AGENDA & MINUTES (Unconfirmed) - IEEE 802 LMSC EXECUTIVE COMMITTEE MEETING

Friday March 16, 2007 1:00 PM – 6:00 PM

Orlando, FL

1.00 MEETING CALLED TO ORDER - Nikolich 1 01:01 PM

Paul Nikolich called the meeting to order at 1:01 PM. Members in attendance were:

Paul Nikolich	-	Chair, IEEE 802 LAN / MAN Standards Committee
Mat Sherman	-	Vice Chair, IEEE 802 LAN / MAN Standards Committee
Pat Thaler	-	Vice Chair, IEEE 802 LAN / MAN Standards Committee
Bob O'Hara	-	Recording Secretary, IEEE 802 LAN / MAN Standards Committee
Buzz Rigsbee	-	Executive Secretary, IEEE 802 LAN / MAN Standards Committee
John Hawkins	-	Treasurer, IEEE 802 LAN/MAN Standards Committee
Tony Jeffree	-	Chair, IEEE 802.1 - HILI Working Group
Bob Grow	-	Chair, IEEE 802.3 - CSMA/CD Working Group
Stuart Kerry	-	Chair, IEEE 802.11 - Wireless LANs Working Group
Bob Heile	-	Chair, IEEE 802.15 – Wireless PAN Working Group
Roger Marks	-	Chair, IEEE 802.16 – Broadband Wireless Access Working Group
Mike Takefman	-	Chair, IEEE 802.17 – Resilient Packet Ring Working Group
Mike Lynch	-	Chair, IEEE 802.18 – Regulatory TAG
Steve Shellhammer	-	Chair, IEEE 802.19 – Wireless Coexistence TAG
Arnie Greenspan	-	Chair, IEEE 802.20 – Mobile Broadband Wireless Access
Vivek Gupta	-	Chair, IEEE 802.21 – Media Independent Handover
Geoff Thompson	-	Member Emeritus (non-voting)

2.00 MI APPROVE OR MODIFY AGENDA - Nikolich 9 01:01 PM

r02 AGENDA - IEEE 802 LMSC EXECUTIVE COMMITTEE MEETING
Friday, March 16, 2007 - 1:00PM -6:00PM

1.00		**MEETING CALLED TO ORDER**	**-**	**Nikolich**	**1**	**01:00 PM**
2.00	**MI**	**APPROVE OR MODIFY AGENDA**	**-**	**Nikolich**	**9**	**01:01 PM**
3.00			**-**			**01:10 PM**
3.01			**-**			**01:10 PM**
3.02			**-**			**01:10 PM**
4.00	**II**	**Announcements from the Chair**	**-**	**Nikolich**	**5**	**01:10 PM**
4.01	**II**		**-**			**01:15 PM**
	Category (* = consent agenda)		**-**			
			-			
5.00		**IEEE Standards Board Items**	**-**			**01:15 PM**
5.01	**ME**	**802.1Qay Provider Backbone Bridge Traffic Eng PAR to NESCOM**	**-**	**Jeffree**	**5**	**01:15 PM**
5.02	**ME**	**802.1AX Link Aggregation PAR to NESCOM**	**-**	**Grow**	**5**	**01:20 PM**
5.03	**ME**	**802.3REV PAR to NESCOM**	**-**	**Grow**	**5**	**01:25 PM**
5.04	**ME**	**802.16REV PAR to NESCOM**	**-**	**Marks**	**5**	**01:30 PM**
5.05	**ME**	**802.17c Protected Inter-ring Communication PAR to NESCOM**	**-**	**Takefman**	**5**	**01:35 PM**
5.06	**ME**	**802.11mb Maintenance PAR to NESCOM**	**-**	**Kerry**	**5**	**01:40 PM**
5.07	**ME**	**802.3cor2 to sponsor ballot**	**-**	**Grow**	**5**	**01:45 PM**

5.08	ME	802.3cor2 authorization for special submittal to RevCom	-	Grow	5	01:50 PM
5.09	ME	Conditional approval of 802.16g to RevCom	-	Marks	5	01:55 PM
5.10	ME		-			02:00 PM
5.11	ME		-			02:00 PM
5.12	ME		-			02:00 PM
5.13	ME		-			02:00 PM
5.14	ME	Conditional approval of 802.1ag to sponsor ballot	-	Jeffree	5	02:00 PM
5.15	ME	Conditional approval of 802.11k to sponsor ballot	-	Kerry	10	02:05 PM
5.16	ME		-			02:15 PM
5.17	ME		-			02:15 PM
6.00		Executive Committee Study Groups, Working Groups, TAGs	-			02:15 PM
6.01	MI	Approval of Delivery of Video Transport Streams over 802.11 SG	-	Kerry	5	02:15 PM
6.02	MI	Approval of 802.11 Convergence of WMM and 11e SG	-	Kerry	5	02:20 PM
6.03	MI	Approval of 802.11 1 Gb/s SG	-	Kerry	5	02:25 PM
6.04	MI		-			02:30 PM
6.05	MI		-			02:30 PM
6.06	MI*	802.15 Body Area Network SG extension	-	Heile		02:30 PM
6.07	MI*	802.15.4c Alternate PHY for China SG extension	-	Heile		02:30 PM
6.08	MI*	802.3 High Speed SG extension	-	Grow		02:30 PM
6.09	MI*	802.3 Energy Efficient SG extension	-	Grow		02:30 PM
6.10	MI*	802.11 Direct Link Setup SG extension	-	Kerry		02:30 PM
6.11	MI*	802.17 dual ring interconnect SG extension	-	Takefman		02:30 PM
6.12			-			02:30 PM
6.13			-			02:30 PM
6.14			-			02:30 PM
6.15			-			02:30 PM
6.16	MI	Confirmation of John Lemon as chair of 802.17	-	Takefman	5	02:30 PM
7.00		Break	-		15	02:35 PM
8.00		IEEE-SA Items	-			02:50 PM
8.01	II	802 Task Force update	-	Nikolich	10	02:50 PM
8.02	II	Attendance software update	-	Nikolich	10	03:00 PM
8.03	II	802.20 working group update	-	Greenspan	5	03:10 PM
9.00		LMSC Liaisons & External Interface	-			03:15 PM
9.01	II	Get IEEE 802 Program Update	-	Hawkins	10	03:15 PM
9.02	ME	802.18 Response to FDA	-	Lynch	5	03:25 PM
9.03	ME	802.18 Response to Liaison from ITU-R WP8F	-	Lynch	5	03:30 PM
9.04	ME	802.18 RR-TAG 60 GHz Final Comments	-	Lynch	5	03:35 PM
9.05	ME	802.18 Report of IP-OFDMA Evaluation Meeting	-	Lynch	5	03:40 PM
9.06	ME	802.18 Statement of Interest – IMT Advanced r2	-	Lynch	5	03:45 PM
9.07	ME	802 Liaison letter to P1900	-	Shellhammer	5	03:50 PM
9.08	ME	ISO/IEC Liaison letter and report	-	Thompson	5	03:55 PM
			-			04:00 PM
10.00		LMSC Internal Business	-			04:00 PM
10.01	MI	TREASURER'S REPORT	-	Hawkins	10	04:00 PM
10.02	MI	Move to concentration banking	-	Hawkins	5	04:10 PM
10.03	MI	Response to Audit Committee Best Practices memo	-	Hawkins	5	04:15 PM
10.04	MI	March 2008 Session Location Selection	-	Rigsbee	10	04:20 PM
10.05	MI	Balloting of P&P Revision titled "AUDCOM Revisions"	-	Sherman	5	04:30 PM
10.06	MI	Balloting of P&P Revision titled "Sponsor Recirculation"	-	Sherman	5	04:35 PM
10.07	MI	Approval of press release for 802.17c	-	Takefman	5	04:40 PM
10.08	MI		-			04:45 PM
10.09	MI	Confirmation of Steven Wood as vice chair of 802.17	-	Takefman	5	04:45 PM
10.10	DT	Consistent time for 802 TF meeting in plenary session	-	Grow	2	04:50 PM
10.11	DT	IEEE-SA process change and compliance issues	-	Grow	5	04:52 PM
10.12	MI	Approval of press release for 802.11n	-	Kerry	5	04:57 PM

10.13	MI	Confirmation of parliamentarian appointment	-	Nikolich	2	05:02 PM
10.14			-			05:04 PM
10.15			-			05:04 PM
11.00		Information Items	-			05:04 PM
11.01	II	Open office hours feedback	-	Nikolich	5	05:04 PM
11.02	II	Network Services Report	-	Alfvin	10	05:09 PM
11.03	II	802.20 attendance record keeping	-	Greenspan	10	05:19 PM
11.04	II	Training Plan	-	Thaler	10	05:29 PM
11.05	II	802.1 Liaison to ITU-T SG4 and SG15	-	Jeffree	2	05:39 PM
11.06	II	802.1 Liaison to TIA TR-41	-	Jeffree	2	05:41 PM
11.07	II	Equipment outsourcing	-	Hawkins	3	05:43 PM
11.08	II		-			05:46 PM
11.09	II		-			05:46 PM
11.10			-			05:46 PM
11.11			-			05:46 PM
11.12			-			05:46 PM
11.13			-			05:46 PM
11.14			-			05:46 PM
11.15			-			05:46 PM
11.16			-			05:46 PM
11.17			-			05:46 PM
11.18			-			05:46 PM
11.19			-			05:46 PM
11.20			-			05:46 PM
11.21			-			05:46 PM
		ADJOURN SEC MEETING	-	Nikolich		06:00 PM
		ME - Motion, External MI - Motion, Internal				
		DT- Discussion Topic II - Information Item				
		Special Orders				

Moved: To approve the agenda, as modified.
Moved: Jeffree/Grow
Passes: 15/0/0

3.00			-			
3.01			-			
3.02			-			
4.00	II	Announcements from the Chair	-	Nikolich	5	

Carl Stevenson was taken to the hospital with chest pains and will not be attending the meeting. Last night either the oxygen or the review of the agenda with Paul improved his attitude and color.

4.01	II		-			
		Category (* = consent agenda)	-			
			-			
5.00		IEEE Standards Board Items	-			
5.01	ME	802.1Qay Provider Backbone Bridge Traffic Eng PAR to NESCOM	-	Jeffree	5	01:08 PM

MOTION

- 802.1 requests EC approval to forward the draft PAR/5C for P802.1Qay, PBB-TE, to NesCom.
- 802.1: Proposed: Bottorff Second:

  finn For: 28 Against: 0 Abstain: 3
- EC proposed: Jeffree second:

Supporting material – P802.1Qay

- No comments received. WG reviewed and approved the text with no changes.
- PAR text:
  http://www.ieee802.org/1/files/public/docs2007/new-pbbte-draft-par-0207.pdf
  5C text:
  http://www.ieee802.org/1/files/public/docs2007/new-pbbte-draft-5c-0207.pdf

Moved: 802.1 requests EC approval to forward the draft PAR/5C for P802.1Qay, PBB-TE, to NesCom.

Moved: Jeffree/Marks
Passes: 15/0/0

5.02	**ME**	**802.1AX Link Aggregation PAR to NESCOM**	**-**	**Grow**	**5**	**01:10 PM**

P802.1AX to NesCom

Motion:

The LMSC Executive committee approves the P802.1AX PAR staying on the March NesCom agenda

M: Bob Grow

S: Pat Thaler

Moved: The LMSC Executive committee approves the P802.1AX PAR staying on the March NesCom agenda.

Moved: Grow/Thaler
Passes: 14/0/1

5.03	**ME**	**802.3REV PAR to NESCOM**	**-**	**Grow**	**5**	**01:12 PM**

P802.3REV to NesCom

Motion:

The LMSC Executive committee approves the P802.3REV PAR staying on the March NesCom agenda

M: Bob Grow

S: Pat Thaler

Moved: The LMSC Executive committee approves the P802.3REV PAR staying on the March NesCom agenda

Moved: Grow/Thaler
Passes: 15/0/0

5.04	**ME**	**802.16REV PAR to NESCOM**	**-**	**Marks**	**5**	**01:14 PM**

Type of Project: Revision to an Existing Standard 802.16-2004	
1.1 Project Number: P802.16	
1.2 Type of Document: Standard for	
1.3 Life Cycle: Full	
1.4 Is this project in ballot now? No	
2.1 Title of Standard: Standard for Local and Metropolitan Area Networks - Part 16: Air Interface for Broadband Wireless Access Systems	**Old Title:** IEEE Standard for Local and metropolitan area networks - Part 16: Air Interface for Fixed Broadband Wireless Access Systems
3.1 Name of Working Group: Broadband Wireless Access Working Group	
Contact information for Working Group Chair Roger B Marks Email: r.b.marks@ieee.org Phone: 1-303-725-4626	
Contact Information for Working Group Vice Chair Email: Phone:	
3.2 Sponsoring Society and Committee: IEEE Computer Society/Local and Metropolitan Area Networks (C/LM) **Contact information for Sponsor Chair:** Paul Nikolich Email: p.nikolich@ieee.org Phone: 857-205-0050 **Contact information for Standards Representative:** Email: Phone:	
3.3 Joint Sponsor: IEEE Microwave Theory and Techniques Society/Standards Coordinating Committee (MTT/SCC) **Contact information for Sponsor Chair:** Richard Snyder Email: r.snyder@ieee.org Phone: (201) 492-1207 **Contact information for Standards Representative:** Email: Phone:	
4.1 Type of Ballot: Individual	
4.2 Expected Date of Submission for Initial Sponsor Ballot: 2007-11	
4.3 Projected Completion Date for Submittal to RevCom: 2008-03	
5.1 Approximate number of people expected to work on this project: 300	

5.2 Scope of Proposed Standard: This standard specifies the air interface, including the medium access control layer (MAC) and physical layer (PHY), of combined fixed and mobile point-to-multipoint broadband wireless access (BWA) systems providing multiple services. The MAC is structured to support multiple PHY specifications, each suited to a particular operational environment.	**Old Scope:** This revised standard specifies the air interface, including the medium access control layer and multiple physical layer specifications, of fixed broadband wireless access systems supporting multiple services. It consolidates IEEE Standards 802.16, 802.16a, and 802.16c, retaining all modes and major features without adding modes. Content is added or revised to improve performance, ease deployment, or replace incorrect, ambiguous, or incomplete material, including system profiles.

5.3 Is the completion of this standard is dependent upon the completion of another standard: No
If yes, please explain:

5.4 Purpose of Proposed Standard: This standard enables rapid worldwide deployment of innovative, cost-effective, and interoperable multivendor broadband wireless access products, facilitates competition in broadband access by providing alternatives to wireline broadband access, encourages consistent worldwide spectrum allocations, and accelerates the commercialization of broadband wireless access systems.	**Old Purpose:** This standard enables rapid worldwide deployment of innovative, cost-effective, and interoperable multivendor broadband wireless access products, facilitates competition in broadband access by providing alternatives to wireline broadband access, ecnourages consistent worldwide spectrum allocations, and accelerates the commercialization of broadband wireless access systems.

5.5 Need for the Project: Revision of the standard is required due the number of outstanding amendments and the identification, during the course of the P802.16-2004/Cor2 project, of a number of maintenance issues.

5.6 Stakeholders for the Standard: Vendors developing IEEE 802.16 products and carriers using IEEE 802.16 products.

Intellectual Property

6.1.a. Has the IEEE-SA policy on intellectual property been presented to those responsible for preparing/submitting this PAR prior to the PAR submittal to the IEEE-SA Standards Board? Yes
If yes, state date: 2007-01-15
If no, please explain:

6.1.b. Is the Sponsor aware of any copyright permissions needed for this project? No
If yes, please explain:

6.1.c. Is the Sponsor aware of possible registration activity related to this project? Yes
If yes, please explain: The revision is expected to include language previously reviewed by the IEEE Registration Authority Committee regarding assignment of the IEEE 802.16 Operator ID.

7.1 Are there other standards or projects with a similar scope? No
If yes, please explain:
and answer the following: Sponsor Organization:
Project/Standard Number:
Project/Standard Date: 0000-00-00
Project/Standard Title:

7.2 Future Adoptions
Is there potential for this standard (in part or in whole) to be adopted by another national, regional, or international organization? Yes

If Yes, the following questions must be answered:
Technical Committee Name and Number: ITU
Other Organization Contact Information:
Contact person: José M. Costa
Contact Email address: costa@nortel.com

7.3 Will this project result in any health, safety, security, or environmental guidance that affects or applies to human health or safety? No
If yes, please explain:

7.4 Additional Explanatory Notes: (Item Number and Explanation)
(5.2) The revision will consolidate IEEE Standards 802.16-2004, 802.16e-2005, 802.16-2004/Cor1-2005, and 802.16f-2005 (and ~~possible subsequent amendments~~), incorporating ~~corrigenda as developed in the IEEE 802.16 Working Group Maintenance Process (as described in IEEE 802.16-06/046)~~. No new functionality will be added.

(5.2) The Scope has not been essentially changed, but unnecessary historical wording has been dropped.

8.1 Sponsor Information:
Is the scope of this project within the approved scope/definition of the Sponsor's Charter? Yes
If no, please explain:

To: Jon Rosdahl
From: IEEE 802.16 Working Group

Dear Mr. Rosdahl,

Thank you for the comments regarding the IEEE 802.16 Revision PAR. Listed below are the responses to your comments from the Working Group:

1. "I believe that revisions have to be done in required times, i.e. after 4 amendments are done it is required. In the notes, it is indicated that '(and possible subsequent amendments)' so the standard may get more than the 4 listed."

   Regarding this comment, we cite Subclause 9.2 of the IEEE-SA Standards Board Operations Manual: "The Sponsor shall initiate revision of a standard whenever any of the material in the standard (including all amendments, corrigenda, etc.) becomes obsolete or incorrect, or if three or more amendments to a base standard exist three years after its approval or most recent reaffirmation." This allows for the possibility that additional amendments may be approved to the base standard up until the three-year deadline. The PAR recognizes the possibility that the revision may incorporate those additional amendments.

   In response to this comment, we propose to replace '(and possible subsequent amendments)' with '(and possibly 802.16g and 802.16i, if completed in time).'

2. "Also I believe that while the corrigenda developed by the group is viable for the revision, I am uncertain why we have listed the group specific document rather than a P&P or IEEE process."

   In response to this comment, we propose to modify the wording as follows:

   7.4 Additional Explanatory Notes: (Item Number and Explanation)
   (5.2) The revision will consolidate IEEE Standards 802.16-2004, 802.16e-2005, 802.16-2004/Cor1-2005, and 802.16f-2005 (and

possibly 802.16g and 802.16i, if completed in time~~e subsequent amendments~~), incorporating ~~corrigenda as developed in the IEEE 802.16 Working Group Maintenance Process (as described in IEEE 802.16-06/046)~~ the P802.16-2004/Cor2 draft. No new functionality will be added.

We recognize that the document IEEE 802.16-06/046, describing the Working Group Maintenance Process, is an internal Working Group document. Therefore, we modify the text to explicitly reference the corrigendum draft (P802.16-2004/Cor2), rather than the WG Maintenance Process.

We hope these responses address your concerns.

Best regards,

The IEEE 802.16 Working Group

Moved: To forward the 802.16 revision PAR (IEEE 802.16-07/008r1) to NesCom.

Moved: Marks/Kerry
Passes: 15/0/0

5.05	**ME**	**802.17c Protected Inter-ring Communication PAR to NESCOM**	**-**	**Takefman**	**5**	**01:18 PM**

The PAR Copyright Release and Signature Page must be submitted by FAX to +1-732-875-0695 to the NesCom Administrator.
If you have any questions, please contact the NesCom Administrator.

Once you approve and submit the following information, changes may only be made through the NesCom Administrator.

Draft PAR Confirmation Number: 198361210.25824
Submittal Email: tak@cisco.com
Type of Project: Amendment to an Existing Standard 802.17-2004
1.1 Project Number: P802.17c
1.2 Type of Document: Standard for
1.3 Life Cycle: Full
1.4 Is this project in ballot now? No
2.1 Title of Standard: IEEE Standard for Information Technology - Telecommunications and Information Exchange Between Systems - Local and Metropolitan Area Networks - Specific Requirements - Part 17: Resilient Packet Ring (RPR) Access Method and Physical Layer Specifications - Amendment: 2 – Protected Inter-Ring Connection
3.1 Name of Working Group: Resilient Packet Ring Working Group
Contact information for Working Group Chair Michael Takefman Email: tak@cisco.com Phone: 613-254-3399
Contact Information for Working Group Vice Chair Email: Phone:
3.2 Sponsoring Society and Committee:IEEE Computer Society/Local and Metropolitan Area Networks (C/LM) **Contact information for Sponsor Chair:** Paul Nikolich Email: p.nikolich@ieee.org Phone: 857-205-0050 **Contact information for Standards Representative:** Email: Phone:
3.3 Joint Sponsor:/ () **Contact information for Sponsor Chair:** Email: Phone: **Contact information for Standards Representative:** Email: Phone:
4.1 Type of Ballot: Individual
4.2 Expected Date of Submission for Initial Sponsor Ballot: 2008-11
4.3 Projected Completion Date for Submittal to RevCom: 2009-07
5.1 Approximate number of people expected to work on this project: 12

5.2 Scope of Proposed Standard: The proposed changes add new capabilities to the MAC layer to enable operation of dual-redundant RPR stations that interconnect 2 RPR rings.	**Old Scope:**

5.3 Is the completion of this standard is dependent upon the completion of another standard: No
If yes, please explain:

5.4 Purpose of Proposed Standard: The amendment extends the property of fast (50 ms) restoration time, associated with an individual RPR ring to dual-interconnected rings. Further, the standard specifies methods for controlling which traffic is sent across each of the two interconnections.	**Old Purpose:**

5.5 Need for the Project: It is common for carriers and enterprises to deploy transport equipment in dual interconnected rings topologies for protection across the span of interconnected rings. RPR targets both of these markets and requires equivalent function. Carriers have expressed a requirement for dual interconnected rings to replace legacy carrier class solutions (SONET/SDH) and some are beginning to deploy proprietary solutions.

5.6 Stakeholders for the Standard: The stakeholders for the project are telecom service providers, equipment manufacturers and ASIC vendors implementing RPR.

Intellectual Property

6.1.a. Has the IEEE-SA policy on intellectual property been presented to those responsible for preparing/submitting this PAR prior to the PAR submittal to the IEEE-SA Standards Board? Yes
If yes, state date: 2007-01-15
If no, please explain:

6.1.b. Is the Sponsor aware of any copyright permissions needed for this project? No
If yes, please explain:

6.1.c. Is the Sponsor aware of possible registration activity related to this project? No
If yes, please explain:

7.1 Are there other standards or projects with a similar scope? No
If yes, please explain:
and answer the following: Sponsor Organization:
Project/Standard Number:
Project/Standard Date: 0000-00-00
Project/Standard Title:

7.2 Future Adoptions
Is there potential for this standard (in part or in whole) to be adopted by another national, regional, or international organization? Do not know at this time

If Yes, the following questions must be answered:
Technical Committee Name and Number: SC6
Other Organization Contact Information:
Contact person:
Contact Email address:

7.3 Will this project result in any health, safety, security, or environmental guidance that affects or applies to human health or safety? No
If yes, please explain:

7.4 Additional Explanatory Notes: (Item Number and Explanation)

8.1 Sponsor Information:
Is the scope of this project within the approved scope/definition of the Sponsor's Charter? Yes

If no, please explain:

Submit to NesCom | Save and Come Back Later

Contact the NesCom Administrator

Moved: Move to forward P802.17c PAR to NesCom.

Moved: Takefman/Hawkins
Passes: 15/0/0

5.06	**ME**	**802.11mb Maintenance PAR to NESCOM**	**-**	**Kerry**	**5**	**01:21 PM**

IEEE P802.11
Wireless LANs

Proposed PAR for Further Maintenance of 802.11

Date: 2007-03-13

Author(s):

Name	Company	Address	Phone	email
Bob O'Hara	Cisco Systems	3625 Cisco Way San Jose, CA 95135	+1 408 853 5513	bob.ohara@cisco.com

Abstract

This document proposes a PAR for maintenance of 802.11, after the adoption of 802.11-2007

The following informaitn is taken directly from the IEEE PAR submittal web page.

Modify this Draft PAR | Submit this Draft PAR to NesCom | Delete this Draft PAR

Draft PAR Confirmation Number: 195359209.20082
Submittal Email: bob.ohara@computer.org Change Submitter Email
Type of Project: Amendment to an Existing Standard 802.11
1.1 Project Number: P802.11mb
1.2 Type of Document: Standard for
1.3 Life Cycle: Full
1.4 Is this project in ballot now? No
2.1 Title of Standard: Standard for Information Technology - Telecommunications and information exchange between systems - Local and Metropolitan Area networks - Specific requirements - Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) specifications - Amendment: Accumulated maintenance changes
3.1 Name of Working Group: Wireless LAN Working Group Add/Change Working Group
Contact information for Working Group Chair Stuart J Kerry Email: stuart@ok-brit.com Phone: 408-474-7356
Contact Information for Working Group Vice Chair Email: Phone:
3.2 Sponsoring Society and Committee:IEEE Computer Society/Local and Metropolitan Area Networks (C/LM) **Contact information for Sponsor Chair:** Paul Nikolich Email: p.nikolich@ieee.org Phone: 857-205-0050 **Contact information for Standards Representative:** Email: Phone:
3.3 Joint Sponsor:/ () **Contact information for Sponsor Chair:** Email: Phone: **Contact information for Standards Representative:**

Email: Phone:
4.1 Type of Ballot: Individual
4.2 Expected Date of Submission for Initial Sponsor Ballot: 2010-01
4.3 Projected Completion Date for Submittal to RevCom: 2010-12
5.1 Approximate number of people expected to work on this project: 50

5.2 Scope of Proposed Standard: This amendment incorporates changes accumulated due to responses to interpretation requests, development of other amendments, and development of minor changes to functionality.	**Old Scope:**

5.3 Is the completion of this standard is dependent upon the completion of another standard: No **If yes, please explain:**

5.4 Purpose of Proposed Standard: This amendment collect the latest information learned from use of the base standard and the development of other amendments, disseminating it in a compact and organized format.	**Old Purpose:**

5.5 Need for the Project: Currently, interpretation responses and slight mismatches in functionality due to development of other amendments are not available in a single easily located document. This amendment will bring all this information together for the developers and users of the base standard.
5.6 Stakeholders for the Standard: The stakeholders in this standard are the developers and users of the base 802.11 standard, including service providers, manufacturers, health care workers, retail service providers, and many others.
Intellectual Property **6.1.a.** Has the IEEE-SA policy on intellectual property been presented to those responsible for preparing/submitting this PAR prior to the PAR submittal to the IEEE-SA Standards Board? Yes If yes, state date: 2007-01-15 If no, please explain: **6.1.b.** Is the Sponsor aware of any copyright permissions needed for this project? No If yes, please explain: **6.1.c.** Is the Sponsor aware of possible registration activity related to this project? No If yes, please explain:
7.1 Are there other standards or projects with a similar scope? No If yes, please explain: **and answer the following:** Sponsor Organization:

Project/Standard Number:
Project/Standard Date: 0000-00-00
Project/Standard Title:

7.2 Future Adoptions
Is there potential for this standard (in part or in whole) to be adopted by another national, regional, or international organization? No

If Yes, the following questions must be answered:
Technical Committee Name and Number:
Other Organization Contact Information:
Contact person:
Contact Email address:

7.3 Will this project result in any health, safety, security, or environmental guidance that affects or applies to human health or safety? No
If yes, please explain:

7.4 Additional Explanatory Notes: (Item Number and Explanation)

8.1 Sponsor Information:
Is the scope of this project within the approved scope/definition of the Sponsor's Charter? Yes
If no, please explain:

Moved: Moved that the IEEE 802 Executive Committee form a IEEE 802.11 WG Maintenance Task group (IEEE802.11mb) as per PAR document: 07/0070r1 and to forward to NESCOM for approval.

Moved: Kerry/Jeffree
Passes: 15/0/0/

5.07	**ME**	**802.3cor2 to sponsor ballot**	**-**	**Grow**	**5**	**01:27 PM**

P802.3-2005/Cor 2 content

Change equation 55-55 as follows:

$$Z_{bal}(f) \geq \begin{cases} 48 & 1 \leq f < 30 \\ 44 - 19.2\left(\frac{f}{50}\right) & 30 \leq f \leq 500 \end{cases} \qquad (55\text{–}55)$$

$$Z_{bal}(f) \geq \begin{cases} 48 & 1 \leq f < 30 \\ 44 - 19.2\log_{10}\left(\frac{f}{50}\right) & 30 \leq f \leq 500 \end{cases} \qquad (55\text{–}55)$$

P802.3-2005/Cor 2

- WG ballot passed with no negatives
  - 13 comments, most out of scope
  - Commenters willing to raise out of scope issues in P802.3REV.
- WG authorized Sponsor ballot
- WG authorized RevCom submittal without further WG vote

802.3/Cor2 WG Motion

Request that IEEE 802.3 requests that the EC forward IEEE P802.3-2005/Cor 2 D2.0 to Sponsor ballot.

The result of the above is that the IEEE 802.3 Working Group chair will request EC approval for submission of IEEE P802.3-2005/Cor 2 to the RevCom conditional upon successful completion of the initial Sponsor ballot (not seeking separate WG approval for RevCom submittal is felt appropriate for expedited processing of a Corrigenda).

Request that IEEE 802.3 authorises the IEEE 802.3aw Task Force to conduct meetings and recirculation ballots as necessary to resolve comments received during Sponsor Balloting.

- Tech 75%
- Y:59 N:0 A:3
  MOTION PASSES, Date: 15-Mar-2007 1:43PM

P802.3-2005/Cor 2 to Sponsor ballot

Motion:

The LMSC approves P802.3-2005/Cor 2 for Sponsor ballot.

M: Bob Grow

S: Pat Thaler

Moved: The LMSC approves P802.3-2005/Cor 2 for Sponsor ballot.

Moved: Grow/Thaler
Passes: 15/0/0

5.08	**ME**	**802.3cor2 authorization for special submittal to RevCom**	**-**	**Grow**	**5**	**01:29 PM**

P802.3-2005/Cor 2 to RevCom

Motion:

The LMSC approves submittal of P802.3-2005/Cor 2 to RevCom for June consideration if initial ballot is successful, and subject to an EC 10-day electronic ballot to leave on the June RevCom agenda.

M: Bob Grow

S: Pat Thaler

Moved: The LMSC approves submittal of P802.3-2005/Cor 2 to RevCom for June consideration if initial ballot is successful, and subject to an EC 10-day electronic ballot to leave on the June RevCom agenda.

Moved: Grow/Thaler

Paul delegates conducting of the EC email ballot to Bob Grow.

Moved: to amend the motion to the following:
Right to forward if no comments are received
Moved: Sherman/Greenspan

With unanimous consent, the motion to amend was withdrawn.

On the main motion:
Passes: 15/0/0

5.09	**ME**	**Conditional approval of 802.16g to RevCom**	**-**	**Marks**	**5**	**01:37 PM**

P802.16g to RevCom: Conditional Approval

16 March 2007

Rules

Motions requesting conditional approval to forward where the prior ballot has closed shall be accompanied by:

- Date the ballot closed
- Vote tally including Approve, Disapprove and Abstain votes
- Comments that support the remaining disapprove votes and Working Group responses.
- Schedule for confirmation ballot and resolution meeting.

Date the ballot closed:
10 March 2007

Stage	Open	Close	
Sponsor Ballot	13 Dec	15 Jan	2007
Sponsor Ballot Recirc #1	29 Jan	13 Feb	2007
Sponsor Ballot Recirc #2	23 Feb	10 Mar	2007

Vote tally including Approve, Disapprove and Abstain votes

- 132 Approve 98%
- 3 Disapprove
- 14 Abstain 9%

Return 76%

- However:
  - Only 2 comments from 1 Disapprove voter in last recirc; on same matter

Comment resolution

		Editorial	Technical	Total	Outstanding Disapprove Comments	Disapprove Voters
SB	802.16-07/002r4	101	115	216	12	3
Recirc#1	802.16-07/012r3	21	52	73	9	2
Recirc#2	802.16-07/018r3	39	117	156	2	1
		161	**284**	**445**	**23**	**3**

Comments that support the remaining disapprove votes and Working Group responses

- attached

Schedule for confirmation ballot and resolution meeting

- Mar 28 Complete D9
- Mar 30: Issue D9
- Apr 3: Open First Recirculation
- Apr 18: Close First Recirculation
- May 7-10: comment resolution at 802.16 Session #49, if necessary

802.16 WG Motion

802.16 Closing Plenary: 15 Mar 2007:

Motion: To authorize the Working Group Chair to request conditional approval for P802.16g/D9 to be submitted to Revcom.

- Proposed: Phillip Barber
- Seconded: Erik Colban
- Approved 56-0-1.

Motion

To grant conditional approval, under Clause 20, to forward P802.16g to Revcom.

Moved: Roger Marks

Seconded:

Approve:

Disapprove:

Abstain:

Comment by: GIESBERTS, PIETER-PAUL **Membership Status:** **Date:** 01/12/2007

Comment # 53 **Document under Review:** P802.16g/D6 **Ballot ID:** P802.16g/D6

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 14 **Line** 34 **Fig/Table#** **Subclause** 6.3.2.3.63

The current NSP request/response mechanism is unnecessary complex, badly documented (no 6.x section describes the behavior), not negotiated (there are no capability bits that indicate whether or not a BS or MS supports these messages) and it may generate unnecessary (partial) network entries by MS' looking for a network. NSP TLVs should be communicated through DCD messages, rather than through the SII-ADV and SBC-REQ/RSP messages. That is much simpler for both the MS and the BS, it is more in line with the current network entry procedures and it is more flexible as it makes it possible for a BS to inform an MS of its' neighbours NSPs (through the MOB_NBR-ADV and the DCD settings TLV).

Suggested Remedy

Remove 6.3.2.3.63 (SII-ADV message, page 14), 11.1.8.2 (NSP Change Count TLV, page 21) and 11.8.9 (SIQ TLV, page 23) and change the scope of the NSP List TLV (11.1.8.1) to DCD only; change the section number of 11.1.8.1. to 11.4.3 and remove 11.1.8. In Section 11.1.8.1 remove the line "When an SBC-REQ message with an SIQ TLV (with bit 1 set) is received, the BS should respond with an SBC-RSP message with an NSP List TLV.". Optionally add the following note to that section: "In case NSP TLV is not present in DCD, the only NSPID that is available is equal to the NAPID (Operator ID)".

GroupResolution **Decision of Group:** **Disagree**

Reason for Group's Decision/Resolution

The commenter may be correct that the proposed remedy may reduce overhead and be more efficient, but it is unclear at this time. The group would prefer to see additional validation/simulation justifying the proposed method, especially demonstrating improved efficiency over the current solution, prior to approving the revised method. Additionally, the group proposes a revised remedy, should the commenter's proposal be proven:

Remove 6.3.2.3.63 (SII-ADV message, page 14)

Remove 11.1.8.2 (NSP Change Count TLV, page 21)

Remove 11.8.9 (SIQ TLV, page 23)

In the table in 11.1.8.1, change the scope of NSP List TLV (11.1.8.1) to DCD only

In the table in 11.1.8.1, add "Assignment method, administration, and usage of NSP Ids are outside the scope of this standard." to the end of the paragraph in for 'value'

Move the content of the table in section number of 11.1.8.1 to insert into Table 358

At the end of 6.3.2.3.2, add text:
"If the BS has a list of NSP IDs to transmit, it shall include the NSP List TLV in the DCD. If the BS has no list of NSP IDs to transmit, NSP List TLV shall be omitted."

Remove 11.1.8

Group's Notes

Approved without opposition

Editor's Notes **Editor's Actions**

2007/07/16 **IEEE 802.16-07/001**

Comment by: GIESBERTS, PIETER-PAUL **Membership Status:** **Date:** 01/12/2007

Comment # **54** **Document under Review:** **P802.16g/D6** **Ballot ID:** **P802.16g/D6**

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 15 **Line** 1 **Fig/Table#** **Subclause** 6.3.2.3.64

The proposed Location Based Services message is unnecessary and a needless complication: it requires the BS to transmit yet another message with its own and neighbours' information. There is no reason why the only currently proposed TLV couldn't be included in the DCD instead - the DCD and MOB_NBR-ADV messages can in that case transfer all required information and this message can be removed.

Suggested Remedy

Remove section 6.3.2.3.64 (LBS-ADV message) and change the scope of the BS Coordinate Broadcast (11.21) to DCD; change its section number to 11.4.4.

GroupResolution **Decision of Group:** **Disagree**

Reason for Group's Decision/Resolution

It is unecessary and incurs substantial overhead penalty to transmit the LBS info with the same frequency as DCD. LBS can be transmitted at much longer intervals. Transmitting LBS in a separate broadcast message is the only other reasonable option. It may be that we could engineer a way to put it into NBR-ADV instead of creating an all new broadcast MAC management message, but that has not been proposed, and we are concerned about backwards compatiblity of message parsing.

Group's Notes

Approved without opposition

Editor's Notes **Editor's Actions**

Comment by: GIESBERTS, PIETER-PAUL **Membership Status:** **Date:** 01/12/2007

Comment # 55 **Document under Review:** P802.16g/D6 **Ballot ID:** P802.16g/D6

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 15 **Line** 51 **Fig/Table#** **Subclause** 6.3.25

Section 6.3.25 currently does not contain any normative text and seems to be pretty much useless. Either extend the section or remove it altogether.

Suggested Remedy

Remove Section 6.3.25 (page 15)

GroupResolution **Decision of Group:** **Principle**

Replace the text of 6.3.25 as:
MIH handover function is the support of IEEE Std 802.21 specific features and functions.

The 802.16 entity may send or receive the MOB_MIH-MSG message to or from the peer 802.16 entity in order to convey MIHF Frames carrying the 802.21 MIH protocol messages.

In 6.3.2.3.62, modify the text before the table as:
[BEGIN DELETE]~~The 802.16 entity may send or receive the MOB_MIH-MSG message to or from the peer 802.16 entity in order to convey MIHF Frames carrying the 802.21 MIH protocol messages. The~~[END DELETE][BEGIN INSERT]This[END INSERT] message shall be transmitted on the Primary Management connection.

Reason for Group's Decision/Resolution

Group's Notes

Approved without opposition

Editor's Notes **Editor's Actions**

Comment by: GEIPEL, MICHAEL D **Membership Status:** **Date:** 01/12/2007

Comment # 82 **Document under Review:** P802.16g/D6 **Ballot ID:** P802.16g/D6

Comment **Type** Editorial **Part of Dis** ☒ **Satisfied** ☐ **Page** 9 **Line** 32 **Fig/Table#** **Subclause** 5.3

Incorrect reference

Suggested Remedy

Replace "11.13.19.3.3.20" with "11.13.19.5.1" on line 32.

GroupResolution **Decision of Group:** **Agree**

Replace "11.13.19.3.3.20" with "11.13.19.5.1" on line 32.

Reason for Group's Decision/Resolution

Group's Notes

Approved without opposition

Editor's Notes **Editor's Actions**

Comment by: GEIPEL, MICHAEL D **Membership Status:** **Date:** 01/12/2007

Comment # 83 **Document under Review:** P802.16g/D6 **Ballot ID:** P802.16g/D6

Comment **Type** Editorial **Part of Dis** ☐ **Satisfied** ☐ **Page** 9 **Line** 48 **Fig/Table#** **Subclause** 5.3

grammar error

Suggested Remedy

Change the second word ("require") in line 48 as follows:
... the GPCS require the upper layer ...
to
... the GPCS requires the upper layer ...

GroupResolution **Decision of Group:** **Agree**

Change the second word ("require") in line 48 as follows:
... the GPCS require the upper layer ...
to
... the GPCS requires the upper layer ...

Reason for Group's Decision/Resolution

Group's Notes

Approved without opposition

Editor's Notes **Editor's Actions**

Comment by: Vladimir Yanover **Membership Status:** Member **Date:** 1/15/2007

Comment # 1125 **Document under Review:** **Ballot ID:** P802.16g/D6

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 9 **Line** 16 **Fig/Table#** **Subclause** 5.3

There is a concern with regard to utility of this feature alone in absence of certain framework (like upper layer protocol between the network and the terminal). For example, to use GPCS Service Flows the terminal has to apply certain classifiers at UL connections. The classification happens in this case above MAC, but anyway there should be some [upper layer] protocol to communicate the classification rules to the terminal. Currently there is no definition of such protocol. Particularly NWG spec does not have such function. Another example is negotiation of exact encapsulation format.

It was noticed by some members that this feature is actually out of the scope of 16g project defined as follows:
"This document provides enhancements to the MAC and PHY management entities of IEEE Standard 802.16-2004, as amended by P802.16e, to create standardized procedures and interfaces for the management of conformant 802.16 devices."

Recommendation: Define GPSC support as optional in 802.16g

Suggested Remedy

Change

5.3 Generic Packet Convergence Sublayer (GPCS)
The Generic Packet CS (GPCS) is an upper layer protocol-independent packet convergence sublayer that supports multiple protocols over 802.16 air interface.

Implementation of GCPS is optional.

It is defined as follows:

GroupResolution **Decision of Group:** **Disagree**

Reason for Group's Decision/Resolution

All convergence sublayers are optional. Selection of the specific CS employed in an implementation is specified by bit selection, negotiated in REG-REQ/RSP. See 11.7.7.1 Classification/PHS options and SDU encapsulation support, Table 440. This bit selection makes support of the feature optional for the SS and optional for the BS.

Group's Notes

Approved without opposition

Editor's Notes **Editor's Actions**

2007/07/16 **IEEE 802.16-07/001**

Comment by: Vladimir Yanover **Membership Status:** Member **Date:** 1/15/2007

Comment # **1126** **Document under Review:** **Ballot ID:** **P802.16g/D6**

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 15 **Line** 51 **Fig/Table#** **Subclause**

No need to specify MIH feature as mandatory

Suggested Remedy

6.3.25 MIH handover Function
MIH handover function is the support of IEEE Std 802.21 specific features and functions.
Implementation of MIH handover function is optional.

GroupResolution **Decision of Group:** **Disagree**

Reason for Group's Decision/Resolution

The requested optionality is already present in the text.

The use of the term 'may' does not impose a requirement on either the BS or the MS.

Note that the capability negotiation for the feature specifically calls out that MS and BS may indicate 'Not Support'

From 11.7.26
The "MIH Capability Supported" TLV indicates if MIH is supported. MS and BS that support the MIH handover function shall identify themselves by inclusion of the MIH capability supported. MS and BS that do not support the 802.21 MIH handover function shall not support the MOB_MIH-MSG management messsage.

From 6.3.2.3.62
The 802.16 entity **may** send or receive the MOB_MIH-MSG message to or from the peer 802.16 entity in order to convey MIHF Frames carrying the 802.21 MIH protocol messages.

Group's Notes

Approved without opposition

Editor's Notes **Editor's Actions**

Comment by: Vladimir Yanover **Membership Status:** Member **Date:** 1/15/2007

Comment # 1127 **Document under Review:** **Ballot ID:** P802.16g/D6

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 14 **Line** 34 **Fig/Table#** **Subclause** 6.3.2.3.63

Advertisement of Service providers IDs makes sense only for mobile and may be nomadic systems. It should be defined as optional in the standard to make it "required" in specific profiles

Suggested Remedy

Change

6.3.2.3.63 Service Identity Information (SII-ADV) message
A BS may use the SII-ADV message to broadcast a list of Network Service Provider (NSP) Identifiers. The message may be broadcast periodically without solicitation or could be solicited by an (M)SS. This message is sent from the BS to all MSs on a broadcast CID. Assignment method, administration, and usage of NSP Ids are outside the scope of this standard.
Implementation of SII-ADV message is optional for both BS and MS.

Change in p.20, line 35

11.1.8 NSP List encodings
11.1.8.1 NSP List TLV
The NSP LIST TLV is a TLV that contains one or more Network Service Provider 24-bit Identifiers. When an SBC-REQ message with an SIQ TLV (with bit 1 set) is received, the BS should respond with an SBC-RSP message with an NSP List TLV.

Implementation of NSP List TLV is optional for both BS and MS.

GroupResolution **Decision of Group:** **Disagree**

Reason for Group's Decision/Resolution

The requested optionality is already present in the text.

The text only requires support for the specified messages and TLVs when NSP IDs are used on the BS. No NSP IDs, no messages need be supported. And there is no requirement that any network or BS support NSP IDs.

Group's Notes

Approved without opposition

Editor's Notes **Editor's Actions**

Comment by: Vladimir Yanover **Membership Status:** Member **Date:** 1/15/2007

Comment # 1128 **Document under Review:** IEEE P802.16g-06/D6 **Ballot ID:** P802.16g/D6

Comment **Type** Technical **Part of Dis** ☐ **Satisfied** ☐ **Page** 15 **Line** 1 **Fig/Table#** **Subclause** 6.3.2.3.64

Some 802.16 members noticed that more analysis needed, particularly about PHY features to be used in locating the terminal's position. Menawhile it should be defined as optional.

Suggested Remedy

6.3.2.3.64 Location Based Services (LBS-ADV) message

A BS may use the LBS-ADV message to broadcast the LBS information. The message may be broadcast periodically without solicitation. This message is sent from the BS to all MSs on a broadcast CID.

Implementation of LBS-ADV message is optional for both BS and MS.

GroupResolution **Decision of Group:** **Disagree**

Reason for Group's Decision/Resolution

The requested optionality is already present in the text.

The use of the term 'may' does not impose a requirement on either the BS or the MS.

Group's Notes

Approved without opposition

Editor's Notes **Editor's Actions**

Comment by: Vladimir Yanover **Membership Status:** Member **Date:** 1/15/2007

Comment # 1129 **Document under Review:** IEEE P802.16g-06/D6 **Ballot ID:** P802.16g/D6

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 20 **Line** 13 **Fig/Table#** **Subclause** 11.1.13

There are several problems in MAC version encoding (11.1.3).

1. The text says [about TLV value]:

6: Indicates conformance with IEEE Std 802.16-2004, IEEE Std 802.16e-2005 and IEEE Std 802.16f-2005
7: Indicates conformance with IEEE Std 802.16-2004, IEEE Std 802.16e-2005, IEEE Std 802.16f-2005 and IEEE Std 802.16g-2007

The problems:
- needs clarification as there is no “conformance with IEEE Std 802.16e-2005” (which is a combination of amendment and corrigenda to IEEE Std 802.16-2004)
- Conformance to IEEE Std 802.16-2004 + IEEE Std 802.16e-2005 is surprisingly bound to the conformance to IEEE Std 802.16f-2005 (MIB for fixed OFDM applications)
- Value 7 indicates conformance to 802.16g-2007 as a whole. Unfortunately the 16g standard includes so many topics not related to each other (ND&S, LBS, MIH, RRM, management primitives) that the only reasonable way of handling them is to make all optional and select features using profiles mechanism. It means that there should not be mandatory features in 802.16g. In this sense any system will be conformant to 802.16g, so no need to indicate conformance in the TLV

Suggested Remedy

Change to

6: Indicates conformance with IEEE Std 802.16-2004 as amended and corrected by IEEE Std 802.16e-2005 ~~and IEEE Std 802.16f-2005~~
~~7: Indicates conformance with IEEE Std 802.16-2004, IEEE Std 802.16e-2005, IEEE Std 802.16f-2005 and IEEE Std 802.16g-2007~~
7~~8~~-255: Reserved

GroupResolution **Decision of Group:** **Disagree**

Reason for Group's Decision/Resolution

IEEE documents are not separable and severable. Implementers cannot pick and choose which 'Amendments' to the standard they may enjoy implementing. The standard is specifically written so that it is the combination of all published standards documents, taken together as a whole, that yields the complete standard definition.

The presentation of the MAC version selection is dictated by the standard document publication sequence.

If the commenter wishes to select a set of features for a specific implementation, he should provide a remedy that includes a profile of such a set of features.

Group's Notes

Approved without opposition

Editor's Notes **Editor's Actions**

Comment by: Vladimir Yanover **Membership Status:** Member **Date:** 1/15/2007

Comment # 1130 **Document under Review:** IEEE P802.16g-06/D6 **Ballot ID:** P802.16g/D6

Comment **Type** Technical **Part of Dis** ☐ **Satisfied** ☐ **Page** 26 **Line** 23 **Fig/Table#** **Subclause** 11.13.38

Problems:
The following text in 802.16g is inconsistent and does not fit the scope of 16g project.
It leaves to the implementation to choose if the reported value is before or after HARQ applied, so no way for proper interpretation by the peer device:

“This TLV indicates the target packet error rate (PER) for the service flow as defined below. This PER could either be the PER as seen by the application (post ARQ and/or HARQ processing) or as seen on the airlink (before the application of ARQ and/or HARQ). The particular use of this TLV is left open to implementations
and vendor differentiations. “

Suggested Remedy

Remove 11.13.38

GroupResolution **Decision of Group:** **Disagree**

Reason for Group's Decision/Resolution

The problem statement is incorrect. There is no confusion on the part of the peer.

In 11.13.38 Packet Error Rate (PER), bit #7 (value of 0 – PER measured by the application, 1 – PER measured on the airlink) disambiguates the interpretation.

On the air interface, the peer always knows that the reported PER value is before ARQ and/or HARQ. At the application layer, the application always knows that the reported PER value is after ARQ and/or HARQ.

Group's Notes

Accpeted without objection

Editor's Notes **Editor's Actions**

Comment by: Vladimir Yanover **Membership Status:** Member **Date:** 1/15/2007

Comment # 1131 **Document under Review:** IEEE P802.16g-06/D6 **Ballot ID:** P802.16g/D6

Comment **Type** Technical **Part of Dis** ☐ **Satisfied** ☐ **Page** 31 **Line** 1 **Fig/Table#** **Subclause** 14

Section 14 "Management interfaces and procedures" must be informative as it addresses management primitives, which are not visible in the air interface.

Suggested Remedy

Make section 14 an informative addendum

GroupResolution **Decision of Group:** **Disagree**

Reason for Group's Decision/Resolution

Section 14 forms the basis for the normative model for 802.16 to provide a method for base station-to-NCMS-to-base station communications essential for mobility, as well as other features, to function. As such, while the primitives defined in section 14 are not conformantly testable (outside of a protocol implementation) on the air interface, they provide the essential key to mobility and other features.

Group's Notes

Accpeted without objection

Editor's Notes **Editor's Actions**

Comment by: YANOVER, VLADIMIR **Membership Status:** **Date:** 02/11/2007

Comment # 1 **Document under Review:** **Ballot ID:** P802.16g/D7

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** **Line** **Fig/Table#** **Subclause**

The comments in "Commentary" format required in 802.16 WG have been uploaded to 802.16 WEB site at http://dot16.org/CSUpload//upload/NetMan_db/16g_D7_Yanover_Vladimir.cmtb

Suggested Remedy

GroupResolution **Decision of Group:** **Agree**

No action required

Reason for Group's Decision/Resolution

Comments incorporated into the commentary database for invidual comment resolution

Group's Notes

Accepted without opposition

Editor's Notes **Editor's Actions**

Comment by: GIESBERTS, PIETER-PAUL **Membership Status:** **Date:** 02/12/2007

Comment # 2 **Document under Review:** **Ballot ID:** P802.16g/D7

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 17 **Line** **Fig/Table#** **Subclause** 6.3.2.3.63

I do not agree with the resolution of comment #53 in the 80216-07_002r5 dbase.
The current NSP mechanism using SII-ADV and SBC messages is unnecessarily complex, badly documented and it may generate unnecessary (partial) network entries by MS' looking for a network. NSP TLVs should be communicated through DCD messages, rather than through the SII-ADV and SBC-REQ/RSP messages. That is much simpler for both the MS and the BS, it is more in line with the current network entry procedures and it is more flexible as it makes it possible for a BS to inform an MS of its' neighbours NSPs (through the MOB_NBR-ADV and the DCD settings TLV).

Chair changed the Comment Type to 'Technical' from 'General'.

Suggested Remedy

Adopt contribution C80216g-07_027.doc.

GroupResolution **Decision of Group:** **Disagree**

Reason for Group's Decision/Resolution

The analysis is useful, but flawed. The underlying assumptions are likely wrong. Assume that DCD in mobile networks is transmitted at least 1x per second; that SII-ADV is transmitted 1x per 60 seconds; MS will wait for SII-ADV before attempting initial network entry. Partial entries are eliminated.

Group's Notes

Vote:
In Favor: 1
Richard van Leeuwen

Against: 4
David Johnston
Peretz Feder
Achim Brandt
Joey Chou

Abstain: 1
Sang-Youb Kim

Comment Rejected

Comment by: Vladimir Yanover **Membership Status:** Member **Date:** 2/11/2007

Comment # 17 **Document under Review:** P802.16g/D7 **Ballot ID:** P802.16g/D7

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 9 **Line** 18 **Fig/Table#** **Subclause** 5.3

There is a concern with regard to utility of this feature alone in absence of certain framework (like upper layer protocol between the network and the terminal). For example, to use GPCS Service Flows the terminal has to apply certain classifiers at UL connections. The classification happens in this case above MAC, but anyway there should be some [upper layer] protocol to communicate the classification rules to the terminal. Currently there is no definition of such protocol. Particularly NWG spec does not have such function. Another example is negotiation of exact encapsulation format.

It was noticed by some members that this feature is actually out of the scope of 16g project defined as follows:
"This document provides enhancements to the MAC and PHY management entities of IEEE Standard 802.16-2004, as amended by P802.16e, to create standardized procedures and interfaces for the management of conformant 802.16 devices."

Recommendation: Define GPSC support as optional in 802.16g

Chair changed the Comment Type to 'Technical' from *empty*.

Suggested Remedy

Change

5.3 Generic Packet Convergence Sublayer (GPCS)
The Generic Packet CS (GPCS) is an upper layer protocol-independent packet convergence sublayer that supports multiple protocols over 802.16 air interface. Implementation of GCPS is optional.

It is defined as follows:

GroupResolution **Decision of Group:** **Disagree**

Reason for Group's Decision/Resolution

The place to specify mandatory or optional features is a PICS.

The support of this feature is already optional via indication using the REG-REQ/RSP (See 11.7.7.1), through capabilities negotiation. The commenter gives no specific rationale why this feature should be singled-out for such declarative langauge, while similar features including IP CS and Ethernet CS do not have similar language, while being similarly negotiated. There are in fact many negotiated

parameters throughout the standard that do not have such specific declarative language, but are negotiated in capability negotiation as optional features.

Group's Notes

Vote:
In Favor: 1
Sang-Youb Kim

Against: 5
Peretz Feder
David Johnston
Achim Brandt
Richard van Leeuwen
Joey Chou

Abstain: 0
none

Comment rejected

Editor's Notes **Editor's Actions**

Comment by: Vladimir Yanover **Membership Status:** Member **Date:** 2/11/2007

Comment # 20 **Document under Review:** P802.16g/D7 **Ballot ID:** P802.16g/D7

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 17 **Line** 50 **Fig/Table#** **Subclause** 6.3.2.3.63

Advertisement of Service providers IDs makes sense only for mobile and may be nomadic systems. It should be defined as optional in the standard to make it "required" in specific profiles

Chair changed the Comment Type to 'Technical' from *empty*.

Suggested Remedy

Change

6.3.2.3.63 Service Identity Information (SII-ADV) message

A BS may use the SII-ADV message to broadcast a list of Network Service Provider (NSP) Identifiers. The message may be broadcast periodically without solicitation or may be solicited by an SS during network entry by including the SIQ TLV in the SBC-REQ message (see section 6.3.2.3.23). This message is sent from the BS to all SSs on the broadcast CID.
Implementation of SII-ADV message is optional for both BS and MS. Assignment method, administration, and usage of NSP Ids are outside the scope of this standard. The list of NSP Ids to be included in this message and the message transmssion frequency are programmable

Change in p.27, line 4

11.1.8 NSP List encodings
11.1.8.1 NSP List
The NSP LIST TLV contains one or more 24-bit Network Service Provider Identifiers. Implementation of NSP List TLV is optional for both BS and MS.

11.1.8.2 NSP Change Count
The NSP Change Count TLV indicates a change of the NSP list. Its value shall be increased by one (modulo 256) whenever the NSP list changes. Implementation of NSP Change Count TLV is optional for both BS and MS.

GroupResolution **Decision of Group:** **Disagree**

Reason for Group's Decision/Resolution

The place to specify mandatory or optional features is a PICS.

The support of this feature is already optional via usage of 'MAY' in its invocation. There is no requirement that either a BS or SS support this message, and no failure in communication will result if either does not support the message.

Group's Notes

Vote:
In Favor: 0
none

Against: 6
Peretz Feder
David Johnston
Achim Brandt
Richard van Leeuwen
Sang-Youb Kim
Joey Chou

Abstain: 0
none

Comment Rejected

Editor's Notes **Editor's Actions**

Comment by: Vladimir Yanover **Membership Status:** Member **Date:** 2/11/2007

Comment # 24 **Document under Review:** P802.16g/D7 **Ballot ID:** P802.16g/D7

Comment **Type** Technical **Part of Dis** ☐ **Satisfied** ☐ **Page** 19 **Line** 1 **Fig/Table#** **Subclause** 6.3.2.3.64

Some 802.16 members noticed that more analysis needed, particularly about PHY features to be used in locating the terminal's position. Menawhile it should be defined as optional.

Chair changed the Comment Type to 'Technical' from *empty*.

Suggested Remedy

6.3.2.3.64 Location Based Services (LBS-ADV) message
A BS may use the LBS-ADV message to broadcast the LBS information. The message may be broadcast periodically without solicitation. This message is sent from the BS to all MSs on a broadcast CID.

Implementation of LBS-ADV message is optional for both BS and MS.

GroupResolution **Decision of Group:** **Disagree**

Reason for Group's Decision/Resolution

The place to specify mandatory or optional features is a PICS.

The support of this feature is already optional via usage of 'MAY' in its invocation. There is no requirement that either a BS or SS support this message, and no failure in communication will result if either does not support the message.

Group's Notes

Vote:
In Favor: 0
none

Against: 5
Peretz Feder
David Johnston
Achim Brandt
Richard van Leeuwen
Sang-Youb Kim

Abstain: 0

none

Comment Rejected

Editor's Notes	Editor's Actions

Comment by: Vladimir Yanover **Membership Status:** Member **Date:** 2/11/2007

Comment # 26 **Document under Review:** P802.16g/D7 **Ballot ID:** P802.16g/D7

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 21 **Line** 16 **Fig/Table#** **Subclause** 6.3.25

No need to specify MIH feature as mandatory

Chair changed the Comment Type to 'Technical' from *empty*.

Suggested Remedy

6.3.25 MIH handover Function
MIH handover function is the support of IEEE Std 802.21 specific features and functions. The 802.16 entity may send or receive the MOB_MIH-MSG message to or from the peer 802.16 entity in order to convey MIHF Frames carrying the 802.21 MIH protocol messages.
Implementation of MIH handover function is optional.

GroupResolution **Decision of Group:** **Disagree**

Reason for Group's Decision/Resolution

The place to specify mandatory or optional features is a PICS.

The support of this feature is already optional via usage of 'MAY' in its invocation. There is no requirement that either a BS or SS support this message, and no failure in communication will result if either does not support the message. Support of this MIH function is negotiated in 11.8.10, capability negotiation.

Group's Notes

Vote:
In Favor: 0
none

Against: 5
Peretz Feder
David Johnston
Achim Brandt
Sang-Youb Kim

Abstain: 0
none

Comment Rejected

Editor's Notes | **Editor's Actions**

Comment by: Vladimir Yanover **Membership Status:** Member **Date:** 2/11/2007

Comment # 30 **Document under Review:** P802.16g/D7 **Ballot ID:** P802.16g/D7

Comment **Type** Technical **Part of Dis** ☐ **Satisfied** ☐ **Page** 26 **Line** 42 **Fig/Table#** **Subclause** 11.1.13

There are several problems in MAC version encoding (11.1.3).

1. The text says [about TLV value]:

6: Indicates conformance with IEEE Std 802.16-2004, IEEE Std 802.16e-2005 and IEEE Std 802.16f-2005
7: Indicates conformance with IEEE Std 802.16-2004, IEEE Std 802.16e-2005, IEEE Std 802.16f-2005 and IEEE Std 802.16g-2007

The problems:
- needs clarification as there is no “conformance with IEEE Std 802.16e-2005” alone (which is a combination of amendment and corrigenda to IEEE Std 802.16-2004)
- Conformance to IEEE Std 802.16-2004 + IEEE Std 802.16e-2005 is surprisingly bound to the conformance to IEEE Std 802.16f-2005 (MIB for fixed OFDM applications)
- Value 7 indicates conformance to 802.16g-2007 as a whole. Unfortunately the 16g standard includes so many topics not related to each other (ND&S, LBS, MIH, RRM, management primitives) that the only reasonable way of handling them is to make all optional and select features using profiles mechanism. It means that there should not be mandatory features in 802.16g. In this sense any system will be conformant to 802.16g, so no need to indicate conformance in the TLV

Chair changed the Comment Type to 'Technical' from *empty*.

Suggested Remedy

Change

6: Indicates conformance with IEEE Std 802.16-2004 as amended and corrected IEEE Std 802.16e-2005
~~7: Indicates conformance with IEEE Std 802.16-2004, IEEE Std 802.16e-2005, IEEE Std 802.16f-2005 and IEEE Std 802.16g-2007~~
7~~8~~-255: Reserved

GroupResolution **Decision of Group:** **Disagree**

Reason for Group's Decision/Resolution

The proposed remedy in all ways is inconsistent with practice and precedence in IEEE 802 for identification of MAC version support.

The proposed changes to line 6 fails to be backwards compatibile with previous amendments.

Commenter's argument regarding the optionality of supporting 802.16g features is inaccurate. While some changes introduced in 802.16g, such as fundamental changes to the 802.16 architecture and reference model are not overly testable, compliane is required to ensure proper support for future 802.16 activity. Thus, compliance with 802.16g is material, and identification of MAC support is important.

Group's Notes

Vote:
In Favor: 0
none

Against: 6
Peretz Feder
David Johnston
Achim Brandt
Richard van Leeuwen
Sang-Youb Kim
Joey Chou

Abstain: 0
none

Comment Rejected

Editor's Notes **Editor's Actions**

Comment by: Vladimir Yanover **Membership Status:** Member **Date:** 2/11/2007

Comment # 38 **Document under Review:** P802.16g/D7 **Ballot ID:** P802.16g/D7

Comment **Type** Technical **Part of Dis** ☐ **Satisfied** ☐ **Page** 37 **Line** 1 **Fig/Table#** **Subclause** 11.13.38

Problems:
The following text in 802.16g is inconsistent and does not fit the scope of 16g project.
It leaves to the implementation to choose if the reported value is before or after HARQ applied, so no way for proper interpretation by the peer device:

"This TLV indicates the target packet error rate (PER) for the service flow as defined below. This PER could either be the PER as seen by the application (post ARQ and/or HARQ processing) or as seen on the airlink (before the application of ARQ and/or HARQ). The particular use of this TLV is left open to implementations
and vendor differentiations. "

Chair changed the Comment Type to 'Technical' from *empty*.

Suggested Remedy

Remove 11.13.38

GroupResolution **Decision of Group:** **Principle**

On page 37, in 11.13.38, in the Table, In the 'value' field, modify as:
'0 – PER measured by the application[BEGIN INSERT], post -ARQ and post-HARQ process[END INSERT]'
'1 – PER measured on the airlink[BEGIN INSERT], before the application of ARQ and HARQ[END INSERT]'

Reason for Group's Decision/Resolution

Group's Notes

Accepted without opposition

Editor's Notes **Editor's Actions**

Comment by: Vladimir Yanover **Membership Status:** Member **Date:** 2/11/2007

Comment # 41 **Document under Review:** P802.16g/D7 **Ballot ID:** P802.16g/D7

Comment **Type** Technical **Part of Dis** ☐ **Satisfied** ☐ **Page** 41 **Line** 1 **Fig/Table#** **Subclause** 14

Section 14 "Management interfaces and procedures" must be informative as it addresses management primitives, which are not visible in the air interface.

Chair changed the Comment Type to 'Technical' from *empty*.

Suggested Remedy

Make section 14 an informative addendum

GroupResolution **Decision of Group:** **Disagree**

Reason for Group's Decision/Resolution

Section 14 forms the basis for the normative model for 802.16 to provide a method for base station-to-NCMS-to-base station communications essential for mobility, as well as other features, to function. As such, while the primitives defined in section 14 are not conformantly testable (outside of a protocol implementation) on the air interface, they provide the essential key to mobility and other features.

Group's Notes

Vote:
In Favor: 0
none

Against: 6
Peretz Feder
David Johnston
Achim Brandt
Richard van Leeuwen
Sang-Youb Kim
Joey Chou

Abstain: 0
none

Comment Rejected

Comment by: GIESBERTS, PIETER-PAUL **Membership Status:** Member **Date:** 03/10/2007

Comment # 1 **Document under Review:** P802.16g/D8 **Ballot ID:** 16gD8

Comment **Type** Technical **Part of Dis** ☒ **Satisfied** ☐ **Page** 17 **Line** 50 **Fig/Table#** **Subclause** 6.3.2.3.63

I don't agree with the resolution of my comment #2 in the 80216-07_012r4 database.
DCDs will not be transmitted any more often in mobile networks than in fixed networks, which will be on the order of once every 10 seconds. There is no need since they are static, and they are too big to send often.
Furthermore with the current document the MS will NOT wait for SII-ADV before attempting initial network entry, because it will use the SBC mechanism to request the info.
The current mechanism is ambiguous, flawed and overly complex.
If the group for some reason wants to keep a separate message for the SII-ADV in stead of transmitting the information in the DCD than that is suboptimal but fine. But the information should in any case be removed from the scope of the SBC-REQ/RSP.

Suggested Remedy

Solution 1:
Move SII to DCD, by adopting contribution C80216g-07_027r1.doc.
Solution 2:
Remove only the SBC SII mechanism and keep a non-solicited broadcast by means of the SII-ADV message (instead of DCD):
* Change second sentence on page 17, section 6.3.2.3.63 as follows:
"The message may be broadcast periodically without solicitation" (i.e. remove "or may be solicited by an SS during network entry by including the SIQ TLV in the SBC-REQ message (see section 6.3.2.3.23).")
* Remove all changes as listed in section 6.3.2.3.24 in this draft
* Remove SBC-RSP from scope field in Section 11.1.8.1 and 11.1.8.2
* Delete section 11.8.9.

GroupResolution **Decision of Group:** **Disagree**

Remove only the SBC SII mechanism and keep a non-solicited broadcast by means of the SII-ADV message (instead of DCD):
* Change second sentence on page 17, section 6.3.2.3.63 as follows:
"The message may be broadcast periodically without solicitation" (i.e. remove "or may be solicited by an SS during network entry by including the SIQ TLV in the SBC-REQ message (see section 6.3.2.3.23).")
* Remove all changes as listed in section 6.3.2.3.24 in this draft
* Remove SBC-RSP from scope field in Section 11.1.8.1 and 11.1.8.2
* Delete section 11.8.9.

Reason for Group's Decision/Resolution

As previously reported, Members believe that DCD will be transmitted with substantially more frequency than commenter assumes, at least 1x per second.
While it is true that the information could be periodically included in DCD, there is no specific benefit of putting the information in DCD

versus in the broadcast SII-ADV message. And since the SII-ADV may be transmitted with substantially less frequency, and since elimination of the SII-ADV message is not possible as there are other information types that SII-ADV may convey, there is no specific advantage to choosing to put the information in the DCD. So, the proposed change does not convey any specific advantage over the current mechanism.
Finally, Members believe that the current method of allowing SS to request transmission of the NSP List may be useful in certain deployment scenarios. Specifically, after a recent change in the NSP List, the network may need to transmit the SII-ADV message unsolicited and with some frequency, say every 10 seconds. But after some period of time, perhaps a few weeks or so, when the vast majority of SS have received the updated list, the network may discontinue unsolicited transmission of SII-ADV and rely on solicited request via SBC-REQ. The network may then go for many months without another change in the NSP List.

Group's Notes

Vote:
In Favor: 1 Against: 3 Abstain: 2
Comment Rejected

Editor's Notes

Editor's Actions

Comment by: GIESBERTS, PIETER-PAUL **Membership Status:** Member **Date:** 03/10/2007

Comment # 2 **Document under Review:** P802.16g/D8 **Ballot ID:** 16gD8

Comment **Type** General **Part of Dis** ☒ **Satisfied** ☐ **Page** 17 **Line** 50 **Fig/Table#** **Subclause** 6.3.2.3.63

Right now, the spec does not mandate that all BS with the same NAPID support the same NSPs. It is not clear that this flexibility is actually required, and to improve scanning & roaming for MS it is beneficial if the MS can assume that all BS from the same operator provide access to the same NSPs.

Suggested Remedy

In the first section of 6.3.2.3.63:
* Fix the typo in "transmission" in the sentence "The list of NSP Ids to be included in this message and the message transmssion frequency are programmable."
Add the following text immediately after that sentence:
"All BS that use the same Operator ID shall list the same NSP Ids in their SII-ADV message."

GroupResolution **Decision of Group:** **Principle**

In the first paragraph, change the misspelled instance of 'transmssion' to 'transmission'

Reason for Group's Decision/Resolution

Based on this comment, the group made modification to the remedy in comment 119, Contribution C802.16g-07/047r2. The change made the value of NSP Change Count TLV programmable. While this does not directly address the commenter's intent, it does address an aspect. As to the commenter's remedy to make NSP List common across Operator ID, the group reasoned that there are specific implementations where such constraint would be undesireable.

Group's Notes

Accepted without opposition

Editor's Notes **Editor's Actions**

Moved: To grant conditional approval, under clause 20, to forward 802.16g to RevCom.

Moved: Marks/Kerry
Passes: 15/0/0

5.10	**ME**		**-**			
5.11	**ME**		**-**			
5.12	**ME**		**-**			
5.13	**ME**		**-**			
5.14	**ME**	**Conditional approval of 802.1ag to sponsor ballot**	**-**	**Jeffree**	**5**	**01:49 PM**

MOTION

- 802.1 requests EC approval to forward P802.1ag to Sponsor ballot.
- 802.1: Proposed: finn Second: seaman
- For: 37 Against: 0 Abstain: 1
- EC proposed: Jeffree second:

Supporting material – P802.1ag

- WG recirculation closed 27 Feb 2007 with one outstanding “no” vote. Voter has now indicated that his comments have been addressed; therefore no outstanding negatives. The voting tally is Approve 48, Disapprove 0, Abstain 18. Response rate is 94%.
- Small number of technical and minor editorial comments accompanying “approve” votes have been addressed this week; the technical comments related to errors in the SNMP MIB. These comments, along with the WG proposed disposition, will be included in my covering letter on the Sponsor ballot.
- No changes will be made from the last recirculated draft (D8), other than to insert an Ethertype value and a range of multicast addresses that, in line with WG policy, are allocated only when the draft goes to Sponsor ballot.
- Disposition of comments on latest recirc is here: http://www.ieee802.org/1/files/private/ag-drafts/d8/802-1ag-d8-dis.pdf

Moved: 802.1 requests EC approval to forward P802.1ag to Sponsor ballot.

Moved: Jeffree/Grow
Passes: 15/0/0

5.15	**ME**	**Conditional approval of 802.11k to sponsor ballot**	**-**	**Kerry**	**10**	**01:51 PM**

IEEE 802 LMSC RESOLUTION

Motion By: KERRY Seconded By: Bob O'Hara

Move to request conditional approval, by the IEEE 802 Executive Committee under Clause 20 of the IEEE 802 policies and procedures, to forward the P802.11k draft 7.0 to Sponsor Ballot.

TGk moved: Hart
TGk 2nd: Ganesh

Moved by Richard Paine on behalf of the Task Group
TG results: (8-0-1)

Moved on behalf of the TGk

WG Results : 61/0/10

Approve: 7 Do Not Approve:3 Abstain:5

Moved: Move to request conditional approval, by the IEEE 802 Executive Committee under Clause 20 of the IEEE 802 policies and procedures, to forward the P802.11k draft 7.0 to Sponsor Ballot.

Moved: Kerry/O'Hara

Moved to call the question: O'Hara/Heile
Passes: 8/4/1

On the main motion:
Passes: 7/3/5 at 2:09pm

Subsequent to the vote on the motion an extended discussion on the requirements of each member of the EC ensued, describing what each felt was necessary for bringing a motion for conditional approval.

Moved: to reconsider the motion passed in item 5.03.
Moved: Grow/Marks
Passes: 12/2/0

Motion being reconsidered:
Moved: The LMSC Executive committee approves the P802.3REV PAR, staying on the March NesCom agenda.

Moved: to amend the motion to insert "as amended as shown in the scope statement shown on the slide" after "PAR,"

> **Amended Scope:**
> **This standard defines Ethernet local area, access and metropolitan area networks. Ethernet is specified at selected speeds of operation; and uses a common media access control (MAC) specification and management information base (MIB). The Carrier Sense Multiple Access with Collision Detection (CSMA/CD) MAC protocol specifies shared medium (half duplex) operation, as well as full duplex operation. Speed specific Media Independent Interfaces (MIIs) provide an architectural and optional implementation interface to selected physical layer entities (PHY) ~~interfaces~~. The physical layer encodes frames for transmission and decodes received frames with the modulation specified for the speed of operation, transmission medium and supported link length. ~~In addition to the local area network applicatoins,~~ Other specified capabilities include: ~~PHY~~ control and management protocols ~~types for access networks, PHYs suitable for metropolitan area network applications,~~ and the provision of power over selected twisted pair PHY types.**

Moved: Grow/Greenspan
Passes: 15/0/0

Amended main motion:

On the main motion: Passes: 15/0/0

5.16 ME -

5.17	**ME**		**-**			
6.00		**Executive Committee Study Groups, Working Groups, TAGs**	**-**			
6.01	**MI**	**Approval of Delivery of Video Transport Streams over 802.11 SG**	**-**	**Kerry**	**5**	**02:22 PM**

IEEE 802 LMSC RESOLUTION

Motion By: KERRY Seconded By: Bob O'Hara

- Request that the IEEE 802 Executive Committee create an IEEE 802.11 Study Group (recommended by the WNG SC) to examine issues related delivery of video transport streams over 802.11 (ref: IEEE 802.11-07-400r1), with the intent to create a PAR and five criteria to form a new Task Group.
- TG Mover: Ganesh Venkatesan
- TG 2nd: Ed Reuss

- **Moved on behalf of WNG SC (result: 59-3-11)**
- **WG Results: 67/1/25**

Approve: Do Not Approve: Abstain:

Moved: Request that the IEEE 802 Executive Committee create an IEEE 802.11 Study Group (recommended by the WNG SC) to examine issues related delivery of video transport streams over 802.11 (ref: IEEE 802.11-07-400r1), with the intent to create a PAR and five criteria to form a new Task Group.

Moved: Kerry/O'Hara

Tony indicated that he is puzzled as to why this PAR is necessary, given the existing work in 802.1. 802.1 has explicitly included wireless support for AV. Ganesh Venkatesan (proposed chair of the SG) responded that the work in this SG would be to determine any medium-specific requirements. Tony indicated that the motion should then be more specific as to that limitation of scope. Tony asked what coordination has been done with 802.1. The response is that no coordination has yet taken place.

Mat asked how this work is related to the incomplete work of 802.11n. Stuart responded that this is not yet determined.

Stuart asked that the motion be withdrawn and conducted as an electronic ballot, after coordination between 802.1 and 802.11.

The motion was withdrawn without objection.

6.02	**MI**	**Approval of 802.11 Convergence of WMM and 11e SG**	**-**	**Kerry**	**5**	**02:33 PM**

IEEE 802 LMSC RESOLUTION

Motion By: KERRY Seconded By: Bob O'Hara

Move the IEEE 802 Executive Committee for a IEEE 802.11 study group to as per doc: 07/116r2 in relation to the alignment of WMM (Wireless Multimedia) to IEEE 802.11 with the goal of developing a PAR and 5 Criteria.

Moved at the January 2007 Interim Session

WG Moved: Andrew Myles
WG 2nd: Bruce Kraemer
WG Results: 37/11/14 Motion Passes

Reaffirmed at March 2007 IEEE 802.11 Plenary
WG Results: 70/17/28

Approve: 13 Do Not Approve: Abstain:

Moved: the IEEE 802 Executive Committee for a IEEE 802.11 study group to as per doc: 07/116r2 in relation to the alignment of WMM (Wireless Multimedia) to IEEE 802.11 with the goal of developing a PAR and 5 Criteria.

Moved: Kerry/O'Hara

Roger asked how this will affect the 802.11 standard. The response is that this is to "standardize what we build", by modifying the QoS portions of 802.11-2007 (what was incorporated as 802.11e).

There was some discussion about the scope of this study group, whether it should be broadened to a general QoS amendment.

Harry Worstell expressed that he is concerned about the scope of the study group

Call the question: O'Hara/Heile
Passes: 13/1/1

On the main motion: 13/0/2

6.03	**MI**	**Approval of 802.11 1 Gb/s SG**	**-**	**Kerry**	**5**	**02:45 PM**

IEEE 802 LMSC RESOLUTION

Motion By: KERRY Seconded By: Bob O'Hara

Request the IEEE 802 Executive Committee to create a IEEE 802.11 study group to address requirements for >= 1Gbps data rates for low-mobility, nomadic/local wireless access, with the intent to create necessary PAR and 5 Criteria.

WG Mover: John Barr, Motorola
WG Seconder: Bruce Kramer, Marvel
WG Results: Yes=123 No=1 Abstain=12

Approve: Do Not Approve: Abstain:

Moved: Request the IEEE 802 Executive Committee to create a IEEE 802.11 study group to address requirements for >= 1Gbps data rates for low-mobility, nomadic/local wireless access, with the intent to create necessary
PAR and 5 Criteria.

Moved: Kerry/O'Hara

John Barr is the potential chair of the SG.

Passes: 15/0/0

6.04	**MI**		**-**			
6.05	**MI**		**-**			
6.06	**MI***	**802.15 Body Area Network SG extension**	**-**	**Heile**		
6.07	**MI***	**802.15.4c Alternate PHY for China SG extension**	**-**	**Heile**		
6.08	**MI***	**802.3 High Speed SG extension**	**-**	**Grow**		
6.09	**MI***	**802.3 Energy Efficient SG extension**	**-**	**Grow**		
6.10	**MI***	**802.11 Direct Link Setup SG extension**	**-**	**Kerry**		
6.11	**MI***	**802.17 dual ring interconnect SG extension**	**-**	**Takefman**		
6.12			**-**			
6.13			**-**			
6.14			**-**			
6.15			**-**			
6.16	**MI**	**Confirmation of John Lemon as chair of 802.17**	**-**	**Takefman**	**5**	**02:49 PM**

802.17 Elections

- John Lemon stood unopposed for the position of Chair
- Steve Wood stood unopposed for the position of Vice-Chair
- 802.17 Motions to Confirm their election
  - M:Takefman S:Ram 8:0:0
  - M:Lemon S:Takefman 7:1:0

802.17 Chair Confirmation

- Move to confirm the election of John Lemon as Chair of 802.17

- M: Takefman
- S: Hawkins

Moved: to confirm the election of John Lemon as Chair of 802.17.

Moved: Takefman/Hawkins

John Lemon introduced himself. He has been the vice chair and one of the original editors of the original standard. He has long experience in IETF and ANSI. His affiliation is AdTran, his employer.

Passes: 15/0/0

Paul thanked Mike Takefman for his service as the original chair of 802.17.

7.00		**Break**	**-**		**15**	**02:53 PM**
8.00		**IEEE-SA Items**	**-**			
8.01	**II**	**802 Task Force update**	**-**	**Nikolich**	**10**	**03:02 PM**

Unapproved IEEE-SA/802 Task Force Minutes

Wednesday March 14th 1-3pm
Start Time - 1:00
Adjourned - 2:43
Attendees: Clyde Camp, John Hawkins, Kim Breitfelder, Michelle Turner, Paul Nikolich, Bob Grow, David Law, Glenn Parsons, Jon Rosdahl, Buzz Rigsbee, Karen Kenney, Steve Mills

1) **Ombudsman feedback** -Kenney - no new updates – less than 100 hits – will keep running
2)**Get IEEE 802™ update** -Hawkins/Kenney –
Hawkins – meeting with Karen to discuss costs and brainstorm
3)**IEEEAudit Committee Response :** Hawkins is preparing a response for approval by EC
4)**Attendance Software update –** Camp – v9 spec will be ready Dec 15th. 802.11 and .15 will be Beta testers
Action Item: Camp to Consider adding the spec affiliation requirement into IMAT system
Milestones:
July 07 Alpha .11.15
Sep 07 Beta .11.15
Nov 07 Beta all of 802
Mar 08 Production
Mar 09 Mandatory Use

5)**ITU-T Joint Workshop May 2007 – ITU and 802.1,.3 and .17**
Parsons – 300 attendees potentially
Runs May 31st and June 1st
5 Sessions:
1. Access
2. Ethernet Transport
3. Ethernet Bridging
4. Management
5. Synchronization

6) **myBallot/myProject update –** Kipness – Spoke about Manage Committee link and P&Ps into myProject

8.02	**II**	**Attendance software update**	**-**	**Nikolich**	**10**	**03:00 PM**

Project: IEEE P802 LAN/MAN Standards Committee

Submission Title: [Attendance Software Requirements Document Report]
Date Submitted: [12 March 2007]
Source: [James P. K. Gilb]
Company [SiBEAM]
Address [555 N Mathilda Ave Ste 100, Sunnyvale, CA 94085]
Voice: [1+1 408 245 3120, 2+82-2-526-4065], FAX: [], E-Mail: [last name at ieee dot org]
Re: []

Abstract: [Summary of comments on attendance software requirements document]

Purpose: []
Notice: This document has been prepared to assist the IEEE 802. 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.
Release: The contributor acknowledges and accepts that this contribution becomes the property of IEEE and may be made publicly available by IEEE 802.

Summary

- In general, all of 802 requirements have been addressed.
  - Clearly, 802 input was given due consideration.
- Some small changes may need to be made
- Review of the document is complex
  - Suggest empowering small group to finish
  - Should reflect the needs of the power users
- Responses from Clyde R. Camp are noted as CRC:

Comments received

- The program requires IEEE account. Is this available to non IEEE members?
  - CRC: An IEEE *Web Account* is required – Web Accounts are free and do not require IEEE or SA membership. This is the basis for minimum security and login validation.
- The terminology is different from 802 usage
  - One session is comprised of several meetings
  - A WG, TG or task force may have one or more meeting during a single session.
  - CRC: Terminology was changed to meet a wider audience. HOWEVER, any user at the sponsor level can change how the meeting/session/breakouts (As defined in this spec) are rendered and displayed on printed pages and screens.

Comments received

- One TG may have multiple 802 projects
  - CRC: TG Need to discuss how one TG can have multiple projects/PARs. It was my understanding that a TG represented (in effect) a PAR
- Should allow other providers to bid on providing the service.
  - CRC: There will be no further bidding on IMAT. The IEEE will be providing the application. Part may be done in-house and part sub-contracted out but those are internal decisions.

Other comments

- Require source code to be available for 802 to modify or contract with outside party for modification (but not distribution outside of 802)
  - CRC: No.
- It isn't clear that breakout will work for us.
  - Breakout appears to be the same as a task group
  - CRC: I *think* we may be saying the same thing once the terminology differences are straightened out. .
- The needs to be an attendance administrator for each WG, not for 802 as a whole.
  - CRC: The sponsor level AA is setting global parameters for the overall meeting – some of these may be overridden by the WG AD for his specific gathering
- Allow attendees to sign in with temporary ID in case the internet is down.
  - CRC: Agreed

Permisson changes

- Allow WG chair and designee to
  - set session time
  - Add or delete sessions and meetings
  - CRC: we need to work this out. IMAT has more flexible requirements than the existing LMSC uses. Some of the capabilities may be disabled by the Sponsor-level AA in terms of what the ADs can do. These permissions will be worked out during the implementation
- Allow attendee to set home group for WG for reciprocal rights.
  - CRC: need to discuss this. I don't understand why an attendee needs to set the global home group for WG reciprocal rights.

Missing requirements

- VPN access (highest priority)
- Non-DNS access to web page (highest priority)
  - CRC: Will look into these, not clear what the requirement is.

Some concern was expressed that the designation of Buzz as the coordinator for the attendance software, particularly for interim meetings. A great deal of lack of understanding was expressed as to how this system will work for WGs and TGs/TFs will be able to independently administer the attendance system and simultaneously avoid conflicts.

8.03	**II**	**802.20 working group update**	**-**	**Greenspan**	**5**	**03:25 PM**

THIS WEEK IN THE WONDERFULL WORLD OF 802.20

Orlando March 12-16

AFFIRMATION

- All efforts accomplished in London were voted and affirmed (no quorum in London)
- Included
  - New work plan for 802.20
  - Dallas minutes approval
  - Completed resolution of letter ballot
  - Update and finalization of Channel Model Document

New Business

– Approved London minutes

– Approved submittal of selected documents to 802.18 for IMT-Advanced

New Proposal Submittals

- Four Partial and one full proposal submittals presented.

  1- A. Jette, V. Oprescu, S. Nagaraj (Motorola)

  2- Y.C.Yoon (LGE)

  3- A. Tee, S. Park (Samsung)

  4- J. Tomcik (Qualcomm)

WAY FORWARD

- Developed and approved a plan for integration of new inputs with the 802.20 baseline draft

- Authorized the Commencement of a Practice Ballot for the integrated baseline draft and new proposals

9.00		**LMSC Liaisons & External Interface**	**-**			
9.01	**II**	**Get IEEE 802 Program Update**	**-**	**Hawkins**	**10**	**03:35 PM**

Get 802 Budget Discussion

- We reviewed some early cost allocation methods/assumptions prepared by IEEE staff
- We agreed to continue gathering and analyzing data to answer the question “how much does it cost to support IEEE 802 activities”
- We agreed we don’t have an answer yet
- P&L data is now being gathered by staff
- Going forward plan:
  - May: meeting in Piscataway to review latest data
  - Jun: Recommendation for 2008 budget planning circulated to EC
  - Jul: Discussion/adoption(?) of 2008 get802 budget

Buzz asked if we can assume that all standards groups are treated the same, i.e., all support by IEEE staff will be handled on a “break even” basis? John said that he can’t speak for the IEEE staff. Mat would like to see more information on IEEE-SA as a whole on the growth of other standards areas, to see if it matches the growth of 802. Geoff asked if the June recommendation will be available for people to discuss during the week of the Standards Board meeting?

9.02	**ME**	**802.18 Response to FDA**	**-**	**Lynch**	**5**	**03:42 PM**

Before the
Food and Drug Administration

Comments on FDA Docket No 2006D-0504 Draft Guidance for Industry and FDA Staff: Radio Frequency Wireless Technology in Medical Devices

IEEE 802[1], as a leading consensus-based industry standards body, produces standards for wireless networking devices, including wireless local area networks ("WLANs"), wireless personal area networks ("WPANs"), wireless regional area networks ("WRANs") and wireless metropolitan area networks ("Wireless MANs"). IEEE 802.18 is the Radio Regulatory Technical Advisory Group and it provides monitoring of, and active participation in, ongoing radio regulatory activities, at both the national and international levels.

Response of IEEE 802.18:

The Institute for Electrical and Electronics Engineers (IEEE) 802.18 Radio Regulatory Technical Advisory Group ("IEEE 802.18" or "the RR-TAG") within IEEE 802, hereby submits its comments in the above captioned proceeding. This document was prepared and approved by the RR-TAG and also was reviewed by the IEEE 802 Executive Committee.[2]

Members of IEEE 802 are currently developing a wide range of wired and wireless networking standards that fit under the broadband access umbrella. Therefore, the members of the RR-TAG that participate in the IEEE 802 standards process are interested parties in this proceeding. We appreciate the opportunity to provide these comments to Federal Drug Administration (FDA).

The IEEE 802.18 RR-TAG is supportive of FDA's work to characterize Radio-Frequency Technology in Medical Devices, and is looking forward to working with other organizations on these important issues.

The recent successes of IEEE 802 standards in medical environments is a testament to the market acceptance of devices that use RF to communicate data wirelessly. One of the foundations for this success is the access to unlicensed spectrum for these communications. These systems are easy to deploy, robust and a relatively inexpensive adjunct to hard wiring a network in a dynamic environment. However, the basic spectrum access conditions for unlicensed spectrum are that these devices must accept interference from other unlicensed devices and from primary and secondary users of the spectrum.[3]

These technologies are excellent for non-time sensitive communications such as email or non-emergency VoIP applications. However, IEEE 802.18 does not recommend or in any way suggest that these technologies should be relied upon in critical situations where lives may be threatened by communication delays or QoS issues that may result from the nature of these best effort services.

IEEE 802 networks, both wired and wireless, offer layers of protection to the link. However, these link mechanisms may need to be part of a larger security approach to secure the data per HIPAA requirements.

[1] The IEEE 802 LAN/MAN Standards Committee develops Local Area Network standards and Metropolitan Area Network standards. An individual Working Group provides the focus for each area. More information about each group can be found at: http://ieee802.org/dots.html

[2] This document represents the views of IEEE 802.18. It does not necessarily represent the views of the IEEE as a whole or the IEEE Standards Association as a whole.

[3] Unlicensed bands rules, CFR 47, Part 15, Subpart C
ISM Band FCC rules, CFR 47, Part 18, Subpart C, Technical Standards

Because of the nature of the work that the IEEE 802 Standards group undertakes, the areas of comment that the 802.18 RR-TAG has addressed in the document is limited to the scope of IEEE 802 standards, which are but a small subset of the issues discussed in the FDA document.

It is our intent in submitting these comments to assist the FDA in evaluating the issues raised in its proceeding with respect to wireless networks. We look forward to working with the FDA and other organizations in this matter.

[place document body text here]

References:

802.18 Motion to SEC

Agenda: 9.02
Date: 03/16/2007
Time: 3:20 p.m.

Motion by: Lynch **Seconded by:**

Moved:

To approve document:

18-07-0018-00-0000_Response-to-FDA_Final.doc

as an 802 document, authorizing the Chair of 802.18 to do necessary editorial and formatting changes and, using the document as a "template", create the appropriate input to Food and Drug Administration.

Informative: This document provides information to the FDA on use of unlicensed wireless technologies for medical applications.

Approve: X **Do Not Approve:** X **Abstain:** X **Motion: Approved**

Moved: To approve document:
18-07-0018-00-0000_Response-to-FDA_Final.doc
as an 802 document, authorizing the Chair of 802.18 to do necessary editorial and formatting changes and, using the document as a "template", create the appropriate input to Food and Drug Administration.
Informative: This document provides information to the FDA on use of unlicensed wireless technologies for medical applications.

Moved: Lynch/Heile

Roger asked if this is an 802 or 802.18 document? Mike indicated that this would be an 802 document, to be edited for format should it be approved.

Bob Grow indicated that he does not agree with the statement on the recommendation not to use 802.11 in life critical applications.

Pat supports "softening the conclusion" along the lines Bob Grow suggested.

Fails: 3/3/6

9.03	**ME**	**802.18 Response to Liaison from ITU-R WP8F**	**-**	**Lynch**	**5**	**03:55 PM**

INTERNATIONAL TELECOMMUNICATION UNION

RADIOCOMMUNICATION STUDY GROUPS

***** DRAFT *****

Document 8F/IEEE-1-E
16 March 2007
English only

Received: **TECHNOLOGY**

Subject: Question ITU-R 229-1/8

***** DRAFT *****

Institute of Electrical and Electronics Engineers (IEEE)

RESPONSE TO "LIAISON STATEMENT FROM ITU-R WORKING PARTY 8F TO IEEE AND WIMAX FORUM"

This contribution was developed by IEEE Project 802, the Local and Metropolitan Area Network Standards Committee ("IEEE 802"), an international standards development committee organized under the IEEE and the IEEE Standards Association ("IEEE-SA").

The content herein was prepared by a group of technical experts in IEEE 802 and industry and was approved for submission by the IEEE 802.16 Working Group on Wireless Metropolitan Area Networks, the IEEE 802.18 Radio Regulatory Technical Advisory Group, and the IEEE 802 Executive Committee, in accordance with the IEEE 802 policies and procedures, and represents the view of IEEE 802.

IEEE takes note of the "Liaison Statement from ITU-R Working Party 8F to IEEE and WiMAX Forum", which was received on 13 February 2007 <http://ieee802.org/secmail/msg09063.html> and filed as IEEE L802.16-07/007 <http://ieee802.org/16/liaison/docs/L80216-07_007.pdf>.

In response, IEEE submits the attached cover sheet as an update to that in Attachment 1 of Document 8F/1065-E.

Note that the proposed IP-OFDMA Global Core Specification (GCS) is an IEEE standard.

IEEE appreciates the contributions received in support of 8F/1065 and looks forward to a speedy evaluation and decision at the 22nd meeting of WP 8F.

Attachments:

1. Cover sheet

cc: WiMAX Forum

Attachment 1

Cover Sheet for Submission of proposed radio transmission technologies for IMT-2000 to ITU

(ATTACHMENT 2 of Circular Letter 8/LCCE/47)

The information listed below will be used for cataloguing radio transmission technologies for IMT-2000 by the ITU and will be posted electronically.

This cover sheet (and additional information, if applicable) should be attached when an evaluation group submits a proposal on radio transmission technologies for IMT-2000.

1. Proponent

a) Name of proponent: IEEE 802.16 Working Group on Broadband Wireless Access

b) Proponent category:

ITU-R membership: Yes _x_ No ___

Regional/National standards body: Yes _x_ (Name: IEEE) No ___

Industry group: Yes ___ (Name: _____)No _x_

Other: (Name:_____) No _x_

c) Contact point

Name: Roger B. Marks
Organization: NextWave Broadband, Inc.
Address:
Tel: +1 303 725 4626
Fax: none
Email: r.b.marks@ieee.org

2. Proposal identification

a) Name of the proposed RTT IP-OFDMA

b) Status of proposal:

Revision ___ (former proposed RTTs name:_____)

New proposal _x_

3. Proposed RTT(s) service environment (check as many as appropriate)

Indoor _x_ Outdoor to indoor pedestrian _x_

Vehicular _x_ Satellite ___

4. Attachments

Technology template for each test environment Documents 8F/1065 and 8F/1079r1

Requirements and objectives template Document 8F/1079r1

IPR statement See statement from IEEE to ITU BR <http://ieee802.org/16/liaison/docs/L80216-06_038.pdf>

(Document 8F/1121)

Other: Proposed edits to M.1457 (Document 8F/1065)

(any additional inputs which the proponent may consider relevant to the evaluation) Document 8F/1075

5. Has the proposal already been submitted to an evaluation group registered with ITU?

Yes See <http://www.itu.int/ITU-R/index.asp?category=study-groups&link=ip-ofdma&lang=en>

(Name of evaluation group: _____, Date of submission:_____)

No __

6. Other information

Name of person submitting form: Michael Lynch

Date: 12 March 2007

_____

802.18 Motion to SEC

Agenda: 9.03
Date: 03/16/2007
Time: 3:25 p.m.

Motion by: Lynch **Seconded by:** Marks

Moved:

To approve document:

L802.16-07_13d2.doc

as an 802 document, authorizing the Chair of 802.18 to do necessary editorial and formatting changes and, using the document as a "template", create the appropriate input to ITU-R WP8F.

Informative: This document is a response to a liaison from ITU-R WP8F and updates the cover sheet to the IEEE 802 input from November on M.1457.

Approve: X **Do Not Approve:** X **Abstain:** X **Motion: Approved**

Moved: To approve document:
L802.16-07_13d2.doc
as an 802 document, authorizing the Chair of 802.18 to do necessary editorial and formatting changes and, using the document as a "template", create the appropriate input to ITU-R WP8F.
Informative: This document is a response to a liaison from ITU-R WP8F and updates the cover sheet to the IEEE 802 input from November on M.1457.

Moved: Lynch/Marks

Passes:12/0/2

9.04	**ME**	**802.18 RR-TAG 60GHz Final Comments**	**-**	**Lynch**	**5**	**04:00 PM**

March 16, 2007

Mr. Julius Knapp
Chief
Office of Engineering and Technology
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, D.C. 20054 USA

Subject:	Comments on the Petition for Rulemaking – Amendment of Part 15 Rules for License-Exempt 57-64 GHz Band
Re:	RM-11104

Dear Mr. Knapp:

The Institute of Electrical and Electronics Engineers, Inc. ("IEEE") is a non-profit organization with over 365,000 members in over 150 countries. One of its activities is to develop consensus based standards for a wide range of technologies and applications. The 802.15.3c ("the Standard") is a project that was formed in March 2005 and has the charter of developing a 60 GHz Wireless Personal Area Network ("PAN") alternate Physical Layer standard-based on the IEEE Std 802.15.3-2003.

As we stated in our previous correspondence regarding this petition August 5, 2005, the past decade has seen considerable success in increasing the bandwidth from the core of a network to the home and the enterprise. However, the bandwidth in the home and the enterprise is inadequate or non-existent to support the new generation of applications such as high definition television ("HDTV") connectivity, video gaming and file transfer. These applications will require data rate from 500 Mbps to over 2 Gbps. The Standard, which will be in full compliance with the Part 15.255 rules, will foster the development of semiconductor devices, software and equipment to fill this need.

In that previous correspondence we indicated that we were having discussions with WCAI and other parties in regard to the WCAI's petition for rulemaking. As a result we requested that the FCC hold in abeyance action on WCAI's petition pending the outcome of those discussions. Those discussions have concluded and IEEE would like to report on the outcome. The WCAI proposal (RM-11104, filed September 30, 2004) comprised three parts:

1. Change the method of specification for the maximum radiated power to append a paragraph to Part 15.255(b)(1) to include the following in bold type below:

"(1) For products other than fixed field disturbance sensors, at least one of the following limits must be met:

(i) The average power density of any emission, measured during the transmit interval, shall not exceed 9 uW/cm2, as measured 3 meters from the radiating structure, and the peak power density of any emission shall not exceed 18 uW/cm2, as measured 3 meters from the radiating structure.

(ii) The average EIRP of any transmitter, measured during the transmit interval, shall be limited to the value of 82 dBm reduced by a factor of 2 dB for every dB that the transmit antenna far field gain is less than 51 dBi."

This language would allow the use of EIRP as an additional method of measuring power radiated. This change in measurement methodology is unnecessary, but IEEE understands that it is meant to insure that any power density measurement be made in the far field radiation path of an antenna. To make such a measurement in the near or transitional field would produce inconclusive, un-repeatable, and probably incorrect results. Therefore, a consensual conclusion was reached that if any change were made to the language it should embrace the notion of far field measurement. IEEE has no views on in this matter about EIRP vs. power density, so long as the far field condition is met.

Conclusion: IEEE can agree on this point: measurements need to be specified in the far field

2. The second part of the changes suggested in the WCAI's petition is the increase in allowed power:

"(ii) The average EIRP of any transmitter, measured during the transmit interval, shall be limited to the value of 82 dBm reduced by a factor of 2 dB for every dB that the transmit antenna far field gain is less than 51 dBi."

IEEE has strong objections to this portion of the petition. IEEE was able to show from first principles that the possibility of severe interference in low-power, indoor wireless PAN links could result from the large increase in the amount of power requested in this part of this proposal.

After much discussion, and several presentations to IEEE 802.15.3c, as well as similar presentations to the WCAI Subcommittee on Spectra Above 40 GHz, the WCAI agreed to modify the language in this second part of its proposal to the following:

"(ii) The average EIRP of any ***outdoor*** transmitter ***with a directional antenna directed towards an outdoor receiver***, measured during the transmit interval, shall be limited to the value of 82 dBm reduced by a factor of 2 dB for every dB that the transmit antenna far field gain is less than 51 dBi. ***Equipment vendors shall supply installation guidelines to installers, that installers shall be responsible for following, that would typically limit the resulting power densities at the surfaces of all nearby window surfaces to be no more than 150 nW/cm^2***."

The concession on the part of the WCAI to limit such transmitters to outdoor installations and to take into consideration the power densities that fall on exterior window surfaces was a significant step in the right direction. However, IEEE's calculations led to the conclusion that 150 nW/cm^2 was still a sufficiently large amount of power to exceed the noise floors being built into systems that are being designed for indoor use. A PAN received in the field of view of a LOS transmission would cause enough additional noise as to be troublesome to most systems. Therefore, IEEE proposes a further modification as follows:

"(ii) The average EIRP of any outdoor transmitter with a directional antenna directed towards an outdoor receiver, measured during the transmit interval, shall be limited to the value of 82 dBm reduced by a factor of 2 dB for every dB that the transmit antenna far field gain is less than 51 dBi. ~~Equipment vendors shall supply installation guidelines to installers, that installers shall be responsible for following, that would typically limit the resulting power densities at the surfaces of all nearby window surfaces to be no more than 150 nW/cm2.~~ ***However, in no case shall the signal received inside a building, resulting from an outdoor transmitter closer than 200 m, be greater than 15 nW/cm2."***

IEEE felt that the burden placed on installers was not practical and simply further complicates an already-complicated specification. We were unable to reach agreement on this final modification. WCAI felt that they needed the higher levels of power in order to insure operation of their system; IEEE felt that this level was at least high by an order of magnitude.

Conclusion: the parties involved have not reached agreement on this part of the petition.

3. The petition requested the deletion of Part 15.255(i)(3) (see bold type below).

(i) For all transmissions that emanate from inside a building, within any one second interval of signal transmission, each transmitter with a peak output power equal to or greater than 0.1 mW or a peak power density equal to or greater than 3 nW/cm2, as measured 3 meters from the radiating structure, must transmit a transmitter identification at least once. Each application for equipment authorization must declare that the equipment that will be used inside a building contains the required transmitter identification feature and must specify a method whereby interested parties can obtain sufficient information, at no cost, to enable them to fully detect and decode this transmitter identification information. Upon the completion of decoding, the transmitter identification data block must provide the following fields:

1. FCC Identifier, which shall be programmed at the factory.
2. Manufacturer's serial number, which shall be programmed at the factory.
3. Provision for at least 24 bytes of data relevant to the specific device, which shall be field programmable. The grantee must implement a method that makes it possible for users to specify and update this data. The recommended content of this field is information to assist in contacting the operator.

Conclusion: IEEE is in agreement on this part of the WCAI petition. Field programmability, especially for consumer devices that might operate in this portion of the spectrum, would place an onerous burden on the un-trained consumer.

In conclusion, IEEE believes that we have discussed this issue to a point of reaching some common ground, with one issue still the subject of disagreement. IEEE does not believe further discussions would be productive. Moreover, IEEE remains convinced that the approach endorsed by IEEE 802.18 in its comment filed with the FCC on August 5, 2005, is the correct approach.

Sincerely yours,

[s]/_____

802.18 Motion to SEC

Agenda: 9.04
Date: 03/16/2007
Time: 3:30 p.m.

Motion by: Lynch **Seconded by:** Heile

Moved:

To approve document:

18-07-0013-00-0000_RR-TAG_60GHz_Final_Comments.doc

as an 802 document, authorizing the Chair of 802.18 to do necessary editorial and formatting changes and, using the document as a "template", create the appropriate input to the FCC.

Informative: This completes an input to the FCC on proposed new rules for the 60 GHz band that was started July 2005.

Approve: X **Do Not Approve:** X **Abstain:** X **Motion: Approved**

Moved: To approve document:
18-07-0013-00-0000_RR-TAG_60GHz_Final_Comments.doc
as an 802 document, authorizing the Chair of 802.18 to do necessary editorial and formatting changes and, using the document as a "template", create the appropriate input to the FCC.
Informative: This completes an input to the FCC on proposed new rules for the 60 GHz band that was started July 2005.

Moved: Lynch/Heile

Passes: 13/0/1

9.05	**ME**	**802.18 Report of IP-OFDMA Evaluation Meeting**	**-**	**Lynch**	**5**	**04:04 PM**

INTERNATIONAL TELECOMMUNICATION UNION

RADIOCOMMUNICATION STUDY GROUPS

L802.16-07/012d3
***** DRAFT *****

Document 8F/IEEE-2-E
15 March 2007
English only

Received: **TECHNOLOGY**

Subject: Question ITU-R 229-1/8

***** DRAFT *****

Institute of Electrical and Electronics Engineers (IEEE)

REPORT OF THE IP-OFDMA EVALUATION GROUP COORDINATION MEETING

This contribution was developed by IEEE Project 802, the Local and Metropolitan Area Network Standards Committee ("IEEE 802"), an international standards development committee organized under the IEEE and the IEEE Standards Association ("IEEE-SA").

The content herein was prepared by a group of technical experts in IEEE 802 and industry and was approved for submission by the IEEE 802.16 Working Group on Wireless Metropolitan Area Networks, the IEEE 802.18 Radio Regulatory Technical Advisory Group, and the IEEE 802 Executive Committee, in accordance with the IEEE 802 policies and procedures, and represents the view of IEEE 802.

As per invitation in Attachment 1 and announced on the ITU-R WP 8F web site:

http://www.itu.int/ITU-R/index.asp?category=study-groups&link=ip-ofdma&lang=en

the IEEE 802.16 Working Group hosted a Meeting of Evaluation Groups on 13-14 March 2007, Orlando, FL, USA. A special web page was set up for such purpose:

http://ieee802.org/16/meetings/mtg48/IP-OFDMA/index.html

Attachment 2 contains the report of the meeting that was reviewed by the participants and does not necessarily represent the views of IEEE.

Proposal

This report is provided for information of Working Party 8F and for the use by evaluation groups and experts that were unable to participate in the coordination meeting.

Attachments:

1. Meeting invitation
2. Report of the IP-OFDMA evaluation group coordination meeting

Attachment 1

Meeting Invitation

(Ref.: IEEE L802.16-07/003)

IEEE 802.16 Working Group on Broadband Wireless Access
http://WirelessMAN.org

Roger B. Marks
r.b.marks@ieee.org
18 January 2007

Colin Langtry, Counsellor
Radiocommunication Study Group 8
International Telecommunication Union
colin.langtry@itu.int

Dear Mr. Langtry:

As you know, the IEEE's contribution 8F/1065 proposes the inclusion of IP-OFDMA, based on IEEE Std 802.16, in Rec. ITU-R M.1457.

As part of the review process, the IEEE 802.16 Working Group (WG) understands that evaluation groups will be invited to evaluate the proposal. The IEEE 802.16 WG welcomes such evaluations and offers its assistance to the evaluation groups.

In order to facilitate the process, the WG offers to host a meeting of evaluation groups in conjunction with its upcoming Session #48 <http://ieee802.org/16/meetings/mtg48> in Orlando, FL, USA. We offer to host such a meeting on 13-14 March 2007. During this time, technical experts will be available to answer questions regarding the IP-OFDMA proposal. The evaluation groups will be welcome to exchange information with each other at that time, as they wish.

Please relay this invitation to Working Party 8F.

Sincerely,

Roger B. Marks
Chair, IEEE 802.16 Working Group on Broadband Wireless Access

cc: Mike Lynch, IEEE-SA Liaison to ITU-R
Paul Nikolich, Chair, IEEE 802 Executive Committee
Stephen Blust, Chair, ITU-R Working Party 8F

Attachment 2

Report of the IP-OFDMA evaluation group coordination meeting

1. Introduction

A meeting of IP-OFDMA evaluation groups was held on 13-14 March 2007, in Orlando, FL, USA, hosted by the IEEE 802.16 Working Group on Broadband Wireless Access, and chaired by José Costa. About 40 experts and representatives from evaluation groups participated in the meeting. The agenda is in Annex 1 and the list of participants in Annex 2. The list of documents that were considered is in Annex 3. Annex 4 provides a record of the clarifications that were provided in answer to the questions that were asked during the discussion.

In opening the meeting, the chairman pointed out the web page set up in the ITU which is the focal point for all communications:

http://www.itu.int/ITU-R/index.asp?category=study-groups&link=ip-ofdma&lang=en

and the web page set up by the IEEE 802.16 Working Group for the meeting:

http://ieee802.org/16/meetings/mtg48/IP-OFDMA/index.html

2. Opening Remarks

Roger Marks welcomed the delegates and explained the meeting objectives as included in the meeting invitation (IEEE L802.16-07/003). It was noted that the purpose of the meeting was to facilitate the exchange of views among evaluation groups and to answer any questions since technical experts would be available to answer questions regarding the IP-OFDMA proposal. The purpose of the meeting was not to perform an evaluation of the proposal.

Among the participants were members of the following evaluation groups, which are announced on the ITU web site:

- Association of Radio Industries and Businesses (ARIB) Evaluation Group
- Canadian Evaluation Group (CEG)
- Chinese Evaluation Group (ChEG)
- Telecommunications Technology Association (TTA) Evaluation Group
- Wireless Communications Association International (WCA) Evaluation Group

In addition, some participants indicated that two other evaluation groups are being formed:

- Telecommunications Industry Association (TIA) Evaluation Group
- Israel Evaluation Group

The experts participating in the meeting and the evaluation groups represented at the meeting introduced themselves and the status of the evaluation activities in their groups.

3. Overview/tutorial presentations

Roger Marks gave an overview of the IEEE 802.16 Working Group and the IEEE Std 802.16 (IEEE C802.16-07/007r1).

Scott Probasco gave an introduction to IP-OFDMA (IEEE C802.16-07/008).

Jayne Stancavage presented Document 8F/1075 and associated overview charts (IEEE C802.16-07/009).

Hassan Yaghoobi presented Document 8F/1079(Rev.1) and associated overview charts (IEEE C802.16-07/010).

4. Detailed review of the self-evaluation

Following these introductions, the meeting proceeded to do a detailed review of the self-evaluation in Section 3 of Document 8F/1079(Rev.1), attribute by attribute. Questions were asked for clarification and answers were provided. These are recorded in Annex 4 for future reference.

Evaluation groups are encouraged to use this reference material and to use the resources indicated in Section 5 to seek further clarifications as needed.

5. Conclusion

This report of the meeting was reviewed and agreed by the participants. The coordination meeting was found to be very useful for the exchange of views and this interchange should continue as the evaluation groups progress their work. To facilitate this exchange of information, the IEEE 802.16 Working Group has set up a forum, which members can join at this web page:

http://ip-ofdma.wirelessman.org

It was also pointed out that the WiMAX Forum has set up a web page to provide further clarification as required:

http://www.wimaxforum.org/technology/WiMAX_IMT_2000/

In closing, the chair thanked all the participants for their contributions (including the tutorial presentations, questions, answers, and suggestions).

Annex 1

Agenda for the meeting

Draft Agenda: http://ieee802.org/16/meetings/mtg48/IP-OFDMA/agenda.html

1. Meeting Welcome and Agenda Review
2. Introductions of Participants and Participating Evaluation Groups
3. Introduction to IEEE 802.16 Working Group and IEEE Std 802.16
4. Introduction to IP-OFDMA and 8F/1065
5. Introduction of 8F/1075 and 8F/1079(Rev.1)
6. Review of 8F/1079(Rev.1)
7. Discussion
8. Review of meeting report
9. Adjourn

Annex 2

List of participants

Announced participants: http://dot16.org/mtg48/IP-OFDMA/reglist_realtime.shtml

Participants:

Name (Family)	Name (Given)	Organization	Home	Evaluation Group
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Annex 3

List of documents

The documents considered by the meeting are the following:

1. IEEE L802.16-07/003 (IEEE Meeting invitation sent to ITU-R).
2. IEEE C802.16-07/007r1 (Roger Marks, “Introduction to IEEE 802.16 Working Group and IEEE Std 802.16”).
3. IEEE C802.16-07/008 (Scott Probasco, “Introduction to IP-OFDMA and 8F/1065”).
4. IEEE C802.16-07/009 (Jayne Stancavage, “Review of 8F/1075: Benefits of IP-OFDMA”).
5. IEEE C802.16-07/010 (Hassan Yaghoobi, “Review of 8F/1079(Rev.1): Additional Technical Details Supporting IP-OFDMA as an IMT-2000 Terrestrial Radio Interface”).
6. ITU-R Doc. 8F/1065 (IEEE)
7. ITU-R Doc. 8F/1075 (WiMAX Forum)
8. ITU-R Doc. 8F/1079(Rev.1) (WiMAX Forum)

Annex 4

Questions and answers for clarification on the self-evaluation

(Reference: Section 3 of Document 8F/1079(Rev.1))

Index	Criteria and attributes	Q or q	Gn	Related attributes in Annex 1	Proponents Comments	Coordination meeting questions and answers
A3.1	Spectrum efficiency :					
	The following entries are considered in the evaluation of spectrum efficiency					
A3.1.1	For terrestrial environment					
A3.1.1.1	Voice traffic capacity (E/MHz/cell) in a total available assigned non-contiguous bandwidth of 30 MHz (15 MHz forward/15 MHz reverse) for FDD mode or contiguous bandwidth of 30 MHz for TDD mode. This metric must be used for a common generic continuous voice bearer with characteristics 8 kbit/s data rate and an average BER 1 □ 10^{-3} as well as any other voice bearer included in the proposal which meets the quality requirements (assuming 50% voice activity detection (VAD) if it is used). For comparison purposes, all measures should assume the use of the deployment models in Annex 2, including a 1% call blocking. The descriptions should be consistent with the descriptions under criterion § 6.1.7 – Coverage/power efficiency. Any other assumptions and the background for the calculation should be provided, including details of any optional speech codecs being considered.	Q and q	G1	A1.3.1.5.1	<u>TDD mode Voice capacity using VoIP:</u> -90 Erlangs/MHz/cell for reuse 3, SIMO, 10 MHz PUSC Subchannelization -80 Erlangs/MHz/cell for reuse 3, SIMO, 5 MHz PUSC Subchannelization <u>Assumptions:</u> -ITU vehicular path loss model -Pedestrian B3 channel model	Q1 = Is a cell one sector or multiple sectors? A1 =In the self-evaluation a cell is 3 sectors. Q2 = What is the reason for 80 vs 90 Erlangs? A2 = It is due to MAC overheads, being slightly less in the 10 MHz case.
A3.1.1.2	Information capacity	Q	G1	A1.3.1.5.2	<u>For the packet data bearer</u>	

	(Mbit/s/MHz/cell) in a total available assigned non-contiguous bandwidth of 30 MHz (15 MHz forward/15 MHz reverse) for FDD mode or contiguous bandwidth of 30 MHz for TDD mode. The information capacity is to be calculated for each test service or traffic mix for the appropriate test environments. This is the only measure that would be used in the case of multimedia, or for classes of services using multiple speech coding bit rates. Information capacity is the instantaneous aggregate user bit rate of all active users over all channels within the system on a per cell basis. If the user traffic (voice and/or data) is asymmetric and the system can take advantage of this characteristic to increase capacity, it should be described qualitatively for the purposes of evaluation.	and q			(UDD) service: Data capacity: -DL SIMO 5MHz= 3.45 Mbit/s/MHz/cell -DL SIMO 10MHz = 3.57 Mbit/s/MHz/cell -UL SIMO 5MHz = 1.6 Mbit/s/MHz/cell -DL MIMO 10MHz= 5.52 Mbit/s/MHz/cell -UL SIMO 10MHz= 1.59 Mbit/s/MHz/cell -UL MIMO 10MHz= 2.1 Mbit/s/MHz/cell Assumptions: - PUSC, ITU vehicular, 60% Pedestrian B 3, 30% Vehicular A 30, 10% Vehicular A 120, -DL:UL=28:9 (payload only)
A3.1.2	For satellite environment These values (§ A3.1.2.1 and A3.1.2.2) assume the use of the simulation conditions in Annex 2. The first definition is valuable for comparing systems with identical user channel rates. The second definition is valuable for comparing systems with different voice and data channel rates.				
A3.1.2.1	Voice information capacity per required RF bandwidth (bit/s/Hz)	Q	G1	A1.3.2.3.1	NA
A3.1.2.2	Voice plus data information capacity per required RF bandwidth (bit/s/Hz)	Q	G1	A1.3.2.3.2	NA
A3.2	Technology complexity – Effect on cost of installation and operation The considerations under criterion § 6.1.2 – Technology complexity apply only to the infrastructure, including BSs (the handportable performance is considered elsewhere).				

A3.2.1	Need for echo control The need for echo control is affected by the round trip delay, which is calculated as shown in Fig. 6. Referring to Fig. 6, consider the round trip delay with the vocoder (D1, ms) and also without that contributed by the vocoder (D2, ms). NOTE 1 – The delay of the codec should be that specified by ITU-T for the common generic voice bearer and if there are any proposals for optional codecs include the information about those also.	Q	G4	A1.3.7.2 A1.3.7.3	Echo control is needed for voice applications. The voice delay is also dependent on the codec used. Selection of the codec is implementation dependent and no specific codec is mandated. Echo control is used on the MS and also optionally on a need basis at the BS or Gateways. The performance characteristics meet the delay requirements outlined in ITU-R M.1079.	
A3.2.2	Transmitter power and system linearity requirements NOTE 1 – Satellite e.i.r.p. is not suitable for evaluation and comparison of RTTs because it depends very much on satellite orbit. The RTT attributes in this section impact system cost and complexity, with the resultant desirable effects of improving overall performance in other evaluation criteria. They are as follows.					
A3.2.2.1	Peak transmitter/carrier (P_b) power (not applicable to satellite)	Q	G1	A1.2.16.2.1	This is not limited by RTT but rather by regulations for the specific RF bands. Mobile Station @ 2.5GHz 23 dBm EIRP (Power class I, QPSK, Refer to Section A3.2.2.2)	Q = What is the source of the 23 dBm EIRP? A = See the power classes in A1.2.16. This is similar to what other technologies use (23-24 dBm).
	Peak transmitter power for the BS should be considered because lower peak power contributes to lower cost. Note that P_b may vary with test environment application. This is the same peak transmitter power assumed in Appendix 2, link budget template (**Table 23**).				This is not limited by RTT but rather by regulations for the specific RF bands.	Q = What regulations apply here? A = This is similar to regulations that apply to other technologies. For example in the USA, according to FCC-04-135-A1 the transmit power for Base stations in 2495-2690 MHz is 2000W EIRP.

A3.2.2.2	Broadband power amplifier (PA) (not applicable to satellite) Is a broadband power amplifier used or required? If so, what are the peak and average transmitted power requirements into the antenna as measured in watts.	Q	G1	A1.4.10 A1.2.16.2.1 A1.2.16.2.2 A1.5.5 A1.2.5	A broadband power amplifier is required. Tx Power is not limited by RTT but by regulations. BS - Tx dynamic range = 10 dB - Spectral flatness as per conditions in A.1.4.10 - Peak Tx power on BS is limited only by regulations and not by the RTT. MS - Tx dynamic range = 45 dB - Spectral flatness as per conditions in A.1.4.10 - 4 power classes are supported as shown below: Peak Transmit power (dBm) for 16QAM 1. 18 <= Ptx,max < 21 2. 21 <= Ptx,max < 25 3. 25 <= Ptx,max < 30 4. 30 <= Ptx,max Peak Transmit power (dBm) for QPSK	Q1 = Peak is given, what is the average power? A1 = The average power varies and it is dependent on antenna configuration, services, duty cycles, how far is mobile to the base (i.e., implementation and operation dependent). It lies between the peak power and the minimum power, which is the peak power minus the dynamic range that is dictated by the implementation. Q2 = Why are there no 64QAM numbers for the uplink? A2 = 64QAM is optional, that's why peak transmit power is not classified.

					1. 20 <= Ptx,max < 23 2. 23 <= Ptx,max < 27 3. 27 <= Ptx,max < 30 4. 30 <= Ptx,max	
A3.2.2.3	Linear base transmitter and broadband amplifier requirements (not applicable to satellite)					
A3.2.2.3.1	Adjacent channel splatter/emission and intermodulation affect system capacity and performance. Describe these requirements and the linearity and filtering of the base transmitter and broadband PA required to achieve them.	q	G3	A1.4.2 A1.4.10	Base stations and terminals supporting this RTT will comply with local, regional, and international regulations for out of band and spurious emissions, wherever applicable.	
A3.2.2.3.2	Also state the base transmitter and broadband PA (if one is used) peak to average transmitter output power, as a higher ratio requires greater linearity, heat dissipation and cost.	Q and q	G2	A1.4.10 A1.2.16.2.1 A1.2.16.2.2	These are implementation dependent. The PAPR of the proposed RTT is around 12dB	PAPR = peak to average power ratio
A3.2.2.4	Receiver linearity requirements (not applicable to satellite) Is BS receiver linearity required? If so, state the receiver dynamic range required and the impact of signal input variation exceeding this range, e.g., loss of sensitivity and blocking.	q	G4	A1.4.11 A1.4.12	<u>BS</u> Max input level on-channel reception tolerance = -45 dBm Max input level on-channel damage tolerance = -10 dBm <u>MS</u> Max input level on-channel reception tolerance = -30 dBm Max input level on-channel damage tolerance = 0 dBmBS/MS <u>BS and MS</u> Max input level sensitivity	Q = What are the linearity requirements and what is the dynamic range? A = It is described in A3.6.7. Also, the dynamic range is specified in A3.6.8.

					(Distributed permutation of subcarriers) for 10 MHz case: -88.5 dBm - QPSK-1/2 -85.1 dBm - QPSK-3/4 -82.8 dBm - 16QAM-1/2 -78.7 dBm - 16QAM-3/4 -77.6 dBm - 64QAM-1/2 -74.5 dBm - 64QAM-2/3 -73.4 dBm - 64QAM-3/4 -71.5 dBm - 64QAM-5/6 Max input level sensitivity (Distributed permutation of subcarriers) for 5 MHz case: -91.5 dBm - QPSK-1/2 -88.1 dBm - QPSK-3/4 -85.8 dBm - 16QAM-1/2 -81.7 dBm - 16QAM-3/4 -80.6 dBm - 64QAM-1/2 -77.5 dBm - 64QAM-2/3 -76.4 dBm - 64QAM-3/4 -74.5 dBm - 64QAM-5/6 Sensitivity numbers are calculated based on assumption of repetition factor 1 and Distributed permutation of subcarriers.	
A3.2.3	Power control characteristics (not applicable to satellite) Does the proposed RTT utilize transmitter power control? If so, is it used in both forward and reverse links? State the power	Q and q	G4	A1.2.22 A1.2.22.1 A1.2.22.2 A1.2.22.3 A1.2.22.4 A1.2.22.5	Open loop and closed loop transmitter power control methods are used. Power control is done on the DL as well as the UL.	Q =Is 32 dB correct? A= This is a theoretical maximum based on the 8-bit message. Typically it is in 1 dB increments.

control range, step size (dB) and required accuracy, number of possible step sizes and number of power controls per second, which are concerned with BS technology complexity.

Power control step size is variable ranging from 0.25 dB to 32 dB. An 8-bit signed integer in power control information element indicates the power control step size in 0.25 dB units. Normally implemented in 1 dB increments.

The power control cycle of closed-loop or open-loop power control is dependent on the rate of power control information element transmission, but less than 200 Hz.

The accuracy for power level control can vary from

± 0.5 dB to ± 2 dB depending on the power control step size.

Single step size m | Required relative accuracy

|m| = 1dB | ± 0.5 dB

|m| = 2dB | ± 1 dB

|m| = 3dB | ± 1.5 dB

4dB < |m| < = 10 dB | ± 2 dB

Two exception points of at least 10 dB apart are allowed over the 45 dB range, where in these two points an accuracy of up to ± 2 dB is allowed for any size step.

The minimum power control dynamic range is 45 dB.

The RTT supports 45 dB under the full power assumption

A3.2.4	Transmitter/receiver isolation requirement (not applicable to satellite) If FDD is used, specify the noted requirement and how it is achieved.	q	G3	A1.2.2 A1.2.2.2 A1.2.2.1	Not Applicable as it is TDD.
A3.2.5	Digital signal processing requirements				
A3.2.5.1	Digital signal processing can be a significant proportion of the hardware for some radio interface proposals. It can contribute to the cost, size, weight and power consumption of the BS and influence secondary factors such as heat management and reliability. Any digital circuitry associated with the network interfaces should not be included. However any special requirements for interfacing with these functions should be included. This section of the evaluation should analyse the detailed description of the digital signal processing requirements, including performance characteristics, architecture and algorithms, in order to estimate the impact on complexity of the BSs. At a minimum the evaluation should review the signal processing estimates (MOPS, memory requirements, gate counts) required for demodulation, equalization, channel coding, error correction, diversity processing (including Rake receivers), adaptive antenna array processing, modulation, A-D and D-A converters and multiplexing as well as some IF and baseband filtering. For new technologies, there may be additional or alternative	Q and q	G2	A1.4.13	The Hardware requirements are implementation dependent. For 5 MHz a 512 FFT and for 10 MHz and 1024 FFT is required. Memory and Processing needs are very much specific to the type of hardware.

	requirements (such as FFTs). Although specific implementations are likely to vary, good sample descriptions should allow the relative cost, complexity and power consumption to be compared for the candidate RTTs, as well as the size and the weight of the circuitry. The descriptions should allow the evaluators to verify the signal processing requirement metrics, such as MOPS, memory and gate count, provided by the RTT proponent.				
A3.2.5.2	What is the channel coding/error handling for both the forward and reverse links? Provide details and ensure that implementation specifics are described and their impact considered in DSP requirements described in § A3.2.5.1.	q	G4	A1.2.12 A1.4.13	An 8bit CRC is used for MAC PDU errors. Forward Error Correction schemes Convolutional Coding and Convolutional Turbo Coding are supported Modulation schemes: QPSK, 16 QAM and 64

		QAM for downlink, QPSK and 16 QAM for uplink. Coding rates: QPSK 1/2, QPSK 3/4, 16 QAM 1/2, 16 QAM 3/4, 64 QAM 1/2, 64 QAM 2/3, 64 QAM 3/4, 64 QAM 5/6. Coding repetition rates: 1x, 2x, 4x and 6x.
A3.2.6	Antenna systems	
	The implementation of specialized antenna systems while potentially increasing the complexity and cost of the overall system can improve spectrum efficiency (e.g. smart antennas), quality (e.g. diversity), and reduce system deployment costs (e.g. remote antennas, leaky feeder antennas).	<u>MS:</u> 1 Tx Antenna 2 Rx Antennas <u>BS:</u> 2 or more Tx Antennas 2 or more Rx Antennas Both MIMO and Beamforming support are mandatory at the Mobile Stations. Base Stations may support either MIMO or Beamforming. In general, it is expected for Beamforming to be deployed in scenarios where increased coverage is required (urban and suburban scenarios), while MIMO is expected to be employed in scenarios requiring high system capacity (urban scenarios). For MIMO operation: Adaptive switching between STC and SM is supported, see Section 1.3. 5 for a detailed description. Two transmit and two or more receive antennas are

employed at the BS; one transmit and two receive antennas are supported at the MS. The typical antenna spacing at the BS and MS is 10 λ and 0.5 λ, respectively, where λ stands for the carrier wavelength. Regarding the type of equalizers for the SM MIMO mode, either minimum mean squared error (MMSE) or maximum-likelihhod (ML) based receivers will be implemented by MS vendors. Regarding the CSI, this is based either on physical or effective carrier-to-interference-and-noise ratio (CINR), while the communication of the MIMO mode is also enabled by the Mobile WiMAX system profiles. Please see also Section 1.3.5 for a detailed description.

For Beamforming operation: Typically, a BS transceiver is equipped with 4 transmit and receive antennas but larger number of antennas can be used. The antenna spacing depends on the used Beamforming algorithm and can range from 0.5 λ to 3 λ. Regarding the weight update operation, see also Section 1.3.5, this is based on channel sounding, which is the process of channel estimation during the uplink operation for updating the antenna weights to be used for the subsequent transmission to a particular user in the

					downlink. Note that due to the channel reciprocity enabled by the TDD operation, the weights are accurate for low MS speeds, e.g., up to 30 km/h, while a graceful degradation of the performance is expected for higher speeds. Certainly, the accuracy of the antenna weights is also highly dependent on the specific Beamforming algorithm used at the BS, which may lead to smaller performance degradation at higher MS speeds.
	NOTE 1 – For the satellite component, diversity indicates the number of satellites involved; the other antenna attributes do not apply.				
A3.2.6.1	*Diversity* : describe the diversity schemes applied (including micro and macro diversity schemes). Include in this description the degree of improvement expected, and the number of additional antennas and receivers required to implement the proposed diversity design beyond and omni-directional antenna.	Q	G2	A1.2.23 A1.2.23.1 A1.2.23.2	When the MIMO option is deployed: In the downlink, both transmit diversity and receive diversity is supported through the use of STC (use of the Alamouti code which is a space-time block coding code for two transmit antennas, while two receive antennas are used at the MS for receive diversity). Note that when SM is used, although there is also inherent transmit and receive diversity due to the use of two antennas at both the BS and MS, the target is the increase of the peak rate by transmitting two data streams over one OFDMA symbol per subcarrier, see also Section 1.3.5 for a detailed

description. In the uplink where CSM (collaborative spatial multiplexing) is supported, receive diversity is applied by the use of two or more receive antennas at the BS. Depending on the propagation environment (mainly characterized by the frequency and time diversity of the link-level channel model), the signal-to-noise ratio (SNR) gain of STC ranges from 4 dB to 7dB compared to a single antenna system; the SNR gain of SM ranges from 2 dB to 4 dB compared to a single antenna system, where there is double data throughput supported by SM compared to the single antenna system. Regarding the CSM mode, higher gains on the order of 1 dB to 2 dB are expected compared to the SM gains reported above.

When the Beamforming option is applied: In the downlink, transmit diversity is supported, while receive diversity is also applied when two receive antennas are used at the MS. In the uplink, receive diversity is supported by using multiple antenna reception at the BS. For a typical implementation of 4 receive and transmit antennas for Bemaforming, the SNR gains at both the uplink and the downlink are expected to range from 6 dB to 12 dB.

A3.2.6.2	*Remote antennas* : describe whether and how remote antenna systems can be used to extend coverage to low traffic density areas.	q	G2	A1.3.6	These can be used for extending coverage. Performance is implementation and deployment scenario specific.
A3.2.6.3	*Distributed antennas* : describe whether and how distributed antenna designs are used.	q	G3	A1.3.6	They can be used in microcellular environments.
A3.2.6.4	*Unique antenna* : describe additional antenna systems which are either required or optional for the proposed system, e.g., beam shaping, leaky feeder. Include in the description the advantage or application of the antenna system.	q	G4	A1.3.6	MIMO and Beamforming types of Smart Antenna capability are supported. MIMO is used for capacity enhancements. Beamforming is used for coverage enhancement.
A3.2.7	BS frequency synchronization/time alignment requirements Does the proposed RTT require base transmitter and/or receiver station synchronization or base-to-base bit time alignment? If so, specify the long term (1 year) frequency stability requirements, and also the required bit-to-bit time alignment. Describe the means of achieving this.	Q and q	G3	A1.4.1 A1.4.3	As it is a TDD system, BS synchronization is required. Methods used are implementation dependent. GPS based methods are typically used. BS frequency tolerance ≤ ± 2ppm of carrier frequency BS to BS frequency accuracy ≤ ± 1% of subcarrier spacing MS to BS frequency synchronization tolerance ≤ 2% of the subcarrier spacing. Time alignment between BS and MS is achieved using the Downlink Preambles and the Uplink ranging operation which corrects time offset errors. The OFDMA Cyclic Prefix marks the Symbol level time alignment.

A3.2.8	The number of users per RF carrier/frequency channel that the proposed RTT can support affects overall cost – especially as bearer traffic requirements increase or geographic traffic density varies widely with time. Specify the maximum number of user channels that can be supported while still meeting ITU-T Recommendation G.726 performance requirements for voice traffic.	Q	G1	A1.2.17	The maximum number of voice channels per 1 RF channel depends on the bit rate and sampling rate supported by the codecs defined in the G.726. For instance, in case of the bit rate of 16 kbit/s with 20 msec sampling rate, up to 256 users can be supported simultaneously by a 10 MHz RF channel, while meeting the delay requirements of VoIP. In the case of a 5 MHz channel up to 120 users can be supported. The performance characteristics meet the delay and traffic requirements outlined in ITU-R M.1079.	Q = What is the rationale for 16 kbit/s? A = This is an example only; it is similar to the bit rate used by other technologies.
A3.2.9	Base site implementation/installation requirements (not applicable to satellite) BS size, mounting, antenna type and height can vary greatly as a function of cell size, RTT design and application environment. Discuss its positive or negative impact on system complexity and cost.	q	G1	A1.4.17	No RTT specific requirements exist.	
A3.2.10	Handover complexity Consistent with handover quality objectives defined in criterion § 6.1.3, describe how user handover is implemented for both voice and data services and its overall impact on infrastructure cost and complexity.	Q and q	G1	A1.2.24 A1.4.6.1	Simple Hard Handover and Optimized Hard Handover is supported. As the MS is only attached to one BS at a time significantly less complexity is expected. As voice is supported as an application over the IP data bearer the handover is always treated as a data	Q = Is handover complexity less than what? A = Less complexity than technologies requiring soft handover.

					connection. Base stations and Mobile stations implement the ability to buffer data during handover as well the protocols necessary for handover. See section 2.2.2.2 for handover performance analysis.
A3.3	Quality				
A3.3.1	Transparent reconnect procedure for dropped calls Dropped calls can result from shadowing and rapid signal loss. Air interfaces utilizing a transparent reconnect procedure – that is, the same as that employed for hand-off – mitigate against dropped calls whereas RTTs requiring a reconnect procedure significantly different from that used for hand-off do not.	q	G2	A1.4.14	Voice is supported as an application over the RTT. The RTT is primarily designed to support Voice using Voice Over IP Protocols. MAC connections that provide reliable Quality of Service for Voice Over IP data flows are supported. These data connections are managed using timers and well as MAC layer signaling to ensure a reliable connection is maintained. Transparent reconnects are provided by the application layer for the voice traffic. As the RTT supports Adaptive Modulation and Coding, and Link Adaptation methods, the MAC level transport connections are managed to make them reliable.

A3.3.2	Round trip delay, D1 (with vocoder (ms)) and D2 (without vocoder (ms)) (See Fig. 6). NOTE 1 – The delay of the codec should be that specified by ITU-T for the common generic voice bearer and if there are any proposals for optional codecs include the information about those also. (For the satellite component, the satellite propagation delay is not included.)	Q	G2	A1.3.7.1 A1.3.7.2	Assuming G.729 with a vocoder delay of 20ms for a 20 Byte voice sample. D1 = 20ms (vocoder) + 50ms (max one-way air interface delay) x 2 = 120ms D2 = 50ms x 2 = 100ms	Q1 = Clarify 120 ms vs M.1225 requirements Q2 = What does the "max" include? A = D1 is the RTD including the vocoder delay, transmission delay, and the radio network delay; it does not include core network/backbone delay, which is assumed to be zero; D1 = 2 x One way delay = 2 x (20 ms (vocoding) + 50ms { 5 ms (processing) + 10 ms (Tx+Rx) + 35 ms (radio network) }) = 140 ms; Note that the 35 ms is the delay through the anchor node which has a functionality similar to ASN or RNC.
A3.3.3	Handover/ALT quality Intra switch/controller handover directly affects voice service quality. Handover performance, minimum break duration, and average number of handovers are key issues.	Q	G2	A1.2.24 A1.2.24.1 A1.2.24.2 A1.4.6.1	Handover signaling is designed to minimize loss of data. Handover latency is <= 50ms if no network re-entry is required. This ensures minimum disruption to data transfer. If NW re-entry is required the latency is <= 85ms. Handover frequency is scenario specific.	
A3.3.4	Handover quality for data There should be a quantitative evaluation of the effect on data performance of handover.	Q	G3	A1.2.24 A1.2.24.1 A1.2.24.2 A1.4.6.1	Handover for voice and data are treated the same way in this RTT.	
A3.3.5	Maximum user bit rate for data (bit/s) A higher user bit rate potentially provides higher data service quality (such as high quality video service) from the user's point of view.	Q	G1	A1.3.3	The maximum bit rates are well above 20160 kbit/s. (DL/UL ratio = 2:1, PUSC, 64QAM, 5/6 coding rate)	Q1 = Is this bit rate per user without considering the number of users A1 = Yes Q2 = Is the DL/UL ratio an RTT limitation? A2= 2:1 is not an RTT limitation, but a typical value, used to arrive at the max bit rate.
A3.3.6	Channel aggregation to achieve higher user bit There should also be a qualitative	q	G4	A1.2.32	No channel aggregation is necessary as IP-OFDMA can operate over the entire	

	evaluation of the method used to aggregate channels to provide higher bit rate services.				10 MHz channel. However, flexible allocation of subchannels (in frequency domain) within an RF channel can be used to dynamically allocate bandwidth to individual users for various bit rate services (see also Section s 1.3.1 to 1.3.3) .	
A3.3.7	Voice quality Recommendation ITU-R M.1079 specifies that FPLMTS speech quality without errors should be equivalent to ITU-T Recommendation G.726 (32 kbit/s ADPCM) with desired performance at ITU-T Recommendation G.711 (64 kbit/s PCM). NOTE 1 – Voice quality equivalent to ITU-T Recommendation G.726 error free with no more than a 0.5 degradation in MOS in the presence of 3% frame erasures might be a requirement.	Q and q	G1	A1.2.19 A1.3.8	The vocoder is independent of the RTT. Any suitable vocoder can be used as voice is supported over using Voice over IP protocol. Therefore the MOS values for the G.726 or any other vocoder used will apply.	Q = What is the MOS for VoIP? A = Refer to ITU-T Recommendation G.114 (Figure 1)
A3.3.8	System overload performance (not applicable to satellite) Evaluate the effect on system blocking and quality performance on both the primary and adjacent cells during an overload condition, at e.g. 125%, 150%, 175%, 200%. Also evaluate any other effects of an overload condition.	Q and q	G3	A1.3.9.1	System overload causes graceful degradation as data transmission bandwidth can be traded off for lower quality connections. As adaptive modulation and coding are supported the system adapts to the load conditions as per the policies implemented.	Q1 = What policies are these? A1 = They are largely implementation dependent Q2 = Will the QoS level also affect the degradation level during overload? A2 = Yes; higher quality service will have less degradation. Q3 = What is the reference point for the overload % A3 = There is no specified reference point. It is an intra- and inter-operator operating point and it is

						operator dependent.
A3.4	Flexibility of radio technologies					.
A3.4.1	Services aspects					
A3.4.1.1	Variable user bit rate capabilities Variable user bit rate applications can consist of the following: – adaptive signal coding as a function of RF signal quality; – adaptive voice coder rate as a function of traffic loading as long as ITU-T Recommendation G.726 performance is met; – variable data rate as a function of user application; – variable voice/data channel utilization as a function of traffic mix requirements. Some important aspects which should be investigated are as follows: – how is variable bit rate supported? – what are the limitations? Supporting technical information should be provided such as – the range of possible data rates, – the rate of changes (ms).	q and Q	G2	A1.2.18 A1.2.18.1	The user bit rates are variable according to the number of subchannels assigned and modulation and coding rate used. The rates can be changed every 5ms which is every frame. The DL-MAP and UL-MAP signal the changes every frame. <u>DOWNLINK</u> BW: 10 MHz Modulation : QPSK, 16 QAM, 64 QAM Coding rate : 1/2, 2/3, 3/4, 5/6 Data rates: 9.6 kbit/s to 23040 kbit/s <u>UPLINK</u> BW: 10 MHz Modulation : QPSK, 16 QAM Coding rate : 1/2, 3/4 Data rates: 9.6kbit/s to 6048 kbit/s	
A3.4.1.2	Maximum tolerable Doppler shift, F_d (Hz) for which voice and data quality requirements are met (terrestrial only) Supporting technical	q and Q	G3	A1.3.1.4	F_d ~500 Hz Voice and Data are treated the same way from the Physical layer perspective.	

	information: F_d				
A3.4.1.3	Doppler compensation method (satellite component only) What is the Doppler compensation method and residual Doppler shift after compensation?	Q and q	G3	A1.3.2.2	NA
A3.4.1.4	How the maximum tolerable delay spread of the proposed technology impact the flexibility (e.g., ability to cope with very high mobile speed)?	q	G3	A1.3.1.3 A1.2.14 A1.2.14.1 A1.2.14.2 A1.3.10	~20μs of delay spread can be tolerated without an equalizer.
A3.4.1.5	Maximum user information bit rate, R_u (kbit/s) How flexibly services can be offered to customers ? What is the limitation in number of users for each particular service? (e.g. no more than two simultaneous 2 Mbit/s users)	Q and q	G2	A1.3.3 A1.3.1.5.2 A1.2.31 A1.2.32	Assuming 10 MHz PUSC: - 23040 kbit/s for the Downlink (DL:UL=35:12) - 6048 kbit/s for the Uplink for (DL:UL=26:21) Services are very flexible as the Subchannels can be grouped to increase data rates.
A3.4.1.6	Multiple vocoder rate capability – bit rate variability, – delay variability, – error protection variability.	Q and q	G3	A1.2.19 A1.2.19.1 A1.2.7	Yes. Vocoders are however independent of the RTT and are implementation specific. The data transports for voice can operate at varying levels of Packet error rate and using H-ARQ can significantly boost performance.
A3.4.1.7	Multimedia capabilities The proponents should describe how multimedia services are handled. The following items should be evaluated: – possible limitations (in data	Q and q	G1	A1.2.21 A1.2.20 A1.3.1.5.2 A1.2.18 A1.2.24 A1.2.30 A1.2.30.1	The Data bearers have no constraints on the type of media they can carry. However typically they are mapped to the QoS of the media type being transmitted. There are no limits on the

	rates, number of bearers), – ability to allocate extra bearers during of the communication, – constraints for handover.				number of bearers as long as bandwidth is available. Extra bearers can be allocated during communication. There are no handover constraints as long as coverage is available.
A3.4.2	Planning				
A3.4.2.1	Spectrum related matters				
A3.4.2.1.1	Flexibility in the use of the frequency band The proponents should provide the necessary information related to this topic (e.g., allocation of sub-carriers with no constraints, handling of asymmetric services, usage of non-paired band).	q	G1	A1.2.1 A1.2.2 A1.2.2.1 A1.2.3 A1.2.5.1	A 5 MHz or 10 MHz TDD carrier may be deployed with 1:3:3 frequency re-use or 1:3:1 reuse.
A3.4.2.1.2	Spectrum sharing capabilities The proponent should indicate how global spectrum allocation can be shared between operators in the same region. The following aspects may be detailed: – means for spectrum sharing between operators in the same region, – guardband between operators in case of fixed sharing.	q and Q	G4	A1.2.26	The proposed RTT utilizes OFDMA which has inherent interference protection capabilities due to allocation of a varying subset of available sub-carriers to different users. So spectrum sharing is carried out using multiple channel carriers. The guard bands are RF band specific.
A3.4.2.1.3	Minimum frequency band necessary to operate the system in good conditions Supporting technical information: – impact of the frequency reuse pattern, – bandwidth necessary to carry high peak data rate.	Q and q	G1	A1.2.1 A1.4.15 A1.2.5	5 MHz or 10 MHz 1x3x3 PUSC or 1x3x1 PUSC may be used. 10 MHz gives the optimal data rate.
A3.4.2.2	Radio resource planning				
A3.4.2.2.	Allocation of radio resources	q	G2	A1.2.25	Subchannelization schemes

1	The proponents and evaluators should focus on the requirements and constraints imposed by the proposed technology. More particularly, the following aspects should be considered: – what are the methods used to make the allocation and planning of radio resources flexible? – what are the impacts on the network side (e.g. synchronization of BSs, signalling,)? – other aspects. Examples of functions or type of planning required which may be supported by the proposed technology: – DCA, – frequency hopping, – code planning, – time planning, – interleaved frequency planning. NOTE 1 – The use of the second adjacent channel instead of the adjacent channel at a neighbouring cluster cell is called "interleaved frequency planning". In some cases, no particular functions are necessary (e.g. frequency reuse □ 1).			A1.2.27 A1.4.15	and zones namely PUSC and AMC are supported to provide flexibility in utilizing the frequency and time resources. Sectorized deployments are possible with flexible frequency re-use (1x3x3 or 1x3x1) using PUSC subchannelization schemes. Slots of multiple subchannels and OFDM symbols are used to manage the resource allocation granularity BSs need to be synchronized. This is typically done using GPS on the BS. No frequency planning is required across cells.	
A3.4.2.2.2	Adaptability to adapt to different and/or time varying conditions (e.g., propagation, traffic) How the proposed technology cope with varying propagation and/or traffic conditions? Examples of adaptive functions which may be supported by the proposed technology:	q	G2	A1.3.10 A1.2.27 A1.2.22 A1.2.14	Subchannelization and slot structure capability provides the ability to schedule frequency/time resources to mitigate the effects of propagation losses and also for traffic load balancing. Link adaptation schemes with CQI feedback	Q = Any other reasons? A = The use of OFDMA makes this RTT particularly robust for multipath propagation.

	– DCA, – link adaptation, – fast power control, – adaptation to large delay spreads. Some adaptivity aspects may be inherent to the RTT.				capability allow operating the link more efficiently. H-ARQ also allows operations at high packet error rates resulting higher spectral efficiency as higher order coding and modulation rates can be used. The OFDMA symbol structure is designed to reduce the effects of delay spreads up to 20μs.
A3.4.2.3	Mixed cell architecture (not applicable to satellite component)				
A3.4.2.3.1	Frequency management between different layers What kind of planning is required to manage frequencies between the different layers? e.g. – fixed separation, – dynamic separation, – possibility to use the same frequencies between different layers. Possible supporting technical information: – guard band.	q and Q	G1	A1.2.28 A1.4.15	Hierarchical layered cells are possible. The type of frequency planning is implementation/deployment scenario specific. The same frequencies can be used across layers by proper segmentation of the PUSC Subchannels.
A3.4.2.3.2	User adaptation to the environment What are the constraints to the management of users between the different cell layers? e.g. – constraints for handover between different layers, – adaptation to the cell layers depending on services, mobile speed, mobile power.	q	G2	A1.2.28 A1.3.10	The RTT does not impose constraints on the management of users between different cell layers in such a hierarchical deployment.
A3.4.2.4	Fixed-wireless access				
A3.4.2.4.1	The proponents should indicate how well its technology is suited for operation in the fixed wireless access environment.	q	G4	A1.1.3 A1.3.5 A1.4.17 A1.4.7	The RTT is very much suited for fixed wireless access as well.

	Areas which would need evaluation include (not applicable to satellite component): – ability to deploy small BSs easily, – use of repeaters, – use of large cells, – ability to support fixed and mobile users within a cell, – network and signaling simplification.			A1.4.7.1	Pico or Micro cells or Macro cells and repeaters are possible. Both fixed and mobile users can work in the same cell. Network signaling for fixed devices are simpler compared to mobile devices.
A3.4.2.4.2	Possible use of adaptive antennas (how well suited is the technology) (not applicable to satellite component) Is RTT suited to introduce adaptive antennas? Explain the reason if it is.	q	G4	A1.3.6	Yes the RTT supports adaptive antenna/Beamforming solutions.
A3.4.2.4.3	Existing system migration capability	q	G1	A1.4.16	NA
A3.5	Implication on network interface				
A3.5.1	Examine the synchronization requirements with respect to the network interfaces. *Best case* : no special accommodation necessary to provide synchronization. *Worst case* : special accommodation for synchronization is required, e.g. additional equipment at BS or special consideration for facilities.	q	G4	A1.4.3	Synchronization of the BSs across the network is required and this is typically accomplished using GPS.
A3.5.2	Examine the RTTs ability to minimize the network infrastructure involvement in cell handover. *Best case* : neither PSTN/ISDN nor mobile switch involvement in handover.	q	G3	A1.2.24 A1.4.6.1	Handover within the same ASN (Access Service Network) does not involve the CSN (Core Service Network). In most handover scenarios with neighboring cells there is minimal

	Worst case : landline network involvement essential for handover.				involvement of the CSN. Only the BS and ASN GW may need to be involved in these scenarios.	
A3.5.3	Landline feature transparency					
A3.5.3.1	Examine the network modifications required for the RTT to pass the standard set of ISDN bearer services. *Best case* : no modifications required. *Worst case*: substantial modification required, such as interworking functions.	q	G1	A1.4.7.1	ISDN is supported as an application running over the IP protocol and is not natively supported. As voice is supported using Voice over IP protocols, the use of ISDN is only involved interworking functions between the IP networks and PSTN.	
A3.5.3.2	Examine the extent of the PSTN/ISDN involvement in switching functionality. *Best case* : all switching of calls is handled by the PSTN/ISDN. *Worst case* : a separate mobile switch is required.	q	G2	A1.4.6 A1.4.8	PSTN/ISDN is not used for switching within the IP network.	
A3.5.3.3	Examine the depth and duration of fading that would result in a dropped call to the PSTN/ISDN network. The robustness of an RTTs ability to minimize dropped calls could be provided by techniques such as transparent reconnect.	Q and q	G3	A1.2.24 A1.4.14	Voice is supported as an application over the RTT. The robustness of the link maintained is implementation dependent. The RTT supports HARQ and hence can operate in higher Packer Error Rates up to 10%.	Q = Should define time and dB for fading? (e.g., in a table) A = This is implementation dependent and is similar to other technologies.
A3.5.3.4	Examine the quantity and type of network interfaces necessary for the RTT based on the deployment model used for spectrum and coverage efficiencies. The assessment should include those connections necessary for traffic, signalling	Q	G2	A1.2.30 A1.2.30.1 A1.4.9	The RTT design is to minimize impacts on the network. All the connections necessary for traffic, signaling and control terminate on the BS for	

	and control as well as any special requirements, such as soft handover or simulcast.				PHY/MAC layer. The Radio Resource Management functions implemented over the IP protocol reside in the ASN. So most RTT configuration parameters are controlled on the BS which is interfaced using an IP connection to the ASN-GW .
A3.6	Handportable performance optimization capability				
A3.6.1	Isolation between transmitter and receiver Isolation between transmitter and receiver has an impact on the size and weight of the handportable.	Q	G2	A1.2.2 A1.2.2.1 A1.2.2.2	As the RTT is a TDD based technology, no specific isolation requirements exist.
A3.6.2	Average terminal power output P_0 (mW) Lower power gives longer battery life and greater operating time.	Q	G2	A1.2.16.1.2	This is implementation dependent. The terminals have different power classes to which they belong as shown in A3.2.2.2.2.
A3.6.3	System round trip delay impacts the amount of acoustical isolation required between hand portable microphone and speaker components and, as such, the physical size and mechanical design of the subscriber unit. NOTE 1 – The delay of the codec should be that specified by ITU-T for the common generic voice bearer and if there are any proposals for optional codecs include the information about those also. (For the satellite component, the satellite propagation delay is not included.)	Q and q	G2	A1.3.7 A1.3.7.1 A1.3.7.2 A1.3.7.3	The Round trip delay will be well within the ITU-T specified limits for a typical Voice application that may be implemented using the RTT.
A3.6.4	Peak transmission power	Q	G1	A1.2.16.1.1	This is not limited by RTT but by regulations. The peak terminal power output P_0 = 1000 mW

					(Power class 3). Also see A3.2.2.2.2 for more details.	
A3.6.5	Power control characteristics Does the proposed RTT utilize transmitter power control? If so, is it used in both forward and reverse links? State the power control range, step size (dB) and required accuracy, number of possible step sizes and number of power controls per second, which are concerned with mobile station technology complexity.				Yes the RTT does utilize transmitter power control for both Downlink and Uplink.	Q = Are the answers to all the questions available? A = See A3.6.5.1, A3.6.5.2 for details. The number of power controls per second is implementation dependent. Maximum is less than 200 power controls per second. Typical values would be 5-20.
A3.6.5.1	Power control dynamic range Larger power control dynamic range gives longer battery life and greater operating time.	Q	G3	A1.2.22 A1.2.22.3 A1.2.22.4	The minimum power control dynamic range is 45 dB.	
A3.6.5.2	Power control step size, accuracy and speed	Q	G3	A1.2.22 A1.2.22.1 A1.2.22.2 A1.2.22.5	The accuracy for power level control can vary from ± 0.5 dB to ± 2 dB depending on the power control step size. Single step size m | Required relative accuracy |m| = 1dB| ± 0.5 dB |m| = 2dB| ± 1 dB |m| = 3dB| ± 1.5 dB 4dB< |m|< = 10dB| ± 2 dB Two exception points of at least 10 dB apart are allowed over the 45 dB range, where in these two points an accuracy of up to +/- 2 dB is allowed for any size step.	Q = What is the difference between UL and DL? A = A3.6 refers only to MS, therefore BS is not mentioned. See A3.2.3 for the BS related information.
A3.6.6	Linear transmitter requirements	q	G3	A1.4.10	Linear transmitters are used on the BS and MS.	Q = What are the linearity requirements for the transmitter? A = No explicit linear transmitter requirement exists, however linear transmitters are typically used in the

						BS and MS. Regulatory requirements (e.g., unwanted emissions) may imply specific linearity requirements on implementations.
A3.6.7	Linear receiver requirements (not applicable to satellite)	q	G3	A1.4.11	Linear receivers are used on the BS and MS.	Q = What are the linearity requirements for the receiver? A = No explicit linear receiver requirement exists, however linear receivers are typically used in the BS and MS. This is band and region dependent.
A3.6.8	Dynamic range of receiver The lower the dynamic range requirement, the lower the complexity and ease of design implementation.	Q	G3	A1.4.12	80dB for the MS receiver and 65dB for the BS receiver	Q = Why is it greater for MS receiver than for BS receiver? A = The BS receiver has smaller dynamic range mainly because of the automatic power control and the fact that the base receives transmissions from multiple MSs and has to balance the power received for simultaneous reception. This is true of other similar technologies as well.
A3.6.9	Diversity schemes Diversity has an impact on hand portable complexity and size. If utilized describe the type of diversity and address the following two attributes.	Q and q	G1	A1.2.23 A1.2.23.1 A1.2.23.2	MIMO and Beamforming are supported. Within the MIMO scheme both Transmit Diversity and Spatial Multiplexing are supported.	
A3.6.10	The number of antennas	Q	G1	A1.2.23.1	BS: 2 Tx, 2 Rx MS: 1 Tx, 2 Rx	Q = Is there a limitation on the number of antennas? A = This is the minimum configuration for IP-OFDMA RTT to support diversity schemes.
A3.6.11	The number of receivers	Q	G1	A1.2.23.1	BS: 2 Receivers MS : 2 Receivers	
A3.6.12	Frequency stability Tight frequency stability requirements contribute to handportable complexity.	Q	G3	A1.4.1.2	BS frequency tolerance ≤ ± 2ppm of carrier frequency BS to BS frequency accuracy ≤ ± 1% of subcarrier spacing MS to BS frequency synchronization tolerance ≤ 2% of the subcarrier spacing	
A3.6.13	The ratio of “off (sleep)” time to	Q	G1	A1.2.29	This implementation	

	"on" time			A1.2.29.1	dependent and is programmable by the BS or MS implementations.	
A3.6.14	Frequency generator step size, switched speed and frequency range Tight step size, switch speed and wide frequency range contribute to handportable complexity. Conversely, they increase RTT flexibility.	Q	G2	A1.4.5	Frequency step size : 200 and 250 KHz Switched speed : 200 µsec Frequency range : 5, 10 MHz	
A3.6.15	Digital signal processing requirements Digital signal processing can be a significant proportion of the hardware for some radio interface proposals. It can contribute to the cost, size, weight and power consumption of the BS and influence secondary factors such as heat management and reliability. Any digital circuitry associated with the network interfaces should not be included. However any special requirements for interfacing with these functions should be included. This section of the evaluation should analyse the detailed description of the digital signal processing requirements, including performance characteristics, architecture and algorithms, in order to estimate the impact on complexity of the BSs. At a minimum the evaluation should review the signal processing estimates (MOPS, memory requirements, gate counts) required for demodulation, equalization, channel coding, error correction, diversity processing (including Rake receivers), adaptive antenna array processing, modulation, A-	Q and q	G1	A1.4.13	These are again implementation dependent.	Q = Can you provide more information on sample descriptions? A = Although this varies across implementations, a sample description is provided: For a typical baseband MAC and PHY Digital Signal processing ASIC where processing is implemented in hardware, MOPS numbers vary. 3 MB of memory and 1.5 to 2 million gates may be needed.

	D and D-A converters and multiplexing as well as some IF and baseband filtering. For new technologies, there may be additional or alternative requirements (such as FFTs). Although specific implementations are likely to vary, good sample descriptions should allow the relative cost, complexity and power consumption to be compared for the candidate RTTs, as well as the size and the weight of the circuitry. The descriptions should allow the evaluators to verify the signal processing requirement metrics, such as MOPS, memory and gate count, provided by the RTT proponent.					
A3.7.1.1	Base site coverage efficiency The number of base sites required to provide coverage at system start-up and ongoing traffic growth significantly impacts cost. From § 1.3.2 of Annex 2, determine the coverage efficiency, *C* (km^2/base sites), for the lowest traffic loadings. Proponent has to indicate the background of the calculation and also to indicate the maximum coverage range.	Q	G1	A1.3.1.7 A1.3.1.7.1 A1.3.1.7.2 A1.3.4	80-95% at system startup 95-100% in a mature system See section 2.2.4.2 for more details.	Q1 = Where is the computation of C (coverage efficiency)? A1 = See page 63 of Document 8F/1079(Rev.1) for the computation of C (Section 2.3.4.2). Q2: What is the bit rate being considered in the computation of C? A2 = It is taken from the link budget and applies to all traffic types in the link budget analysis.
A3.7.1.2	Method to increase the coverage efficiency Proponent describes the technique adopted to increase the coverage efficiency and drawbacks. Remote antenna systems can be used to economically extend vehicular coverage to low traffic density areas. RTT link budget, propagation delay system noise	q	G1	A1.3.5 A1.3.6	MIMO and Beamforming can be used to increase coverage efficiency. Remote or Distributed antenna systems can also be used. However the use of these methods is deployment	Q = Does it use repeaters? A = The technology does not preclude them.

	and diversity strategies can be impacted by their use. Distributed antenna designs – similar to remote antenna systems – interconnect multiple antennas to a single radio port via broadband lines. However, their application is not necessary limited to providing coverage, but can also be used to economically provide continuous building coverage for pedestrian applications. System synchronization, delay spread, and noise performance can be impacted by their use.				scenario specific based on the implementations.
A3.7.2	Satellite Normalized power efficiency Supported information bit rate per required carrier power-to-noise density ratio for the given channel performance under the given interference conditions for voice Supported information bit rate per required carrier power-to-noise density ratio for the given channel performance under the given interference conditions for voice plus data mixed traffic.	Q	G1	A1.3.2.4 A1.3.2.4.1 A1.3.2.4.2	NA

802.18 Motion to SEC

Agenda: 9.05
Date: 03/16/2007
Time: 3:35 p.m.

Motion by: Lynch **Seconded by:** Marks

Moved:

To approve document:

L802.16-07_12d3.doc

as an 802 document, authorizing the Chair of 802.18 to do necessary editorial and formatting changes and, using the document as a "template", create the appropriate input to ITU-R WP8F.

Informative: This provides a report of the IP-OFDMA evaluation group that met during the 802 plenary this week.

Approve: X **Do Not Approve:** X **Abstain:** X **Motion: Approved**

Moved: To approve document:
L802.16-07_12d3.doc
as an 802 document, authorizing the Chair of 802.18 to do necessary editorial and formatting changes and, using the document as a "template", create the appropriate input to ITU-R WP8F.
Informative: This provides a report of the IP-OFDMA evaluation group that met during the 802 plenary this week.

Moved: Lynch/Marks

Arnie asked what happened to the process where other chairs would be involved? Mike responded that this document relates to IMT-2000, not IMT-advanced, and that this is a normal process document that has been in process for the last year.

Passes: 15/0/0

9.06	**ME**	**802.18 Statement of Interest – IMT Advanced r2**	**-**	**Lynch**	**5**	**04:10 PM**

INTERNATIONAL TELECOMMUNICATION UNION

RADIOCOMMUNICATION STUDY GROUPS

Document 8F/IEEE-3-E
6 April 2007
English only

Received: **TECHNOLOGY**

Subject: Question ITU-R 229-1/8

Institute of Electrical and Electronics Engineers (IEEE)

CONTRIBUTION TO IMT-ADVANCED

This contribution was developed by IEEE Project 802®, the Local and Metropolitan Area Network Standards Committee ("IEEE 802"), an international standards development committee organized under the IEEE and the IEEE Standards Association ("IEEE-SA").

The content herein was prepared by a group of technical experts in IEEE 802 and industry and was approved for submission by the IEEE 802.18 Radio Regulatory Technical Advisory Group and the IEEE 802 Executive Committee, in accordance with the IEEE 802 policies and procedures, and represents the view of IEEE 802.

IEEE hereby announces its intention to contribute to the ITU-R IMT-Advanced project concerning relevant aspects of IEEE 802 technologies as defined by currently published standards, and to include relevant information regarding standards projects presently in process that are applicable to the IMT-Advanced project.

The IEEE 802 Working Groups ("WG") expected to participate in this process are the following:

- IEEE 802.11™ Wireless Local Area Networks Working Group
- IEEE 802.15™ Wireless Personal Area Networks Working Group
- IEEE 802.16™ Broadband Wireless Access Working Group
- IEEE 802.20™ Mobile Broadband Wireless Access Working Group
- IEEE 802.21™ Media Independent Handover Services Working Group
- IEEE 802.22™ Wireless Regional Area Networks Working Group

IEEE plans to submit a preliminary technical requirements contribution in time for the Working Party 8F meeting in Kyoto, Japan, in May 2007, and a further contribution for the Working Party 8F meeting in January, 2008.

802.18 Motion to SEC

Agenda: 9.06
Date: 03/16/2007
Time: 3:40 p.m.

Motion by: Lynch **Seconded by: Shellhammer**

Moved:

To approve document:

18-07-0019-00-0000_Statement_of_ Interest_IMT Advancedr2.doc

as an 802 document, authorizing the Chair of 802.18 to do necessary editorial and formatting changes and, using the document as a "template", create the appropriate input to ITU-R WP8F.

Informative: This announces that some IEEE 802 WGs its intention to develop an input on IMT Advanced requirements.

Approve: X **Do Not Approve:** X **Abstain:** X **Motion: Approved**

Moved: To approve document:
18-07-0019-00-0000_Statement_of_ Interest_IMT Advancedr2.doc
as an 802 document, authorizing the Chair of 802.18 to do necessary editorial and formatting changes and, using the document as a "template", create the appropriate input to ITU-R WP8F.
Informative: This announces that some IEEE 802 WGs its intention to develop an input on IMT Advanced requirements.

Moved: Lynch/Shellhammer

Passes: 15/0/0

9.07	**ME**	**802 Liaison letter to P1900**	**-**	**Shellhammer**	**5**	**04: 12 PM**

Stephen Berger
IEEE 1900 Committee Chair

IEEE 1900 and 802 are beginning to have some common areas of interest, however, the two organizations have not established a communication channel between the two organizations. There was some communications between the 802.19 TAG and the 1900.2 working group in the past. And recently the 1900.4 chair attended the 802.21 working group and discussed the activities of 1900.4. However, there is not currently an effective mechanism for exchanging information. For example, the 802.21 working group was not aware of the work of 1900.4 until the working group was established and up and running.

I believe that the two organizations should establish formal liaisons. Ideally we could identify two individuals to act as liaisons between the two organizations. One liaison would be a member of 802 who will attend 1900 meetings and report to 1900 on the activities of 802. The other liaison would be a member of 1900 who would attend 802 meetings and report to 802 on the activities of 1900. This would facilitate understanding between the two organizations which might lead to discussions on synergy of activities in both of the groups.

In addition to these liaisons it may make sense for individual working groups to establish liaisons at the working group level.

Regards,
Paul Nikolich
Chair, IEEE 802

Moved: to approve the liaison letter to Steve Berger, as chair of IEEE P1900, subject to editorial revisions.
Moved: Shellhammer/Rigsbee

Buzz asked if there is a common name for P1900? Steve reported that they are about to become the Standards Coordinating Committee on Dynamic Spectrum Access Networks (DYSPAN). This is before the Standards Board, next week. Steve Mills said that 1900 is "effectively" an SCC, operating under an MOU between EMC and Communications societies.

Passes: 14/0/0

9.08	**ME**	**ISO/IEC Liaison letter and report**	**-**	**Thompson**	**5**	**04:20 PM**

AI: 9.08

Closing EC Motion, Orlando, 3/07

In support of:

SC6/WG1 Project 5
international activities,
Geoff Thompson, 802 IR

EC Motion

- Move that Jesse Walker be appointed as liaison delegate from IEEE 802 to the April, ’07 meeting of SC6/WG1 in Xian, China.

(Info: Geoff Thompson will be USNB delegate)

- Moved: Bob Grow
- Second: Stuart Kerry
- App ___ Dis ___ Abs ___
- Pass/Fail

Moved: Move that Jesse Walker be appointed as liaison delegate from IEEE 802 to the April, ’07 meeting of SC6/WG1 in Xian, China.
(Info: Geoff Thompson will be USNB delegate)

Moved: Grow/Kerry

Passes: 13/0/0

EC Motion

- Move that the liaison document from IEEE 802 to the April, ’07 meeting of SC6/WG1 in Xian, China will (in accordance with EC mail ballot action of 9/06) be:
  - Updated list of currently active 802 standard formatted to replace the current text of the proposed draft for ISO/IEC 8802-1
  - List of current 802 Projects (i.e. PARs)
  - List of current 802 Study Groups
  - Pointers to 802 Web sites
  - Reiteration of open offer to NB reps to become “International Observers” in any WG of interest.

- Moved: Bob Grow
- Second: Stuart Kerry
- App ___ Dis ___ Abs ___
- Pass/Fail

- **Moved: Move that the liaison document from IEEE 802 to the April, '07 meeting of SC6/WG1 in Xian, China will (in accordance with EC mail ballot action of 9/06) be:**
  - **Updated list of currently active 802 standard formatted to replace the current text of the proposed draft for ISO/IEC 8802-1**
  - **List of current 802 Projects (i.e. PARs)**
  - **List of current 802 Study Groups**
  - **Pointers to 802 Web sites**
  - **Reiteration of open offer to NB reps to become "International Observers" in any WG of interest.**

Moved: Grow/Kerry

Roger asked the purpose of this liaison document. Geoff responded that the first item (list of active 802 standards) is intended to be placed in 8802-1. The rest would be a liaison document describing current work in 802.

Roger asked if the EC could see the document before it is sent. Geoff indicated he would send it to the EC, asking each chair to verify their information in the document. Roger indicated he feels it is important to be available before approval.

Passes: 13/2/0

			-			
10.00		**LMSC Internal Business**	-			
10.01	**MI**	**TREASURER'S REPORT**	-	**Hawkins**	**10**	**04:29 PM**

IEEE Project 802
Statement of Operations
Jan 2007 Interim Session
London, England
As of Mar 14, 2007

Session Income					Est/*Act*		Budget		Deviation
		Net Registrations			*772*		1,000		(228)
64%	497	Early Registrations	@	$600	298,200				
20%	151	Registrations	@	$750	113,250				
16%	123	On-site registrations	@	$900	110,700				
0%	1	Student	@	$350	350				
	1	Early cancellations	@	$600	(600)				
	10	Cancellations	@	$500	(5,000)				
	11	Late cancellations	@	$350	(3,850)				
	11	Special Cancellation	@	$150	(1,650)				
	1	Special Cancellation	@	$650	(650)				
5%	3	Special Cancellation	@	$500	(1,500)				
	0	Other credits	@	$100	0				
	Registraion Subtotal				509,250		675,000		(165,750)
	0	Deadbeat Payment	@						0
	Interest								0
	Other (Hotel comps and commission)					27,598		110,703	(83,105)
TOTAL Session Income						$ 536,848		785,703	(248,855)

Session Expenses			Actual		Budget	
	Audio Visual Rentals		17,914		35,000	17,086
	Audit					0
	Bank Charges					0
	Copying		1,734		10,000	8,266
	Credit Card Discounts & Fees		14,004		19,575	5,571
	Equipment Expenses		117		1,200	1,083
	Get IEEE 802 Conttribution					0
	Insurance					0
	Meeting Administratior		81,874		98,088	16,214
	Misc Expenses		5,711	*	24,825	19,114
	Networking		84,021		88,203	4,182
	Phone & Electrical		20,577		20,093	(484)
	Refreshments		234,959		304,736	69,777
	Shipping		19,823		27,500	7,677
	Social		19,360		60,278	40,918
	Supplies		147		2,000	1,853
TOTAL Session Expense			$ 500,242		691,498	191,256
Other Income/Expense			(127,958)			
NET Session Surplus/(Deficit)			(91,352)		94,205	(185,557)
Analysis						
	Refreshments per registration		304		305	0
	Social per registration		25		60	35
	Meeting Admin per registratior		106		98	(8)
	Surplus/(Loss) per registration		(118)		94	(213)

* Misc items: Hotel gratuity $100 & 802.20 travel reimb: $4311

Cash on hand as of Mar 10, 2007	$ 606,921	
Reserve for unpaid expenses for prior sessions	(127,958)	(London penalties reserve)
Reserve for other outstanding commitments	(5,600)	(Avilar fees)
Income received for current session	(32,754)	
Expenses prepaid for current session	44,905	
Expenses prepaid for future sessions	0	
Operating Reserve following this sessior	$ 485,515	

IEEE Project 802
Estimated Statement of Operations
March 2007 Plenary Session
Orlando, FL
As of March 10, 2007

Meeting Income	*Estimate*	*Budget*	*Variance*
Registrations	**1,320**	1,200	120
Registration income	**566,700**	519,600	47,100
Cancellation refunds	**(11,334)**	(9,353)	
Deadbeat collections		0	0
Bank interest	**200**	200	0
Other income	**50,000**	50,000	0
TOTAL Meeting Income	**$ 605,566**	$ 560,447	45,119

Meeting Expenses	*Estimate*	*Budget*	*Variance*
Audio Visual Rentals	**$ 24,500**	$ 18,000	(6,500)
Audit	**0**	0	0
Bank Charges	**250**	500	250
Copying	**3,500**	3,500	0
Credit Card Discount	**16,956**	14,549	(2,407)
Equipment Expenses	**11,000**	11,000	0
Get IEEE 802 Contribution	**112,500**	112,500	0
Insurance	**3,000**	2,500	(500)
Meeting Administration	**80,820**	75,064	(5,756)
Misc Expenses	**2,000**	2,500	500
Network	**56,500**	60,000	3,500
Phone & Electrical	**500**	2,500	2,000
Refreshments	**122,000**	120,500	(1,500)
Shipping	**19,211**	15,000	(4,211)
Social	**44,260**	45,000	740
Supplies	**1,000**	1,000	0
Other Discounts	**0**	0	0
TOTAL Meeting Expense	**$ 497,997**	$ 484,113	(13,884)

NET Meeting Income/Expense	**$ 107,569**	$ 76,334	31,234
Analysis			
Refreshments per registration	**92**	100	8
Social per registration	**34**	38	4
Meeting Administration per reg	**61**	63	1
Networking per registration	**43**	50	7
Get IEEE 802 Contribution per	**85**	**94**	9
Surplus/Deficit per registration	**81**	64	18
Pre-registration rate	**71%**	**67%**	

London Final Cost Disposition

- Straw Poll: Would we be willing to schedule a plenary at the London venue (Metropole + Paddington) in order to avoid $30k-50k penalties?
- Assume cost structure similar to the interim.
- Available dates
  - March 2009
  - March 2010
  - March 2011
  - July 2011

  - Y: N: A:

Get text from slide
Yes: 1
No: 13
Abstain:

This is not a statement of opinion on the desirability of non-North American meetings.

10.02	**MI**	**Move to concentration banking**	**-**	**Hawkins**	**5**	**04:45 PM**

Motion

- To authorize the treasurer to open a bank account with Wachovia Bank via the concentration banking program of IEEE and close the current account with US Bank
- Mover:
- Second:
- Y:
  N:
  A:

Moved: To authorize the treasurer to open a bank account with Wachovia Bank via the concentration banking program of IEEE and close the current account with US Bank

Moved: Grow/Takefman

Passes: 15/0/0

10.03	**MI**	**Response to Audit Committee Best Practices memo**	**-**	**Hawkins**	**5**	**04:47 PM**

Motion

Move to respond to the memo received 30 Jan 2007 from the IEEE Audit Committee with reference to financial best practices with the letter AuditCommResp07MarV1.doc as reviewed.

The Chair is authorized to make editorial changes as appropriate.

Mover: John Hawkins
Second: Buzz Rigsbee

Y: N: A:

IEEE 802 LAN/MAN Standards Committee

Mar 16, 2007

Ronald G. Jensen
Past Chair - IEEE Audit Committee
445 Hoes Lane
Piscataway, NJ 08855

Ref: Financial best practices recommendations

Dear Mr. Jensen,

The IEEE 802 LMSC Executive committee meeting at its March 2007 plenary session in Orlando, FL has addressed the requests in your memo of 30 January, 2007. The items are summarized below along with the committee's responses.

1) Acknowledge that LMSC assets are IEEE property
- Audit Committee suggestions: Confirm your understanding that LMSC assets are IEEE property, and that the EC and the LMSC working groups, as "steward" of these assets, acknowledge their responsibility to manage them appropriately.

IEEE 802 Response: The EC acknowledges that assets it manages are the property of IEEE Inc. As duly elected officers of IEEE 802 LMSC we recognize we have a fiduciary duty as the stewards of these assets to manage them appropriately and that we retain the right to obligate these assets for purposes necessary to promote 802 approved objectives.

2) All bank accounts to have at least two volunteer and one IEEE staff signators Staff Director of Financial Service as staff signator on all accounts.
- Audit Committee suggestions: Migrate to IEEE concentration banking (Wachovia) Develop a plan and schedule to complete the migration to concentration banking by the end of 2007.

IEEE 802 Response: Agree, the 802 treasurer will open a concentration banking account by May 31st, 2007 and the existing 802 account will be closed as obligations through that account are satisfied.

3) Submit all supporting financial materials for year-end audits by agreed-upon deadline

- Audit Committee suggestions: LMSC will submit outstanding 2005 data by 31 March 07. LMSC and the Audit Department will work together to determine future due dates for financial reporting.

IEEE 802 Response: LMSC has submitted the outstanding 2005 data (as of Feb 1, 2007), and will work with IEEE Operations Audit to establish and meet future deadlines.

4) Document use of competitive bidding in selection of suppliers, or supply rationale for non-use

- Audit Committee suggestions: All contracts submitted for execution will document the use of competitive bidding in the selection of suppliers, or supply rationale for non-use.

IEEE 802 Response: Agree, 802 complies for all contracted services and uses prudent financial analysis of competitive prices for equipment and supply purchases.

5) 3rd party bonuses must be clearly documented in the contract; otherwise they are prohibited

- Audit Committee suggestions: This best practice will be followed.

IEEE 802 Response: We agree. Third party bonuses paid from IEEE 802 funds, if used, will be documented as such in the appropriate contract
We presume that gratuities for exceptional performance are allowed .

6) Report Conflicts of Interest regarding business matters

- Audit Committee suggestions: The IEEE Policy regarding conflicts of interest will be followed.

IEEE 802 Response: We agree.

Yours sincerely,

Paul Nikolich,
Chairman, IEEE 802 LMSC

John F Hawkins,
Treasurer; IEEE 802 LMSC

cc: Steve Mills, Chair, IEEE-SASB
George Arnold, President, IEEE-SA BOG
Judith Gorman, Managing Director, IEEE-SA

Moved: to respond to the memo received 30 Jan 2007 from the IEEE Audit Committee with reference to financial best practices with the letter AuditCommResp07MarV1.doc as reviewed.

The Chair is authorized to make editorial changes as appropriate.

Moved: Hawkins/Rigsbee

Passes: 15/0/0

10.04	**MI**	**March 2008 Session Location Selection**	**-**	**Rigsbee**	**10**	**04:52 PM**

IEEE 802 LMSC MARCH 2008 PLENARY SESSION OPTIONS

Note: **The Hyatt Regency New Orleans has officially released us from contract because of uncertainty of facilities (rooms and meeting space) for March 2008.**

DATES AVAILABLE:	LOCATION:	VENUE/HOTEL:	RATES:	OTHER COMMENTS:
March 9-14, 2008	Vancouver, Canada	Hyatt Regency Vancouver (500 guest rooms peak nt) Fairmont Hotel Vancouver (400 guest rooms peak nt)	$170CAD S or D/T (approx. $144US* * based on current exchange rate)	HRV - comp Internet Access Link and all infrastructure patches FHV - comp wired Internet Access in guest-rooms Internet Access via Optical Link to HRV net PRO: great hotels, great facilities best rate, good for Asian attendees for obtaining VISAs CON: Spring season weather, WRONG dates WARNING: This week overlaps with IETF mtg !!!
March 16-21, 2008	Chicago, IL.	Hyatt Regency Chicago (downtown location) (550 guest rooms peak nt) need overflow hotel for extra guest rooms	$169US S or D/T	PRO: good meeting space, great downtown location, easy access for attendees CON: mid-range room rate but good for downtown, SERIOUS weather concerns in mid-March, tough Union town (can mean higher prices)
March 16-21, 2008	San Francisco, CA	Hyatt Regency San Francisco Embarcardero (same as July 2007) (650 guest rooms peak nt) need overflow hotel for extra guest rooms	$194US S $204US D/T	Meeting space is not available until 9pm on Saturday, March 15 prior PRO: great location, weather good, great hotel, free guestroom Internet, free drink-tickets for social CON: just there in July 2007, high room rates, higher prices, and later-access to meeting space for set-up than we would like.

DATES AVAILABLE:	LOCATION:	VENUE/HOTEL:	RATES:	OTHER COMMENTS:
March 16-21, 2008	Chicaco, IL	Hyatt Regency Chicago O'Hare (airport location) (865 guest rooms peak nt) need overflow hotel for extra guest rooms	$145US S or D/T	PRO: easy airport access, great meeting space, good room rate newly renovated property in 2007 CON: AIRPORT location, SERIOUS weather conditions may be an issue
March 16-21, 2008 A BEST BET ???	Orlando,FL	Caribe Royale Resort (800 guest rooms peak nt) Buena Vista Resort (overflow) (200 guest rooms peak nt)	$165US S or D/T $145US S or D/T	PRO: great meeting space and large guest room block, good room rate for season CON: meeting in March is high-season, rates are higher, overlaps dates of many spring breaks
March 16-21, 2008 JOKE ???	Dallas, TX	Hyatt Regency - DFW (735 guest rooms peak nt) need overflow hotel for guest rooms @ Grand Hyatt	$229US S or $254US D/T	PRO: good meeting space and guest room block, easy access for travelers CON: AIRPORT location, Terrible Rates (???)

Poll of EC members on desirability of each location:

	Yes	No
HR Chicago (downtown)	9	5
HR O'Hare (airport)	2	11
HR Vancouver	3	11
HR San Francisco	5	7
Caribe Royale	15	1
HR DFW	1	15

10.05 MI Balloting of P&P Revision titled "AUDCOM Revisions" - Sherman 5 05:05 PM

Proposed IEEE 802 LMSC Policy and Procedure Revision Ballot
in response to
AudCom

From: Matthew Sherman, LMSC Vice Chair
To: LMSC Executive Committee **Date:** 3/16/2007

Duration: Till XXX, 2006

Purpose: Address objections from IEEE SA AudCom concerning the current LMSC P&P

Rationale for proposed change:

The current LMSC P&P has been 'Not Accepted' by AudCom, and IEEE SA has requested that we modify our P&P in response to the objections expressed. The specific areas of concern included:

1. A better description of the rights of the participants and due process.
2. A clarification of the responsibilities of the Chair.
   This should closely follow the definition in section 3.4 of the Baseline P&P.
3. The lack of requirement to act in accordance with the IEEE Code of Ethics.
   This requirement for conduct should be added to the P&P.

Another issue identified was:

> "the separation of the EC functions as the Sponsor and the Working Group leadership functions is not yet complete and confusing"

Finally AudCom seemed unsure which LMSC P&P sections corresponded to the material in sections 9.3-9.4 of the Model Sponsor P&P and proxy voting was not addressed.

The revisions to the LMSC P&P included in this document address these concerns and issues.

Editorial instructions are highlighted in Pink.

Proposed Changes:

Changes presented here are against the LMSC P&P Revised effective January 4, 2006

7.1.2 Membership

The officers of the Executive Committee by virtue of their office hold corresponding offices for the LAN MAN Standards Committee (LMSC) and are referred to by that title. Membership of the Executive Committee is composed of the following voting members:

LMSC Chair
The Chair is elected by the EC and confirmed by the Standards Activities Board. Duties include (but are not limited to) overseeing the activities of the LMSC, chairing EC and LMSC Plenary meetings, and representing the LMSC at CS SAB, SA Standard Board, and at other organizations as required.

LMSC Vice Chair(s)
The LMSC Chair appoints a (1st) Vice Chair and may appoint a 2nd Vice Chair. Vice Chairs must be confirmed by the EC. In the case of unavailability or incapacity of the Chair, the 1st Vice Chair shall act in the capacity of the Chair.

LMSC Executive Secretary, Recording Secretary, and Treasurer
These positions are appointed by the LMSC Chair and confirmed by the EC.

Chairs of Active Working Groups

Chairs of the Technical Advisory Groups (TAGs)

In addition, the Executive Committee includes the following non-voting members:

Chairs of Hibernating Working Groups
Appointed WG or TAG Chairs
Acting positions (prior to the close of the plenary session where appointed or elected)

Deleted: *meeting*

All appointed and elected positions become effective at the end of the plenary session where the appointment/election occurs. Prior to the end of that plenary session, such persons filling vacancies are considered 'Acting', and do not vote. Persons who are succeeding someone that currently holds the position do not acquire any EC rights until the close of the plenary session. Membership is retained as in Working Groups (see **Error! Reference source not found. Error! Reference source not found.**). All members of the EC shall be members or affiliates of The IEEE-SA and either the IEEE or the IEEE Computer Society.

The term for all positions of the Executive Committee ends at close of the first plenary session of each even numbered year. Unless otherwise restricted by these P&P or the relevant WG/TAG P&P, individuals may be confirmed for a subsequent term if reappointed or re-elected to the position. Members appointed and affirmed maintain their appointments until the next appointment opportunity unless they resign or are removed for cause.

The 802 Chair will ensure that those EC members who are not Chairs of active Working Groups have specific areas of interest to cover in order to encourage a wider view to be taken than that specifically covered by the Chairs of active Working Groups.

Any person to be confirmed by the EC shall, prior to confirmation by the EC, file with the Recording Secretary a letter of endorsement from their supporting entity (or themselves if self supporting). This letter is to document several key factors relative to their participation on the EC and is to be signed by both the executive committee member and an individual who has management responsibility for the EC member. This letter shall contain at least the following:

a) Statement of qualification based on technical expertise to fulfill the assignment
b) Statement of support for providing necessary resources (e.g., time, travel expenses to meetings), and
c) Recognition that the individual is expected to act in accordance with the conditions stated in subclause **Error! Reference source not found. Error! Reference source not found.** dealing with voting "as both a professional and as an individual expert."

In case an election or appointment is not confirmed by the EC, the person last holding the position will continue to serve until confirmation of an election or appointment are achieved. Should that person be unable or unwilling to serve, succession will proceed to the person who would have succeeded just prior to the election or appointment. If no successor exists, the position may be left vacant, or filled by temporary appointment by the EC Chair. Further responsibilities of LMSC officers are defined in the following subclauses.

7.1.2.1 LMSC Chair

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The LMSC Chair has the following responsibilities:

a) Decide which matters are procedural and technical
b) Decide procedural matters
c) Place technical issues to a vote by WG members
d) Lead the participants according to all of the relevant policies and procedures
e) Entertain motions, but not make motions
f) Delegate necessary functions as needed
g) Set goals and deadlines and adhere to them
h) Prioritize objectives to best serve the group and the goals
i) Seek consensus of the Sponsor if required as a means of resolving issues

The LMSC Chair also shall:

j) Be objective
k) Not bias discussions
l) Ensure that all parties have the opportunity to express their views
m) Be knowledgeable in IEEE standards processes and parliamentary procedures

7.2.1.2 LMSC Recording Secretary

The LMSC Recording Secretary shall:

a) Distribute a draft agenda at least 14 calendar days before meetings.
b) Record and publish minutes of each meeting within 60 calendar days of the end of meeting.

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c) Create and maintain the voting membership roster and submit to the IEEE Standards Department annually
d) Be responsible for the management and distribution of Sponsor documentation
e) Maintain lists of unresolved issues, action items, and assignments

7.2.1.2 LMSC Treasurer

Treasure has the responsibility to assure compliance with SA financial policies and establish guidelines for efficient financial operation of LMSC. The LMSC Treasurer shall

a) Maintain a budget
b) Control all funds into and out of LMSC's bank accounts
c) Follow IEEE policies concerning standards meetings and finances
d) Read the IEEE Finance Operations Manual

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7.2.2.1 WG Chair

The Chair has the following responsibilities:

a) Decide which matters are procedural and technical
b) Decide procedural matters
c) Place technical issues to a vote by WG members
d) Lead the participants according to all of the relevant policies and procedures
e) Entertain motions, but not make motions
f) Delegate necessary functions as needed
g) Set goals and deadlines and adhere to them
h) Prioritize objectives to best serve the group and the goals
i) Seek consensus of the Sponsor if required as a means of resolving issues

The Chair also shall:

j) Be objective
k) Not bias discussions
l) Ensure that all parties have the opportunity to express their views
m) Be knowledgeable in IEEE standards processes and parliamentary procedures

7.2.2.2 WG Vice Chair

The Vice Chair shall carry out the Chair's duties if the Chair is temporarily unable to do so or chooses to recuse him or herself (i.e., to give a technical opinion). If more than one Vice Chair exists, one Vice Chair shall be designated the First Vice Chair and assume the Vice-Chair responsibilities identified here.

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7.2.2.3 WG Secretary

The Secretary shall:

a) Distribute the agenda at least 14 calendar days before meetings.
b) Record and publish minutes of each meeting within 60 calendar days of the end of meeting.

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¶
The Chair of the Working Group decides procedural issues. The Working Group members and the Chair decide technical issues by vote. The Working Group Chair decides what is procedural and what is technical.¶

8.4 Conduct

It is expected that participants in LMSC activities shall behave in a professional manner at all times. Participants shall demonstrate respect and courtesy towards officers and each other, while allowing participants a fair and equal opportunity to contribute, in accordance with the IEEE Code of Ethics.

9.2 Proxy voting

Proxy voting is not permitted within LMSC.

12. Appeals

The LMSC recognizes the right of appeal. Both technical and procedural appeals may be made. Every effort should be made to ensure that impartial handling of complaints regarding any action or inaction within LMSC is performed in an identifiable manner. Appeals are achieved either using processes defined in WG/TAG P&P, or as defined in subclause 7.1.6.

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10.2 External Communication

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Except as detailed in section 10.5, inquiries to the LMSC from outside of LMSC should be directed to the Chair of LMSC, and members should so inform individuals who raise such questions. All replies to inquiries shall be made through the LMSC Chair.

10.3. Public statements for standards

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All public communications from within LMSC shall comply with the policies of the IEEE-SA Standards Board Operations Manual.

10.4. Informal communications

Informal communications shall not imply that they are a formal position of the IEEE, the IEEE-SA, LMSC, or any subgroup of LMSC.

Renumber the current P&P section 14 as section 10.5.

Renumber other P&P sections in accordance with these changes and adjust any cross references as required.

EC Motion

To approve for distribution and executive committee ballot the P&P Revision titled "AudCom" as described in the file named:

- 802.0-AudCom_-_Proposed_LMSC_P&P_Revision_Ballot_070311_r0.pdf

Moved: Matthew Sherman

2nd: Bob Grow

For:

Against:

Abstain:

Moved: To approve for distribution and executive committee ballot the P&P Revision titled “AudCom” as described in the file named:

- **802.0-AudCom_-_Proposed_LMSC_P&P_Revision_Ballot_070311_r0.pdf**

Moved: Sherman/Grow

Passes: 14/0/0

10.06	**MI**	**Balloting of P&P Revision titled "Sponsor Recirculation"**	**-**	**Sherman**	**5**	**05: 07 PM**

Proposed IEEE 802 LMSC Policy and Procedure Revision Ballot
for
Sponsor Recirculation Length

From: Matthew Sherman, LMSC Vice Chair
To: LMSC Executive Committee **Date:** 3/16/2007

Duration: Till XXX, 2006

Purpose: 10 day length of Sponsor Recirculation Ballots is viewed as too short by some EC members

Rationale for proposed change:

10-day default for a recirculation ballot too short
- Default in My Ballot
- Can result in participants only having 5 working days or less if holidays

The revisions to the LMSC P&P included in this document address these concerns and issues.

Editorial instructions are highlighted in Pink.

Proposed Changes:

Changes presented here are against the LMSC P&P Revised effective January 4, 2006

Add the following new clause:

7.5.2 Sponsor ballot duration

Sponsor ballots of LMSC standards, recommended practices and guides shall adhere to the same minimum durations as specified for Working Group letter ballots (see 7.2.4.2.2).

EC Motion

To approve for distribution and executive committee ballot the P&P Revision titled "Sponsor Recirc Length" as described in the file named:

- 802.0-Sponsor_Recirc_Length_-_Proposed_LMSC_P&P_Revision_Ballot_070316_r0.pdf

Moved: Matthew Sherman

2nd: Bob Grow

For:

Against:

Abstain:

Moved: To approve for distribution and executive committee ballot the P&P Revision titled "Sponsor Recirc Length" as described in the file named:

- **802.0-Sponsor_Recirc_Length_-_Proposed_LMSC_P&P_Revision_Ballot_070316_r0.pdf**

Moved: Sherman/Grow

Passes: 14/0/0

10.07	**MI**	**Approval of press release for 802.17c**	**-**	**Takefman**	**5**	**05:08 PM**

This item withdrawn.

10.08	**MI**		**-**			
10.09	**MI**	**Confirmation of Steven Wood as vice chair of 802.17**	**-**	**Takefman**	**5**	**05:09 PM**

802.17 Vice-Chair Confirmation

- Move to confirm the election of Steven Wood as Vice-Chair of 802.17

- M: Takefman
- S: Hawkins

Moved: to confirm the election of Steven Wood as Vice-Chair of 802.17.

Moved: Takefman/Hawkins

Passes: 15/0/0

10.10	**DT**	**Consistent time for 802 TF meeting in plenary session**	**-**	**Grow**	**2**	**05:10 PM**

Bob indicated that there are loads of conflicts in the plenary week. He wonders if other chairs might be more likely to attend the 802 TF meeting if the time was consistent. Tony indicated that it would be better to hold it outside of normal meeting times.

Paul indicated he will hold it consistently Wednesday 1-3pm.

10.11	**DT**	**IEEE-SA process change and compliance issues**	**-**	**Grow**	**5**	**05:12 PM**

Overview of IEEE-SA Process and Patent Policy Changes

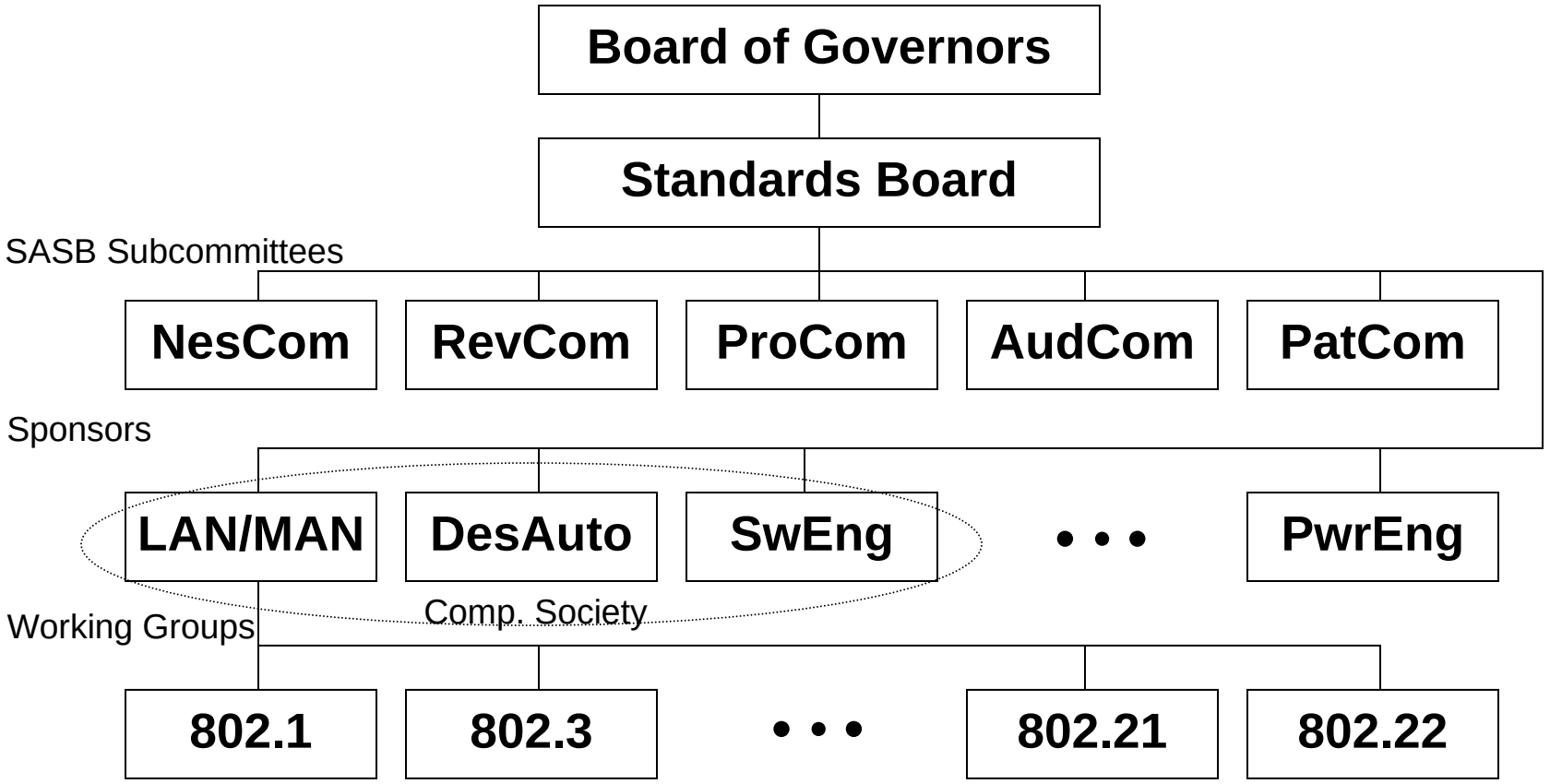
Robert M. Grow
Chair, IEEE 802.3 Working Group
Member IEEE-SA Standards Board
bob.grow@ieee.org

IEEE-SA web site: standards.ieee.org

Major areas of policy refinement

- Affiliation & Dominance
- Code of Ethics
- Process automation (myProject)
- Patent policy

Simplified IEEE-SA Hierarchy



Affiliation policy

- Requirement to declare affiliation at all standards development meetings
  - Affiliation not necessarily same as employer
  - Declaration requirement may be familiar to some 802 WGs, though WG declaration process may evolve
  - Failure to declare
    - No attendance credit
    - Possible loss of voting member privileges
  - Greater penalties possible for false or misleading declaration
- Affiliation declaration will be added to Sponsor ballot
- January (and possibly this week's) IEEE 802 experience is basis for a Frequently Asked Questions document to be distributed soon

IEEE Code of Ethics

- IEEE-SA participation being consistent with IEEE Code of Ethics existed previously
  - IEEE Membership is encouraged but not required for standards participation
  - Ethics & Member Conduct Committee only has authority over IEEE members
- Standards Conduct Committee approved
  - Scope limited to IEEE-SA participation
  - Consider charges of CoE violation
  - Determine penalties to participants and their affiliation
  - Procedures reference Ethics & Member Conduct Committee procedures

myProject program

- New myProject features are rolling out to support these IEEE-SA procedural changes
- New features to be introduced will support:
  - Integration with attendance software
  - Code of Ethics acknowledgement
  - Copyright acknowledgement
  - Declaration of affiliation for IEEE-SA activities
  - Centralized IEEE-SA participant list
  - IEEE-SA privacy policy
- Eventually, all IEEE-SA participants (not just Sponsor Ballot participants) will be expected to have an IEEE web account

New Patent Policy

- A significant update of IEEE-SA's patent policy
- Draft modifications developed by PatCom with extensive industry participation over more than a year
  - Major high-tech corporate counsel
  - Volunteers, staff and IEEE counsel
  - Public comment and response review
  - Review/revisions of patent policies by other SDOs
- Standards Board and Board of Governors approved
  - Becomes effective 30 April 2007
  - Educational support material is pending
- Governing documents are the authoritative reference
  - Policy – IEEE-SA Standards Board Bylaws
  - Implementation – IEEE-SA Standards Board Operations Manual

Patent Policy – Underlying principles

- Balance needs of intellectual property (IP) holders and implementers of standards
- IP costs are a valid consideration in standards development technology selection
- Balance the benefits of more information with recognition that working groups are technical activities
  - There are things that participants (mostly engineers) are not qualified to discuss
  - Standards development meetings aren't venues for legal discussions between lawyers
  - Avoid anti-trust (competition law) violations

New policy Highlights

- Based on assurance, not specific disclosure
- Better transparency
  - Improve competitive analysis of technology alternatives
  - Limited discussion of IP costs will be allowed in standards development meetings
  - LOAs may be distributed (not discussed) at meetings
- Improved Letter of Assurance
  - Use of LOA form is mandatory
  - Publication of terms allowed with LOA
  - Allow flexibility in licensing terms
- Improved confidence in LOA applicability and durability
- No duty to search

More patent policy information

- Patent Policy tutorial tonight
  - More details and features will be presented
  - All LMSC and WG leadership are requested to attend
  - Any IEEE 802 participant is welcome to attend
- Educational and support material to be available before policy becomes active
  - New patent slides for use in meetings
  - Standards Companion updates
  - Refined tutorial slide set
  - Frequently asked questions document
  - Anti-trust (competition law) guide

10.12	**MI**	**Approval of press release for 802.11n**	**-**	**Kerry**	**5**	**05:17 PM**

This item has been withdrawn.

10.13	**MI**	**Confirmation of parliamentarian appointment**	**-**	**Nikolich**	**2**	**05:18 PM**

Parliamentarian Duties

- Provide parliamentary advice to the chair or any other member requesting it
- Call attention to errors in procedure affecting members rights or otherwise doing harm
- Exception: is allowed to participate in debate and to vote

Motion

- To affirm the appointment by the 802 chair of Bob O’Hara as the parliamentarian of LMSC

- Moved: Kerry
- Seconded: Grow

Moved: To affirm the appointment by the 802 chair of Bob O'Hara as the parliamentarian of LMSC

Moved: Kerry/Grow

A view was expressed that we are creating a new position and this should be in the P&P.

Call the question: Hawkins/Rigsbee
12/0/2

On the main motion:

Passes: 8/5/1

10.14			-			
10.15			-			
11.00		**Information Items**	-			
11.01	**II**	**Open office hours feedback**	-	**Nikolich**	**5**	**05:26 PM**

Open Office Hours Minutes, 14MAR2007. SOM 7:50pm, EOM 9:10pm

Panel Members: Paul Nikolich, Karen Kenney, Jim Carlo, Steve Mills

Attendance, approximately 16 people at start of meeting, 6 at end of meeting

Format: panel at front of room on dias, attendees at tables

Comments from the attendees:

Not enough non-NA meetings
- meeting fees are not a substanial fraction of cost to attend--should not be a major barrier to non-NA meetings
- Israel meeting cost was reasonable (~$300),
- David James--feels the meeting fees are too high, lack of international chairs, need an affirmative action program
- Adrian recommends against London/Paddington

CONCLUSION: meet internationally once per year, Geneva may be a good starting location

IPR Tutorial comments
- questions were poorly addressed, e.g. disclosure policy
- much discussion regarding the assignment and affiliation requirements

CONCLUSION: send your questions and concerns to the patcom adminstrator

802.11n ballot
- procedural ballot 15day is too long, Reason for his concern--the editors were forced to work long hours to meet the 15day plus 30 day letter ballot requirement in the dot11 project

CONCLUSION: WG chair could be authorized by WG at closing meeting to approve editorial work of merging comments into draft is done properly, obviating the need for the 15 day procedural letter ballot. Institute an LMSC policy change reducing letter ballot time to 10 days from 15 days.

Press articles in Japanese press

- photographs circulated of an 802 meeting--this is expressly forbidden, but what can be done?

CONCLUSION: continue efforts to ensure positive press balances negative press

Meeting format

- panel/audience format was not conducive to informal conversation

CONCLUSION: on value of Open Office Hour feedback format

- these informal sessions are not working - as only a few stallwarts attend.
- I will discontinue Open Office Hours

Paul will terminate the open office hours at future meetings.

11.02 II Network Services Report - Alfvin 10 05:29 PM

Rick reported that this has been a very good venue for networking, taxing the facilities beyond anything the hotel had seen before.

11.03 II 802.20 attendance record keeping - Greenspan 10 05:33 PM

Arnie read the following statement:
It will probably come as no surprise to the members of the EC that there are abuses taking place in respect to attendance reporting. In large part this abuse of the 802 rules is a self inflicted wound. The attendance system that we have in place is designed to preclude the double reporting of attendance that we are encountering. However in order to the capability that we have in our current attendance system all working groups must use the system.

We carefully observe all rules and procedures that have been set in place within 802. When all working groups fail to use the same attendance system we hamper our ability to enforce our attendance rules. It is possible to detect and address attendance abuses without getting us all on the same attendance reporting system. However doing so is more time consuming, inefficient and difficult than precluding these abuses by using the same attendance system.

Therefore I move that:
Moved: The Chair direct all Working Group Chairs to use the automated Azgard system starting with the Montreal interim Meeting.

Moved: Greenspan/Takefman

Several chairs expressed disagreement with this motion, indicating that there is already a move to a new attendance system planned for later in the year.

Roger indicates that he feels there also needs to be a change to the P&P to address “double attendance” by members.

Mat asked if it would be possible to use the software already used by 802.11.

Fails: 2/11/2

11.04	**II**	**Training Plan**	**-**	**Thaler**	**10**	**05:44 PM**

Not many are signing up for online training. We will reintroduce the training in the meetings. We will run the IEEE Standards Process training in July, the 802 process in March. There is a question of how to provide incentives to the 802 and WG leadership to take the training. As a reward for taking the training, one idea is to provide a fleece or t-shirt to persons that complete the training. Other suggestions are welcome.

Steve likes the idea on training at the meeting, mostly on "how things are run around here", including general parliamentary procedure. Roger indicated that this material is not in the current course.

Buzz suggested that advertising of the training should be done more often.

Straw poll on gift for completing training
Fleece to leadership: Yes 3, No: 6
T-shirt to first 100 completions: yes: 2, No: 5

11.05	**II**	**802.1 Liaison to ITU-T SG4 and SG15**	**-**	**Jeffree**	**2**	**05:55 PM**

Tony reported that 802.1 is responding to questions from other working groups. They have sent two responses this week.

11.06	**II**	**802.1 Liaison to TIA TR-41**	**-**	**Jeffree**	**2**	**05:55 PM**

Tony included this item in item 11.05.

11.07	**II**	**Equipment outsourcing**	**-**	**Hawkins**	**3**	**05:56 PM**

Asset Outsourcing

- Projectors, network gear
- Costs we'd avoid:
  - Acquisition
  - Storage
  - Shipping
  - Inventory/accounting
  - Insurance
  - Replacement (3-5yr)
  - Maintenance
- Costs we'd incur:
  - Per meeting lease
  - Bond?

Asset Outsourcing Plan

- Gather more details (Mar/Apr)
- Request proposals (Apr/May)
- Circulate (Jun)
- Consider adopting (Jul)
- Execute (Jul-Dec)

Some concern was expressed about needing to replace equipment, should we have a “break up” with the contractor to whom we transfer our current assets.

11.08	**II**		-		
11.09	**II**		-		
11.10			-		
11.11			-		
11.12			-		
11.13			-		
11.14			-		
11.15			-		
11.16			-		
11.17			-		
11.18			-		
11.19			-		
11.20			-		
11.21			-		
	ADJOURN SEC MEETING		-	**Nikolich**	**06:00 PM**
	ME - Motion, External	**MI - Motion, Internal**			
	DT- Discussion Topic	**II - Information Item**			
	Special Orders				

The meeting was adjourned at 6:00pm.

Respectfully submitted,

Bob O'Hara
Recording Secretary, 802 LMSC