APPROVED

Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**
Title	**IEEE 802.16 Working Group Session #21 Meeting Minutes**
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Re:	IEEE 802.16 Session #21 Minutes (Cheju Island, Korea)
Abstract	
Purpose	To record meeting minutes.
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Minutes of IEEE 802.16 Session #21

IEEE 802.16 Working Group
Cheju Island, Korea
23-26 September, 2002

Opening Plenary

Call to Order
Chair Roger Marks called the meeting to order at 1:17pm on 23-09-2002.

Agenda (http://ieee802.org/16/meetings/mtg21/opening.html)
Motion 1 Brian Kiernan, 802.16 Opening Plenary Agenda (Motion: To approve Opening Plenary agenda as presented), 2nd Robert Nelson.
Motion 1 carries by unanimous voice vote.

Motion 2 Phil Whitehead, to approve Minutes of Session #20 (802.16-02/37)**,** 2nd Brian Kiernan
Motion 2 carries by unanimous voice vote.

No attendance books at this meeting. All those who register and attend will receive "participation" credit.
The Chair presented the materials in IEEE 802.16-02/51.

SEC News
Get IEEE 802 will continue (agreement to May 2004). IEEE Std 802.16: free by October 19
802.19 Coexistence TAG formed – Jim Lansford: Interim Chair
802.18 Regulatory TAG has begun activities. Carl Stevenson: Chair
This group is active and stays busy. The TAG approved 4 documents have the authority to issue these unless blocked by motion of an SEC member.

802.16 had no objection to the four 802.18 documents up for consideration.

IEEE 802 Rules Changes Made
SEC Closing Meetings 1-6pm on Fridays
Second Vice Chair position created; Mat Sherman elected
WG Letter Ballotminimum duration reduced to 30 days; recirculation specified as at least 15 days

IEEE 802 Rules Change Ballots
Change to SEC email voting – doomed to fail (in Chair's opinion)
Changes to support TAGs
Quicker loss of membership – Membership is retained by participating in at least two of the last 2 [changed from 4] Plenary session meetings (one interim may be substituted)

The group discussed the current quicker loss of membership proposal above. Jim Mollenauer volunteered to develop an alternative proposal that will be presented at the closing plenary meeting. Anyone with additional feedback was encouraged to supply information to Jim.

Schedule for the week
Clear priority is to have complete comment resolution on TGa.

TG2

Phil Whitehead, Chair

The PAR change to the P802.16.2a coexistence amendment project was approved in August. Changes to the PAR had to do with removing portions covering 2.5 GHz due to lack of input.\WG Letter Ballot #8, on the first draft, was conducted, with approval (subject to comment resolution)The primary objective for TG2 is comment resolution.

Task Group c

Ken Stanwood, Chair

P802.16c passed Sponsor Ballot, subject to comment resolution. Since only one Disapprove vote was received, and since it did not include a technical comment, resolution should be straightforward, TGc will serve as the Ballot Resolution Committee at this session. The group has 40 comments to resolve. The goal is to submit to IEEE by Nov. 1 deadline.

Task Group C1

Ken Stanwood, Chair

PAR 1802.16.1 (10-66 GHz PICS) was approved by IEEE-SA on 15 August 2002.
A call for contributions was issued and a proposed draft was submitted for consideration.

TGa

Brian Kiernan, Chair

P802.16a passed Sponsor Ballot, subject to comment resolution. TGa will serve as the Ballot Resolution Committee at this session. This group needs to get through all of the 316 comments before the end of the session.

802.16a PICS Ad Hoc

An ad hoc committee was appointed in July to draft a 2-11 GHz PICS . No one had volunteered for this activity. At this meeting, Gordon Antonello volunteered as the temporary chair for this ad hoc committee.

802.16 Enhancements Ad Hoc

Paul Struhsaker, Chair
This group was chartered to "develop a PAR for enhancements to IEEE 802.16/16a for support for nomadic operation, roaming, repeaters, MIB/management, and system profiles by the end of Session #21."

No contributions had been received.

Ken Stanwood commented that the system profiles are the precursor to the PICS proforma.

Mobile Wireless MAN Study Group

Brian Kiernan, Chair

The primary purpose is to get through TGa, The Mobile Study Group will be the last thing on the agenda. This group is looking at an analysis to make TGa mobile.

Liaison Issues

T1P1

Roger Marks reported on his visit to a T1P1 meeting his resulting letter (IEEE L802.16-02/19). The letter noted three possible areas of cooperation:
(1) optimization of 802.16 systems for cellular backhaul
(2) OFDM technologu
(3) Handoff capability

Since T1P1 has experience on handoff capability, Roger Marks has suggested that a tutorial on handoff be organized for the November Plenary Meeting. He and Brian Kiernan intend to organize it.

Future Meetings

November Plenary Meeting – At this time, we still don't know which hotel we will be in at the next meeting. All of the other wireless groups are currently at the Hyatt, while 802.16 is at the Sheraton. The Chair is working to have 802.16 moved to the Hyatt; he is making progress, but the decision is not yet final. Reservations are difficult to find in both hotels. Some rooms may free up after final decisions are made.

Session #23 in San Jose, CA collocated with the WCA Technical Symposium.Since the co-location will limit our meeting time early in the week, we couldmeet until Friday. Yossi Segal suggested that we conclude on Friday. We will discuss this further at the Closing Plenary. Dean Chang will work with WCA to develop plans.

Session #24 – Dallas TX – Hyatt at the airport.

Session #25 – Discussion – last meeting we requested proposals for Session #23. We accepted one proposal for Session #23 and the other (Sinaia, Romania, hosted by Marianna Goldhammer of Alvarion) for Session #25 in May. Since then, we have been invited to join with the interim meeting of 802.11, 802.15, 802.18, and 802.19 in Singapore.

Motion 3 Brian Kiernan, to accept the invitation to meet in Singapore to join with other wireless groups such as 802.11, 802.15, the two TAGs 2nd Randall Schwartz.
Motion to table (Motion 3) until closing plenary Shawn Taylor 2nd Yossi Segal
Motion to table (Motion 3) carries 22-0.

Motion 4 Brian Kiernan, To adjourn the meeting, 2nd Remi Chayer.
Motion 4 carries by unanimous voice vote.

The meeting was adjourned at 3:15pm on 23-09-2002.

Closing Plenary

Call to Order
Roger Marks called the meeting to order at 7:40pm on 26-09-2002.

Agenda Approval http://ieee802.org/16/meetings/mtg21/closing.html)
Motion 5 Carl Eklund to approve the agenda as presented, 2nd Bob Nelson.
Motion 5 carries by unanimous voice vote.

Task Group 2
Phil Whitehead, Chair

The group reviewed 183 comments and now seeks agreement to start recirculation.

Motion 6 To approve the resolutions contained in database 802.16-02/44r2, incorporate these resolutions into a revised draft P802.16.2a/D2-2002, and initiate a 15 day recirculation, with resolutions to be considered at Session #22.
Motion 6 carries 17-0.

Interest in work from CEPT SE19 regarding possibility to release draft.

Task Group C
Carl Eklund reported that TGc, as the Ballot Resolution Committee for the Sponsor Ballot of P802.16c, has completed resolution of all the comments. These, along with an accompanying draft D4, will form the basis of a recirculation. This is expected to be the final recirculation, and submission to RevCom by the Nov, 1

Task Group C1

Carl Eklund reported that TGC1 reviewed its sole contribution (a proposed PICS from the WiMAX Forum) and will initite Call for Comments on it. Expect to initiate working group letter ballot at Session #22.

Motion 7 Carl Eklund "To forward the draft PAR in IEEE 802.16-02/45 for SEC approval"[2nd] Nico Van Waes
Motion 7 carries 17-0.

This is for a Proposed PAR 1802.16.2 for 10-66 GHz Test Suite Structure and Test Purposes. It would be the second of three 10-66 GHz interoperability volumes.

Enhancements Ad Hoc group
The ad hoc group met on Wednesday, with most of the session participants present. One submission was made (IEEE C802.16-02/11, by Roger Marks). It encouraged the development of a PAR on 2-11 GHz system profiles and corrections to errors in 802.16a. The ad hoc group approved this plan. Gordon Antonello had agreed to lead the development of the PAR and worked with Roger Marks to draft a PAR in 802.16-02/47.

Motion 8 Paul Struhsaker, to forward the draft PAR in IEEE 802.16-02/47 for SEC approval, [2nd] Shawn Taylor
Motion 8 carries19-0

TGa
Brian Kiernan, Chair

Brian Kiernan reported that TGa, as the Ballot Resolution Committee for the Sponsor Ballot of P802.16a, has completed resolution of all the comments. These, along with an accompanying draft D4, will form the basis of a recirculation.

Resolution on comments that may arise during the recirculation was discussed. In order to meet the November 1 RevCom submission deadline, this must be done without benefit of a regular Working Group meeting. The work can be done using some combination ofemail, teleconference, and interim meeting.

Motion 9 Roger Marks, to appoint a Ballot Resolution Committee and task them to resolve any comments arising from the recirculation of the P802.16a Sponsor Ballot. The final set of resolutions would be forwarded only if

unanimously supported by the Committee. The Committee is tasked to technically justify accepting any comments that would reverse earlier technical decisions. The Working Group and Task Group a Chairs will be observers to the Committee. The members of the Ballot Resolution Committee will be the following, and only the following: Brian Eidson, Marianna Goldhammer, Itzik Kitroser, Bob Nelson, Randall Schwartz, Shawn Taylor, and Nico Van Waes. Each member is entitled to resign and name an alternate.
Question Called Carl Eklund 2nd Nico Van Waes
Call the question carries by with no objections
Motion 9 22-0.

Mobile Broadband Wireless Study Group

Brian Kiernan, Chair

Thirty-eight people met and reviewed a number of contributions.

Motion 10 Lei Wang, To forward the draft PAR in IEEE 802.16-02/48, along with the Five Criteria in IEEE 802.16-02/49, for SEC approval, Tal Kaitz.
Motion 10 carries 14-0.

John Fan read the following comments, which the Chair asked be incorporated in the minutes:

* I think this work of extending the 802.16 fixed wireless access system to work in mobile environments is highly worthwhile, deserves a task group and will get a Task Group, but it should act from strength and from clarity. It should not act prematurely out of fear of other efforts that ultimately have different intended frequency bands, different parameters, and different intended vendors and operators. As an observer of the discussions within TGa this week, I would like to suggest that more deliberation, clarification and resolution at this early stage in the development can lead to a better working consensus and a more focused group later on, resulting in the best possible mobility extension to the IEEE 802.16 standard.

* In the scope of the PAR, the system "allows" operation up to 250 km/hr whereas in the 5 criteria, the system "supports" "fixed and vehicular mobility MAN operation" without stating what is intended by vehicular mobility, which could mean 120 km/hr, 250 km/hr or some other value. The sense, I believe is to make it run as fast as it can, but as written the PAR is committed to an ill-defined concept of "vehicular mobility".

* The spectral efficiency requirement of 3-4 bits/s/Hz needs to be elaborated (peak for user, per sector, per cell, and under what types of conditions). Also, key issues such as data rate (per user, per sector, aggregate per cell), latency targets and mobility channel models were not specified. The system is stated to be targeting "licensed bands under 6 GHz" without adequately specifying what the bands are licensed for (e.g., mobility, fixed).

* The level of allowed modifications in amending the 802.16 standard have not been indicated. In addition, no indication has been given as to which mode (OFDM, OFDMA, SC) will be extended. This raises the question of how the mobility extension would interoperate with the existing modes, raises the possibility of developing multiple incompatible mobility extensions, and raises the spectre of reopening old issues and undoing decisions that have already been made.

IEEE Rule Changes

Jim Mollenaur recommends a process whereby the Chair send out an email to people that do not attend meetings to check to see if they are still interested in the work of the group. If they did not respond, then they would be dropped from their membership. Jim will send some wording to Roger on this. Roger reported that similar proposal have already been raised within the SEC.

Future Sessions

Session #22" there is still no commitment to which hotel that we will be usng. The Chair will continue to push for a common location with the other 802 wireless groups/

Session #23 in San Jose, CA, USA – A straw poll was taken on the ending date for the meeting. 17 people favored Thursday and 2 Friday. Session Host Dean Chang will plan the session accordingly.

The following motion had been tabled until the closing plenary meeting:
Motion 3 Brian Kiernan, to accept the invitation to meet in Singapore to join with other wireless groups such as 802.11, 802.15, and the two TAGs 2nd Randall Schwartz.
Motion 3 fails 1-12.

With Session #25 now confirmed for Sinaia, Romana (Session Host: Marianna Goldhammer of Alvarion) Roger asked Marianna to provide some dates and plans for the meeting.Several peoplerecommended that we avoid May 12-16 so people can attend the meeting in Singapore if necessary. Marianna will plan Session #25 for 19-22 May.

Liaison

TM4

Motion 11 Remi Chayer, To forward the approved liaison letter L802.16-02/20 (with editorial changes) to TM4, 2nd Phil Whitehead
Motion 11 carries by unanimous voice vote.

T1P1

Motion 12 Brian Kiernan To forward the approved liaison letter # IEEE L802.16-02/21 (with editorial changes) to T1P1, 2nd Russell McKown
Motion 12 carries by unanimous voice vote.

Publicity

The Chair is authorized by the Working Group to write Session #21 Report.

Roger Marks plans to write a thank you letter to Panyuh Joo and Samsung for sponsoring Session #21. The Working Group also expressed verbally its appreciation to Panyuh Joo for his excellent work regarding Session #21.

New Business

David Trinkwon requested a comment from the Chair, to be entered into the minutes, regarding his lack of action following a motion at Session #20 regarding the 802.16a Sponsor Ballot Group. The Chair replied that he would have entered into the minutes the text of an explanation:

At the send of Session #20, a motion was passed "to invite additional names from within the Working Group to be added to the Sponsor Ballot Group." However, this motion had no effect because the IEEE-SA, not the Working Group, runs the IEEE the ballot process. IEEE-SA has strict rules and procedures regarding ballot group formation. Among their rules, as I know them, are that once a group is formed:

*it does not change
*it remains valid for ballots that start within six months

IEEE-SA formed the 802.16a group on April 10. Sponsor Ballot was opened on August 5, with the group less than four months old.

For the sake of speculation, let's suppose that the IEEE-SA was willing to dissolve the existing balloting group and create a new one. This would have had a terrible impact on our schedule; namely, we would not have gotten the Sponsor Ballot closed in time for Session #21 in Korea. This would have left TGa crippled.

The facts are that the Working Group passed Letter Ballot #7 which authorized forwarding the 802.16a draft to Sponsor Ballot. The Sponsor (IEEE 802) agreed to forward it. This gave me, as Chair, the authority to forward the draft for Sponsor Ballot, and I did.

Closing
Motion 13 Bob Nelson, to adjourn the meeting 2nd Remi Chayer.
Motion 13 carries by unanimous voice vote.

Appendix: Attendance List

The following 54 people participated in Session #21 and paid the $120 registration fee:

Gordon Antonello	Wi-LAN Inc.	Canada
Brian Banister	Comtech AHA	USA
Dean Chang	Aperto Networks	USA
Rémi Chayer	Harris Corporation	Canada
Wei-Ping Chuang	Industrial Technology Research Institute	Taiwan
Brian Edmonston	iCODING Technology Inc.	USA
Brian Eidson	Conexant Systems, Inc.	USA
Carl Eklund	Nokia Research Center	Finland
John Fan	Flarion Technology	USA
Avraham Freedman	Hexagon System Engineering	Israel
G. Jack Garrison	Harris Corporation	Canada
Marianna Goldhammer	Alvarion Ltd.	Israel
Seung-Eun Hong	ETRI	Korea
Panyuh Joo	Samsung Electronics Co., Ltd.	Korea
Tal Kaitz	Alvarion Ltd.	Israel
Toyoki Kawahara	Panasonic	Japan
Brian Kiernan	InterDigital Communications Corp.	USA
Eung-Bae Kim	ETRI	Korea
Itzik Kitroser	Runcom Technologies Ltd.	Israel
Changhoi Koo	Samsung Electronics Co., Ltd.	Korea
Jae Min Kwak	ETRI	Korea
Jonathan Labs	Wavesat Telecom Inc	Canada
Chin-Chen (John) Lee	EPIN Technologies, LTD	China
Seung-Hwan Lee	ETRI	Korea
Yu Ro Lee	ETRI	Korea
Yigal Leiba	Runcom Technologies Ltd.	Israel
Jen-Sheng Li	Industrial Technology Research Institute	Taiwan
Lingjie Li	Redline Communications	Canada
Jing Yi Liao	China Samsung Telecom R&D Center	China
Roger Marks	NIST	USA
Russell McKown	Raze Technologies (former)	USA
James Mollenauer	Technical Strategy Associates	USA
Ronald Murias	Wi-LAN Inc.	Canada
Robert Nelson	Raze Technologies (former)	USA
Hiroshi Nomura	Speednet Inc.	Japan
Hiroya Ogawa	CRL	Japan
Moshe Ran	MostlyTek Ltd.	Israel
Jungmin Ro	Samsung Electronics Co., Ltd.	Korea
Randall Schwartz	BeamReach Networks, Inc.	USA
Yossi Segal	Runcom Technologies Ltd.	Israel
Sean Sonander	Akelia Wireless	UK
PyeongJung Song	ETRI	Korea
Kenneth Stanwood	Ensemble Communications	USA
Paul Struhsaker	Texas Instruments, Inc.	USA
Changho Suh	Samsung Electronics Co., Ltd.	Korea
Yoshihiro Suzuki	Panasonic	Japan

Shawn Taylor	Wi-LAN Inc.	Canada
David Trinkwon	Medley Systems Ltd	UK
Rainer Ullmann	Wavesat Wireless, Inc.	Canada
Nico van Waes	Nokia Networks	USA
Hai Wang	Samsung Electronic	China
Lei Wang	Wi-LAN Inc.	Canada
Philip Whitehead	Radiant Networks PLC	UK
Choong-il Yeh	ETRI	Korea