meimei	Dang	China Academy of Telecom. Research	Beijing		China
Yes	David	Doan	Philips Semiconductors	San Jose	CA	USA
Yes	Xiaolu	Dong	China Academy of Telecom. Research	Beijing		China
Yes	Francois (Frank)	Draper	Wavesat Inc.	Dorval	PQ	Canada
Yes	Lester	Eastwood	Motorola	Schaumburg	IL	USA
Yes	Carl	Eklund	Nokia	Helsinki		Finland
Yes	Yigal	Eliaspur	Intel	Jerusalem		Israel
Yes	Roger	Eline	Intel Corp.	San Jose	CA	USA
Yes	Oren	Elkayam	Runcom Technologies Ltd	Rishon Le Zion	IL	Israel
No	Haojie	Fan	ZTE Corporation			China
No	Jun	Fang	Linkair Communications	Santa Clara	CA	USA
No	Yonggang	Fang	ZTE	San Diego	CA	USA
Yes	Mo-Han	Fong	Nortel Networks	Ottawa	ON	Canada
No	Bogdan	Franovici	Redline Communications Inc.	Markham	ON	Canada
Yes	Amitabha	Ghosh	Motorola	Arlington Heights	IL	USA
Yes	Nikhil	Goel	nex-G Systems Pte Ltd.	Singapore		Singapore
Yes	Marianna	Goldhammer	Alvarion Ltd.	Tel Aviv		Israel
Yes	Reza	Golshan	Fujitsu Microelectronics	Sunnyvale	CA	USA
No	John	Graham	picoChip Inc.	San Diego	CA	USA

Yes	Yang	Guangzhao	Huawei Technologies Co., Ltd.	Shenzhen		China
Yes	Joanna	Guenin	Motorola	Schaumburg	IL	USA
Yes	Qiang	Guo	Motorola, Inc.	Libertyville	IL	USA
Yes	Zion	Hadad	Runcom Technologies Ltd.	Rishon Le Zion		Israel
Yes	Yung	Hahn	Intel Corp.	Hillsboro	OR	USA
Yes	Jun	Han	ZTE	San Diego	CA	USA
Yes	Johnson	Hsu	Senao International Co., Ltd	Taipei		Taiwan
No	YuMin	Hu	ZTE Corporation			China
No	Zheng	Hu				unknown
Yes	John	Humbert	Sprint	Overland Park	KS	USA
Yes	Seung Ku	Hwang	ETRI			Korea
Yes	Prakash	Iyer	Intel Corporation	Beaverton	OR	USA
Yes	Won Gyu	Jang	POSDATA/PIRC	Seoul	Kyeonggi-do	Korea
Yes	Jaeho	Jeon	Samsung Electronics Ltd.	Suwon-City	Gyeonggi-Do	Korea
Yes	Moo Ryong	Jeong	DoCoMo USA Labs	San Jose	CA	USA
Yes	Yong Seok	Jin	LG Electronics Inc	Anyang	Kyongki-do	Korea
No	Clarence	Joh	Agere			USA
Yes	Brian	Johnson	Nortel Networks	Germantown	MD	USA
Yes	David	Johnston	Intel Corp.	Hillsboro	OR	USA
Yes	Panyuh	Joo	Samsung Electronics Corp.	Suwon	Gyeonggi	Korea
Yes	Tal	Kaitz	Alvarion Ltd.	Tel Aviv		Israel
Yes	Dae-Hyun	Kang	Intel (Korea) Corp.	Seoul		Korea

Yes	Masashi	Kawamura	KDDI corporation	Tokyo		Japan
Yes	Ivy	Kelly	Sprint	Overland Park	KS	USA
No	Masud	Kibria	Intel Corp.	Hillsboro	OR	USA
Yes	Brian	Kiernan	InterDigital Communications Corp	King of Prussia	PA	USA
Yes	DoWan	Kim	SK Telecom	Sungnam City	Kyunggi-do	Korea
Yes	Jaehung	Kim	ETRI	Daejeon		Korea
Yes	Jaehyeong	Kim	Posdata			USA
Yes	Jeong-Heon	Kim	Samsung Electronics	Suwon-City	Gyeonggi-Do	Korea
Yes	Jeonghwi	Kim	KT Corporation	Seoul		Korea
Yes	Jung Won	Kim	Samsung Electronics	Suwon-city	Gyeonggi-do	Korea
Yes	Sungsoo	Kim	Samsung Electronics Co., Ltd.	Suwon city	Gyeonggi-do	Korea
Yes	Yong-Ho	Kim	LG Electronics Inc.	Anyang-shi	Kyongki-do	Korea
Yes	YoungKyun	Kim	Samsung			Korea
Yes	Gilad	Kirshenboim	Amethyst Communication Technologies	M.P.Hof Ashkelon		Israel
Yes	Itzik	Kitroser	Runcom Technologies Ltd.	Rishon Le Zion		Israel
Yes	Jay	Klein	Xsilio Networks	Kfar Saba		Israel
Yes	Kang Il	Koh	SK Telecom	Sungnam City	Kyunggi-do	Korea
Yes	Changhoi	Koo	Samsung Electronics Co., Ltd.	Suwon-si	Gyeonggi-do	Korea
Yes	Lalit	Kotecha	BeamReach Networks	Sunnyvale	CA	USA

Yes	John	Kulick	Agere Systems	Allentown	PA	USA
Yes	Hachihei	Kurematsu	Fujitsu Network Solutions Ltd.	Kawasaki		Japan
Yes	Dong-Seung	Kwon	ETRI	Daejeon		Korea
Yes	Jonathan	Labs	Wavesat Wireless, Inc.	Ville St-Laurent (Montreal)	PQ	Canada
No	Kin Nang (Vincent)	Lau	ASTRI	Hong Kong		Hong Kong
No	Kai-Yan	Law	Traxcomm Limited			Hong Kong
Yes	Chang-Jae	Lee	LG Electronics Inc.	Anyang-shi	Kyongki-do	Korea
Yes	Dongkie	Lee	SK Telecom	Seoul		Korea
Yes	Heon-Il	Lee	SK Telesys	Seoul		Korea
Yes	Seong-Choon	Lee	KT Corporation	Seoul		Korea
Yes	Seung-Que	Lee	ETRI	DAEJEON		Korea
Yes	Sook-Jin	Lee	ETRI	Daejeon		Korea
Yes	Yigal	Leiba	Runcom Technologies Ltd.	Rishon Lezion		Israel
Yes	Donald	Leimer	Proxim Corp.	Rancho Palos Verdes	CA	USA
Yes	Barry	Lewis	Redline Communications Inc.	Lightwater	Surrey	UK
Yes	Kemin	Li	Walbell Technologies Inc	Bellevue	WA	USA
Yes	Xiaodong	Li	Walbell Technologies, Inc.	Bellevue	WA	USA
No	Dexin	Liang	Philips	San Jose	CA	USA
Yes	Geunhwi	Lim	Samsung Electronics	Suwon	Gyeonggi-do	South Korea

Yes	Hyoungsoo	Lim	ETRI	Daejeon		Korea
No	Lianhua	Lin	Alcatel Shanghai Bell			China
No	Tao	Lin	Institute of Acoustics, Chinese Academy of Sciences	Beijing		China
Yes	Erik	Lindskog	Beceem Communications, Inc.	Santa Clara	CA	USA
No	Richard	Liu	ZTE Corporation			China
No	Phoebe (Sze Ying)	Lo	Traxcomm Limited			Hong Kong
Yes	Titus	Lo	Walbell Technologies, Inc.	Redmond	WA	USA
No	Peter	Lok	Traxcomm Limited			Hong Kong
Yes	Pierre	Lopez	Alcatel	Nanterre	France	France
Yes	Michael	Lynch	Nortel Networks	Richardson	TX	USA
Yes	Martin	Lysejko	Airspan Networks Inc.	Uxbridge	Middlesex	UK
Yes	Sha	Ma	Huawei Technologies Co., Ltd.	Beijing		China
Yes	Seung Joo	Maeng	Samsung Electronics	Suwon-City	Gyeonggi-Do	Korea
Yes	David	Maez	Navini Networks	Richardson	TX	USA
Yes	Jeffrey	Mandin	Streetwaves Network Consulting	Jerusalem		Israel
Yes	Kevin	Mankin	theta microelectronics	san jose	CA	usa
Yes	Roger	Marks	NIST	Boulder	CO	USA
Yes	Ian	McCallum	Intel Corp.	Vaughan	ON	Canada



Yes	Gavin	Meakes	Airspan Networks Inc.	Uxbridge	Middlesex	UK
Yes	Scott	Migaldi	Motorola	Schaumburg	IL	USA
Yes	James	Mollenauer	Technical Strategy Associates	Newton	MA	USA
Yes	Dong-II (Stephan)	Moon	SK Telecom	Seoul		Korea
Yes	Roland	Muenzner	Alcatel	Stuttgart		Germany
Yes	Willem	Mulder	Agere Systems	Nieuwegein		Netherlands
Yes	Fumio	Murakami	Japan Radio Co., Ltd.	Mitaka	Tokyo	Japan
No	Ross	Murch	HKUST	Hong Kong		Hong Kong
Yes	Ronald	Murias	Wi-LAN Inc.	Calgary	AB	Canada
Yes	Kenichi	Nakamura	Fujitsu Limited	Tokyo		Japan
Yes	Nicholas	Ng	ST Microelectronic Ltd.	Shatin		Hong Kong
No	Yuan	Ni	ZTE Corporation			China
Yes	Mitsuo	Nohara	KDDI R&D Labs.	Yokosuka	Kanagawa	Japan
Yes	Paul	Odlyzko	Motorola	Schaumburg	IL	USA
No	Hiroyo	Ogawa	NICT	Yokosuka		Japan
Yes	Min Seok	Oh	LG Electronics. Inc.	Anyang	Kyoung-gi	Korea
Yes	Masoud	Olfat	Nextel Communications	Reston	VA	USA
Yes	Shlomo	Ovadia	Intel Corp.	Santa Clara	CA	USA
Yes	Jae Joon	Park	ETRI	Daejeon		Korea
Yes	Joonho	Park	Samsung	Suwon-city	Gyeonggi-do	Korea
Yes	Nam hoon	Park	ETRI	DAEJEON		Korea
Yes	Pyung-su	Park	Hanaro Telecom	Goyang-si	Gyeonggi-do	Korea
Yes	Youn Ok	Park	ETRI	Daejeon		Korea

Yes	Youngsoo	Park	Samsung Electronics	Suwon		Korea
Yes	Trevor	Pearman	Beceem Communications, Inc.	Santa Clara	CA	USA
Yes	Paul	Petrus	ArrayComm	San Jose	CA	USA
Yes	Ambroise	Popper	SEQUANS Communications	Paris		France
Yes	Doug	Pulley	picoChip	Bath	B&NES	UK
Yes	Jose	Puthenkulam	Intel Corp.	Hillsboro	OR	USA
Yes	Feng	Qian	Via Telecom	San Diego	CA	USA
Yes	Russ	Reynolds	Proxim, Inc.	Sunnyvale	CA	USA
Yes	Chris	Rogers	Intel Corp	Hillsboro	OR	USA
Yes	Wonil	Roh	Samsung Electronics	Suwon-City	Gyeonggi-Do	Korea
Yes	Byung-Han	Ryu	ETRI	Daejeon		Korea
Yes	Kiseon	Ryu	LG Electronics Inc.	Anyang-shi	Kyongki-do	Korea
No	Sihoon	Ryu	SK Telecom	Sungnam City	Kyunggi-do	Korea
Yes	Rao	Sattiraju	Posdata			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
Yes	Radu	Selea	Redline Communications Inc.	Markham	ON	Canada
Yes	Eli	Shasha	Runcom Technologies Ltd	Rishon Le Zion	IL	Israel
Yes	Jun	Shen	Posdata			USA
Yes	Aureus	Shum	Freescall Semiconductor HK Ltd.			unknown

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	Junhyuk	Song	Samsung Electronics	Suwon-city		Korea
Yes	Kenneth	Stanwood	Cygnus Communications	Carlsbad	CA	USA
Yes	Kenneth	Stewart	Motorola	Libertyville	IL	USA
Yes	Vijay	Subramanian	Motorola	Arlington Height	IL	USA
Yes	Bo	Sun	ZTE Xi'an Research Center			China
No	Yanbin	Sun	Intel	Beijing		China
Yes	Kazuki	Tani	KDDI Corporation	Tokyo		Japan
Yes	Shawn	Taylor	Wi-LAN Inc.	Calgary	AB	Canada
Yes	Wen	Tong	Nortel Networks	Ottawa	ON	Canada
No	Bruce	Tuch	Agere Systems	Nieuwegein		Netherlands
Yes	Mano	Vafai	Aperto Networks	Milpitas	CA	USA
Yes	Frederick	Vook	Motorola Labs	Schaumburg	IL	USA
Yes	Lei	Wan	Ericsson	Beijing		China
No	Dong	Wang	ZTE Corporation			China
No	Hai	Wang	China Samsung Telecom R&D Institute	Beijing		China
Yes	HaiJun	Wang	China Electronics Standardization Institute	Beijing		China
Yes	Irving	Wang	ZTE San Diego	San Diego	CA	USA
Yes	Lei	Wang	Wi-LAN Inc.	Calgary	AB	Canada

Yes	Michael	Webb	BeamReach Networks	Sunnyvale	CA	USA
Yes	Dong-Jun	Weon	LG Electronics Inc	Anyang-shi	Kyongki-do	Korea
Yes	Glenn	West	Nex-G Systems Pte Ltd.	Singapore		Singapore
Yes	Alfred	Wieczorek	Motorola, Inc.	Plantation	FL	USA
Yes	Clyde	Witchard	picoChip	Bath	B&NES	UK
No	Piu (Bill)	Wong	ASTRI	TST		Hong Kong
Yes	Dongya	Wu	China Electronics Standardization Institute	Beijing		China
Yes	Geng	Wu	Nortel Networks	Richardson	TX	USA
No	Xiaodong	Wu	Freescale Semiconductor Inc.	Shanghai		China
Yes	Bing	Xu	Huawei Technologies Co., Ltd.	Beijing		China
Yes	Dongmei	Xu	China Electronics Standardization Institute	Beijing		China
No	Haoyu	Xu	Shanghai Research Center for Wireless Communications	Shanghai		China
No	YuHong	Xue	ZTE Corporation			China
Yes	Hassan	Yaghoobi	Intel Corporation	Santa Clara	CA	USA
Yes	Vladimir	Yanover	Alvarion Ltd.	Herzlya		Israel
No	Zhongbang	Yao	China Electronics Standardization Institute	Beijing		China
Yes	Choong-il	Yeh	ETRI	Deajeon		Korea
Yes	Kunmin	Yeo	ETRI	Daejeon		Korea

Yes	Chang Wahn	Yu	ETRI	Daejeon		Korea
Yes	Huayan	Zhang	Intel China Ltd.	Beijing		China
No	Jim	Zhang	Harris Corporation, MCD	Shenzhen		China
No	Qiang	Zhang	Siemens China	Beijing		China
Yes	Wenzhong	Zhang	ZTE Corporation			China
No	X.	Zhang	Chinese Academy of Sciences			China
Yes	Yuze	Zhang	Coast Communications, Inc.	Allentown	PA	USA
No	Dongmei	Zhang	Nokia	Beijing		China
No	Zhe	Zhang	Nortel Networks	Beijing		China
Yes	Xufeng	Zheng	China Samsung Telecom R&D Institute	Beijing		China
No	Yan	Zhigang	CMCC	Beijing		China
Yes	Peiying	Zhu	Nortel Networks	Ottawa	ON	Canada
Yes	Ning	Zou	Intel (China) Ltd.	Beijing		China

\*Session #31 "participation" credit was granted to those participating in six of the eight session intervals, provided that registration fees were paid.

Note: This report was not part of the minutes as formally approved by the IEEE 802.16 Working Group.

## ***IEEE 802.16 Session #31 Report***



### **Summary**

Session #31 of the IEEE 802.16 Working Group on Broadband Wireless Access took place on 17-20 May in Shenzhen, China. It was the first meeting of any IEEE 802 Working Group in China. The attendance of 228 people broke the 802.16 record of 221 set at Session #30. 106 of the attendees were newcomers; many attended a Monday morning tutorial on the "IEEE 802.16 Working Group Process, Status, and Technology" (see Part A and Part B).

The session was hosted by Rajesh Bhalla of corporate host ZTE Corporation. As noted in a followup letter to the host, the arrangements, including the Wednesday evening banquet, were superb. The host also provided a company facility tour on Friday morning following the session.

### **Balloting Completed on Final Draft Revision of IEEE Standard 802.16**

Balloting concluded on Draft 5, the final draft of IEEE P802.16-REVd, a comprehensive revision of IEEE Standard 802.16 ("Air Interface for Fixed Broadband Wireless Access Systems") and its two amendments. The draft has been submitted to IEEE's Review Committee (RevCom) for consideration at its meeting of 23 June. After approval by the IEEE-SA Standards Board, anticipated on 24 June, the document will be published as IEEE Standard 802.16-2004 and will replace IEEE Standards 802.16-2001, 802.16c-2002, and 802.16a-2003.

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

Comments were resolved following the first 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 led Task Group e to the development of Draft 3 for a second recirculation. The Task Group appointed ad hoc committees to address two topics - Handoff and Security - and tasked them to consolidate relevant issues raised during the session for submission during the ballot recirculation. The Task Group drafted a modification of the 802.16e Project Authorization Request (PAR) to address some obsolete language and allow for more flexibility. The modified PAR, which

anticipates completion of the draft by the end of 2004, was forwarded by the Working Group for IEEE 802 EC consideration during Session #32. The Task Group issued a [closing report](#) and [minutes](#).

### **Publication of Third Conformance Standard**

[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 approved as an IEEE Standard by the IEEE-SA Standards Board on 12 May 2004. This is the IEEE 802.16 Working Group's eighth standard. Publication is expected in July.

No input was received concerning the recently-approved PAR 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.

### **Network Management Study Group Drafts two PARs**

The IEEE 802.16 Network Management Study Group met and drafted 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. Both were submitted by the Working Group for IEEE 802 consideration during Session #32. The Study Group issued a [report](#) and [minutes](#).

### **Working Group Ad Hoc Committee 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 an [activity report](#) and [minutes](#) and will meet again during Session #32.

### **Working Group Liaison Activities**

- The WG Chair reported on his [letter to the China Communication Standards Association \(CCSA\)](#) suggesting a meeting during the week of Session #31. He reported on his subsequent positive meeting with Madame Cao Shumin (CCSA's Deputy Secretary-General), Mr. Wen Ku (Director General of the Department of Science and Technology in China's Ministry of Information Industry), and Jim Carlo (IEEE-SA President). Dang Meimei, who chairs the Broadband Wireless Access Working Group (WG3) within CCSA's Wireless Communications Technical Committee (TC5), presented a well-received liaison report at the 802.16 Closing Plenary in which she suggested the establishment of a liaison relationship and cooperation between 802.16 and TC5. Following the meeting, Madame Cao sent the WG Chair a [letter to IEEE 802](#).

Earlier in the week, the WG Chair also met, along with Jim Carlo, with a group at the Standards Administration of China (SAC), led by SAC Administrator Li Zhonghai. That meeting followed an earlier [invitation from the IEEE-SA](#).

- The WG approved a [liaison statement to TTA PG302](#) (formerly known as PG05), which is

addressing portable Internet service (PIS) in Korea. The letter announced the appointment of Yung Hahn as the WG's liaison to TTA302.

- José M. Costa, the WG's ITU-R Liaison, reviewed the documents [Characteristics of Wireless Metropolitan Area Networks - Follow up to contribution to ITU-R](#) and [Global Radio Standards Collaboration on Wireless Access Systems including Radio Local Area Networks and Ad Hoc Networking](#).
- The WG reviewed a [letter to IEEE 802.16 from ITU-T Study Group 15](#).

## Documents

The [Session #31 document list](#) includes references to over 150 session documents.

## Minutes and Motions

The Working Group minutes are available as [IEEE 802.16-04/29](#).

## Future Meetings

- IEEE 802.16's [Session #32](#) will take place in Portland, OR, USA on 12-15 July 2004 in conjunction with the [IEEE 802 Plenary Session](#).
- 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 in San Antonio, TX, USA on 15-18 November 2004 in conjunction with the [IEEE 802 Plenary Session](#).
- IEEE 802.16's [Session #35](#) will take place in January 2005. The site and dates will be determined during Session #32. Proposals are welcome; please see the [IEEE 802.16 Interim Session Guidelines](#).

## About IEEE 802.16

The [IEEE 802.16 Working Group on Broadband Wireless Access Standards](#) has developed and is enhancing the **WirelessMAN™** 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](#).

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With the approval of the IEEE 802.16 Working Group, this report was drafted and edited (16 June 2004 edition) by:

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