

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

Thursday, July 13, 2000 - 7:00 p.m.

Hyatt Regency, La Jolla, CA

1. MEETING CALLED TO ORDER

5 Jim Carlo called the meeting to order at 7:00 pm. Members in attendance were:

	Jim Carlo	- Chair, IEEE 802 LAN / MAN Standards Committee
	Paul Nikolich	- Vice Chair, IEEE 802 LAN / MAN Standards Committee
	Buzz Rigsbee	- Executive Secretary, IEEE 802 LAN / MAN Standards Committee
10	Howard Frazier	- Recording Secretary, IEEE 802 LAN / MAN Standards Committee
	Robert Grow	- Treasurer, IEEE 802 LAN/MAN Standards Committee
	Tony Jeffree	- Chair, IEEE 802.1 - HILI Working Group
	Geoff Thompson	- Chair, IEEE 802.3 - CSMA/CD Working Group
	Bob Love	- Chair, IEEE 802.5 - Token Ring Working Group
15	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 RPRSG – Resilient Packet Ring Study Group
	Vic Hayes	- Regulatory Ombudsman
20	Pat Thaler	- Chair, IEEE 802.12 – DPAM Working Group (in hibernation)
	Al Petrick	- Vice Chair, IEEE 802.11 Wireless LANs Working Group (substituting for Stuart Kerry)

The meeting was attended by approximately 15 IEEE 802 Working Group members, and several guests including Jerry Walker and Denise Pribula.

25 2. APPROVE OR MODIFY AGENDA

1.00	MEETING CALLED TO ORDER	- Carlo	1	07:00 PM
2.00	APPROVE OR MODIFY AGENDA	- Carlo	4	07:01 PM
3.00	TREASURER'S REPORT	- Grow	15	07:05 PM
	Category (* = consent agenda)			
4.00	ME 802 Standards Distribution	- Carlo	30	07:20 PM
4.01	ME* 802.1u (.1Q Maintenance) to LMSC Ballot	- Jeffree	5	07:50 PM
4.02	ME 802.1t (.1D Maintenance) Conditional App to LMSC Ballot	- Jeffree	5	07:55 PM
4.03	ME 802.1v Protocol Aware VLANs Conditional App to LMSC Ballot	- Jeffree	5	08:00 PM
4.04	ME* New PAR - 802.3ag (802.3 Maintenance)	- Thompson	5	08:05 PM
4.05	ME Liaison Letter to SC25 WG3	- Thompson	5	08:10 PM
4.06	ME 1802.3rev to LMSC Ballot	- Thompson	5	08:15 PM
4.07	ME New PAR - 802.11b Higher Rate	- Kerry	5	08:20 PM
4.08	ME 802.11d to LMSC Ballot	- Kerry	5	08:25 PM
4.09	ME 802.11 Liaison Letter to SC6 8802-11 PDAM2	- Kerry	5	08:30 PM
4.10	ME 802.16 ETSI Liaison Letters	- Marks	10	08:35 PM
4.11	ME Letter to IEEE-ISTO	- Carlo	30	08:45 PM
4.12	ME	-	0	09:15 PM
4.13	ME	-	0	09:15 PM
4.14	MI Affirm 802.15 SG on Bluetooth Radio2	- Heile	10	09:15 PM
4.15	MI Affirm 802.15 SG on Low Rate WPAN	- Heile	5	09:25 PM
4.16	MI Affirm renewal of 802.16 WirelessHuman SG	- Marks	5	09:30 PM
4.17	MI Affirm renewal of Resilient Packet Ring SG	- Takefman	5	09:35 PM
4.18	Break	-	15	09:40 PM

4.19	MI	Kill the Friday Plenary Rules Change	-	Nikolich	10	09:55 PM
4.20	MI	LMSC Scope Statement	-	Nikolich	5	10:05 PM
4.21	MI	Procedure for Communication with External Organizations	-	Hayes	15	10:10 PM
4.22	MI	Just Say No to Albuquerque	-	Frazier	5	10:25 PM
4.23	MI	Future Meeting Venues	-	Rigsbee	10	10:30 PM
4.24	MI	Equipment Purchase (laptop)	-	Rigsbee	5	10:40 PM
4.25	MI		-		0	10:45 PM
4.26	MI		-		0	10:45 PM
4.27	DT	802 Attendance Projections	-	Nikolich	5	10:45 PM
4.28	DT	Networking 802 meetings	-	Nikolich	5	10:50 PM
4.29	DT	Audit Status	-	Grow	10	10:55 PM
4.30	DT	Support for Interim Meetings	-	Rigsbee	15	11:05 PM
4.31	DT		-		0	11:20 PM
4.32	DT		-		0	11:20 PM
4.33	II	Position Paper to FCC From 802.11 and 802.15	-	Hayes	5	11:20 PM
4.34	II	802.11 Liaison Letter to ETSI-BRAN	-	Hayes	5	11:25 PM
4.35	II		-		0	11:30 PM
4.36	II		-		0	11:30 PM

ME – Motion, External MI - Motion, Internal
DT- Discussion Topic II - Information Item

Carlo notes that items 4.01 and 4.04 are on the consent agenda, to be approved when the agenda is approved.

Jeffrey/Heile move to approve agenda

9/0/0 approved at 7:06

5 **3.00—Treasurer’s Report- --Grow**

(see file thutreasrep.pdf)

851 bodies paid registration. A new attendance record.

10 Refreshments and social expenses higher than usual. AV, electrical and phone very high.

Thompson wants to hear breakout of phone and electrical expenses. Assumes that electrical is due to use of lots of powerstrips.

Grow says that the only exceptional phone charge was the installation of an ISDN line for \$750, which was requested for 802.11 and 802.15. Note that this expense exceeds what a WG chair is authorized to spend without SEC approval. ISDN line used to access Internet.

15 Love notes that such expenses should be approved by the SEC, and used for the benefit of all of 802.

Carlo notes that special expenses must be approved by the SEC ahead of time.

Grow shows an alternative view of the budget which includes an allocation of \$62,900 towards making standards freely available. This allocation reflects an assumption of collecting \$100 per head for IPF, but contributing on \$22,000 to IPF and the remainder (\$62,900) towards making standards freely available.

20 **ACTION ITEM:** Carlo assigns an action to Grow to put a detail regarding the refreshments on the web for the SEC to consider. If Grow believes that fee cannot be set correctly, one month before the next plenary meeting, he should raise the issue on the SEC reflector.

Grow presents budget estimate for future meetings, assuming higher expenses, including assumption of allocating \$70,000 to free documents.

Grow suggests that we will need to reconsider the meeting fees for the March 2001 meeting in Hilton Head, which normally we would do at this meeting. Can we do this via email? Frazier expresses concern about deciding the fees via email, as that would exclude the broad membership from the discussion.

5 Discussion of how to achieve relief from the normal 8 month advance notice requirement for the meeting fees. Frazier suggests that the fee for the next meeting can be set at the opening SEC meeting, and announced at the opening plenary.

Thompson says he could support Frazier's proposal, if the information was posted on the web no later than the Monday following the plenary meeting. Frazier says he can commit to the following Friday, but not the following Monday.

Love suggests that the "free standards" contributions can be adjusted meeting by meeting towards making a yearly target.

IEEE Project 802
Estimated Statement of Operations
July 2000 Meeting

open	9 July Operating Reserve	46,700	
July 2000 Meeting Income:		Actual	Budget
	294 Registrations@ \$300	88,200	
	557 Registrations@ \$250	139,250	
	Registrations@ \$100	0	
	Subtotal	227,450	125,875
	Deadbeat Registrations	0	0
	Bank Interest	200	200
	Other	850	450
plus	TOTAL Income	228,500	126,525
July 2000 Meeting Expenses:		Estimate	Budget
	Audio Visual Rentals	8,600	5,000
	Bank Charges	25	25
	Copying	8,500	9,750 *
	Credit Card Discounts	6,619	4,641 *
	International Program Fee	22,200	22,200 *
	IEEE 802 Free Standards		
	Meeting Administration	48,200	42,150 *
	Phone & Electrical	3,000	800
	Refreshments	56,000	23,400
	Shipping	3,500	3,000
	Social	42,000	15,600
	Supplies		22
	Other	1,000	
minus	TOTAL Meeting Expense	199,644	126,588
minus	Equipment Expense	8,000	5,000
equals	Jul 2000 Operating Reserve	67,556	
	Net Change in Operating Reserve	20,856	(63)

* Actual charges are based on registration, budget is based on registration forecast.

IEEE Project 802
Estimated Statement of Operations
July 2000 Meeting

open	9 July Operating Reserve	46,700	
July 2000 Meeting Income:		Actual	Budget
	294 Registrations@ \$300	88,200	
	557 Registrations@ \$250	139,250	
	Registrations@ \$100	0	
	Subtotal	227,450	125,875
	Deadbeat Registrations	0	0
	Bank Interest	200	200
	Other	850	450
plus	TOTAL Income	228,500	126,525
July 2000 Meeting Expenses:		Estimate	Budget
	Audio Visual Rentals	8,600	5,000
	Bank Charges	25	25
	Copying	8,500	9,750 *
	Credit Card Discounts	6,619	4,641 *
	International Program Fee	22,200	22,200 *
	IEEE 802 Free Standards	62,900	
	Meeting Administration	48,200	42,150 *
	Phone & Electrical	3,000	800
	Refreshments	56,000	23,400
	Shipping	3,500	3,000
	Social	42,000	15,600
	Supplies		22
	Other	1,000	
minus	TOTAL Meeting Expense	262,544	126,588
minus	Equipment Expense	8,000	5,000
equals	Jul 2000 Operating Reserve	4,656	
	Net Change in Operating Reserve	(42,044)	(63)

* Actual charges are based on registration, budget is based on registration forecast.

	1999			2000			2001		
	Austin <i>Actual</i> March	Montreal <i>Actual</i> July	Kauai <i>Actual</i> Nov	Albq. <i>Actual</i> March	LaJolla <i>Estimate</i> July	Tampa <i>Budget</i> Nov	Hilton Head <i>Budget</i> March	Portland <i>Budget</i> July	Austin <i>Budget</i> Nov
Meeting Income:									
Registrations	415	469	474	598	851	700	600	500	400
Preregistration fee	275	250	250	250	250	250	250	250	250
On-site registration fee	300	300	300	300	300	300	300	300	300
Average Fee	286	266	266	270	267	260	255	255	255
Subtotal	118,800	124,650	126,150	161,700	227,450	182,000	153,000	127,500	102,000
Bank Interest	263	202	213	200	200	200	150	150	150
Other			475	450	850	400	400	375	375
TOTAL Income	119,063	124,852	126,838	162,350	228,500	182,600	153,550	128,025	102,525
Meeting Expenses:	March	July	Nov	March	July	Nov	March	July	Nov
Audio Visual Rentals	4,208	5,911	6,863	4,577	8,600	5,000	6,000	5,000	5,000
Bank Charges	1	133	1	0	25	25	30	30	30
Copying	4,819	2,384	4,818	6,721	8,500	8,400	7,200	6,000	4,800
Credit Card Discounts	3,383	3,245	3,364	4,145	6,619	5,096	4,284	3,570	2,856
IPF/Escrow	37,400	42,000	22,200	22,200	85,100	70,000	60,000	50,000	40,000
Meeting Planners	36,302	32,999	36,547	39,397	48,200	44,300	40,200	35,900	31,600
Phone & Electrical	822	618	986	556	3,000	1,000	1,000	1,000	1,000
Refreshments	15,814	9,988	25,626	22,610	56,000	23,100	19,200	16,000	12,800
Shipping	2,248	1,855	4,025	1,631	3,500	3,000	4,000	3,000	3,500
Social	9,596	7,125	23,411	18,426	42,000	16,100	12,000	10,000	8,000
Supplies	0	0	5	22	0	0	0	0	0
Other	1,100	70	2,806	223	1,000	1,500	2,000		1,500
Meeting Equipment	4,924	20,150	22,482	5,796	5,000	5,000	5,000	5,000	5,000
TOTAL Meeting Expense	120,617	126,479	153,134	126,305	267,544	182,521	160,914	135,500	116,086
NET to Operating Reserve	(1,554)	(1,627)	(26,296)	36,045	(39,044)	79	(7,364)	(7,475)	(13,561)
Opening Reserve	49,480	47,963	66,296	39,293	75,338	36,294	36,373	29,009	21,534
Projected Closing Reserve	47,926	46,336	40,000	75,338	36,294	36,373	29,009	21,534	7,973
Projected Closing Cash	36,726	35,136	28,800	64,138	25,094	25,173	17,809	10,334	(3,227)

4.00-802 Standards Distribution--Carlo

Carlo introduces Jerry Walker, who reviews the "IEEE 802 Standards for Free" proposal.

5 (see file walker2.pdf)

Thompson expresses the concern that the prohibition "no commercial use" is too restrictive. The wording needs to be softened to recognize that most users of the standard will be applying it to commercial endeavors.

10 Jeffree expresses concern that this funding model will be difficult to start up and sustain. Other funding models, for instance using funds obtained from sale of OUIs, would produce a sustainable funding stream.

Walker states that the concept of deriving funding from sale of OUIs is interesting and worth pursuing.

15 Carlo presents the sponsorship levels and benefits and says they are still subject to review and refinement.

Carlo entertains motion made by Frazier/Nikolich

Jeffree proposes to add a line encouraging the IEEE-SA to investigate other funding options.

20

Thompson reflects concerns of his working group about being subjected to mass solicitations.

Marks is concerned that the motion is not in accordance with our rules, and that we need a rules change in order to enact this motion, since our rules don't allow us to spend money to distribute standards freely.

25

Nikolich reads the rules regarding use of LMSC funds and says that broadly interpreted, this expenditure is allowed within the rules.

30 Grow expresses concern that "spamming" the proposal package out to the membership of 802 is not a good idea, as the 802 members may not know who to contact.

Frazier expresses opinion that the proposal "spamming" scheme is a fine idea, and that he knows exactly who to talk to in his company to get funding. He states that he has already obtained a commitment to participate in this program from his employer.

35 Marks agrees that the proposal "spamming" scheme is a fine idea.

Thompson says that it is not so easy to find the right person in a large, established company.

Hal Keen states that he would prefer to receive an email package.

40

Alan Chambers says that peer pressure will help get sponsors on board.

Marks asks about availability of drafts?

45 Carlo says that this program does not apply to drafts.

Thaler says that drafts could be available on a less restrictive basis.

Ross asks who the standards are being made freely available to?

50 Answer: Every man, woman, child, and extraterrestrial.

Carlo asks if email should be distributed instead of paper package?

Discussion turns to money.

55

Frazier expresses concern about committing to \$100/head since this could have a negative impact on our budget, leading to an increase in meeting fees. Would prefer committing to a flat figure (such as \$100K) for one year.

Grow says his budget would be happy with either \$75/head per meeting, or a flat figure of \$100k.

Based on our estimated attendance a \$75/head per meeting tax would yield \$130K.

SEC Motion:

- 5 **IEEE 802 endorses program “in principle” as described**
- **IEEE 802 encourages investigation of other funding options**
IEEE 802 provide IEEE-SA seed funding as follows
- **\$75/person seed for next three meetings starting in July 2000**
- **Money paid to escrow account and refunded (except for up to \$12.5K startup costs)**
10 **if program does not achieve funding goals**
- **IEEE 802 funding reviewed based on contributions**
IEEE 802 support the solicitation to 802 attendees
- **Providing email for solicitation**
- **IEEE 802 SEC support through calls and solicitations**

15

Frazier/Nikolich

Al Petrick, Vice Chair of 802.11, sits in for Stuart Kerry, who has taken ill. Al cannot vote.

20

9/0/1 Approved at 8:20 pm

IEEE 802 Standards For Free

Proposal

Jim Carlo/Jerry Walker

IEEE 802 Standards For Free

Principals of Program

- IEEE 802 membership and IEEE-SA would like to see individual IEEE 802 standards available world-wide without encumbrances
- To do so requires costs to be offset by other income sources
- IEEE 802 and industry world-wide benefiting should support
- IEEE 802 Standards For Free means:
 - Downloadable from IEEE site(s) without charge
 - Distribution of electronic/printed copies within a corporation
 - No resale of standards or commercial use of IEEE copyrighted material
 - No derivative works of standards

IEEE 802 Standards For Free Program Stages

- Planning (November99 - July00)
 - IEEE 802 commitment (Motion at end of Presentation)
 - IEEE SA commitment
- Initiation of Funding Drive (August00)
 - Mailing to membership and corporations
- Program Initiation (January01)
 - IEEE 802 Standards for Free Startup
 - March01 IEEE 802 / Standards Board Meeting Celebration
- Program Evaluation (July01)
 - Funding continuation program

IEEE 802 Standards For Free Donation Levels

- Initiator Sponsor (\$100K, Avail until March01)
 - Initiator Supporter (\$50K, Avail until March01)
 - Sponsor (\$25K, Yearly)
 - Supporter (\$10K, Yearly)
 - Contributor (\$5K - \$1K, Yearly)
-
- IEEE 802 - \$100/per person/meeting (Beginning July00) and ending when program funding stable.

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LAN/MAN Standards List

Below is the list of 802 standards number. Note: Only LAN/MAN Plus subscribers will be able to access unapproved drafts.

[Terms of Use](#)

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LAN/MAN (802) Approved Standards

Overview & Architecture

[802-1990](#) [Overview and Architecture](#)

LAN/MAN Bridging & Management (802.1)

[802.1D, 1998 Edition/ISO/IEC 15802-3:1998](#) [MAC Bridges](#)

[802.1F-1993](#) [Common Definitions and Procedures for IEEE 802 Management Information](#)

[IEEE 11802-5:1997 \(IEEE 802.1H\)](#) [Technical Report and Guidelines--Part 5: Media Access Control \(MAC\) Bridging of Ethernet V2.0 in Local Area Networks](#)

[802.1-1995](#) [Managed Objects for MAC Bridges](#)

[15802-2-1995](#) [LAN/MAN Management](#)

[15802-4-1994](#) [System Load Protocol](#)

[ISO/IEC 15802-5:1998 \(IEEE 802.1G, 1998 Edition\)](#) [Remote Media Access Control \(MAC\) bridging](#)

Our appreciation to the following 802 standards sponsors.



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Graphic w/ live links

Live Links

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Mock-Up: Standards Sponsorship Site Layout

IEEE 802 Standards For Free Contingency

- Initiation
 - Program will initiate upon availability of \$300K escrow account and good outlook for future funding
- Fall-back
 - Delay program to allow escrow to accumulate
 - Re-canvass membership
 - Other alternatives

SEC Motion 14July2000

- Moved: Howard Frazier Seconded: Paul Nikolich
- Subject: **IEEE 802 Standards For Free**
- IEEE 802 endorse program “in principle ” as described
 - IEEE 802 encourages investigation of other funding options
- IEEE 802 provide IEEE-SA seed funding as follows
 - \$75/person seed for next three meetings starting in July 2000
 - Money paid to escrow account and refunded (except for up to \$12.5K cost) if program does not achieve funding goals.
 - IEEE 802 funding reviewed based on contributions
- IEEE 802 support the solicitation to 802 attendees
 - Provide email for solicitation
 - IEEE 802 SEC support through calls and solicitations
- Approve:____ Do Not Approve:____ Abstain:____



Back-Up Material

Initiator Sponsor (\$100K)

Until Mar01

- The Initiator Sponsors will be recognized with a handsome **platinum** level graphic IEEE 802 logo that can be displayed in the corporate headquarters or used in marketing materials. These contributors will also be given a ten-year Enterprise online subscription to all IEEE standards and drafts. In addition, Initiator Sponsors will be permitted to establish a large corporate icon link from the IEEE 802 individual standards delivery site to their company or products or services. Initiator Sponsors will also be given most favorable terms for licensing IEEE 802 intellectual property.

— The value of the Enterprise All IEEE subscription is \$40,000 annually.

Initiator Supporter (\$50K) Until Mar01

- The Initiator Supporters will be recognized with a handsome **gold** level graphic IEEE 802 logo that can be displayed in the corporate headquarters or used in marketing materials. These contributors would also be given a five-year Enterprise online subscription to all IEEE Information Technology standards and drafts. In addition, Initiator Supporters will be permitted to establish a small corporate icon link from the IEEE 802 individual standards delivery site to their company or products or services. Initiator Supporters will be given favorable terms for licensing IEEE 802 intellectual property.
 - The value of the Enterprise All IT subscription is \$25,000 annually.
- Initiator Supporters can move up to the **platinum** level and the associated privileges by making subsequent contributions of \$50K for the next two years (2001 and 2002). However, Initiator Supporters will not be recognized as “Initiator Sponsor”. The “Initiator Sponsor” designation can only be achieved at the beginning of the program.

Sponsor (\$25K yearly)

- Sponsoring companies or individuals will be recognized with a handsome **silver** level graphic element with the IEEE 802 logo that can be displayed in the corporate headquarters or used in marketing materials. These contributors would also be given an annual twenty-user online subscription to all IEEE Information Technology standards and drafts. In addition, sponsoring companies will be permitted to establish a name/text link from the IEEE 802 individual standards delivery site to their company or products and services.
 - The value of the twenty-user All IT subscription is \$10,625 annually.
- Sponsors can move up to the **gold** level and the associated privileges by making subsequent contributions of \$25K for the next two years (2001 and 2002). However, Sponsors will not be recognized as “Initiator Supporter”. The “Initiator Supporter” designation can only be achieved at the beginning of the program.

Supporter (\$10K yearly)

- Supporting companies or individuals will be recognized with a handsome **bronze** level graphic element with the IEEE 802 logo that can be displayed in the corporate headquarters or used in marketing materials. These contributors would also be given an annual ten-user online subscription to all IEEE Information Technology standards and drafts. Supporters will also receive a text listing on the IEEE 802 individual standards delivery site.
 - The value of the ten-user All IT subscription is \$7,500 annually.
- Supporters can move up to the **silver** level and the associated privileges by making subsequent contributions of \$10K for the next two years (2001 and 2002). Supporters that move up to the silver level will be recognized as Sponsors.

Contributors (\$5K to \$1K yearly)

- Contributing companies or individuals will be recognized with a text listing on the IEEE 802 individual standards delivery site.
- Contributors who make three successive yearly contributions of \$5K or more may move up to the **bronze** Supporter level with the associated privileges and will be recognized as Supporters.

4.01-ME*-802.1u (.1Q Maintenance) to LMSC Ballot-Jeffree

Approved as part of the consent agenda.

5 **4.02-ME-802.1t (.1D Maintenance) Conditional App to LMSC Ballot--Jeffree**

(see file dot1motions.pdf)

Carlo asks what kind of PAR this was, Corrigenda or Supplement?

10 Jeffree answers supplement.

Jeffree/Frazier

9/0/1 Approved at 8:25

15

SEC Motion

- SEC conditionally approves forwarding P802.1t to LMSC (Sponsor) Ballot pending successful completion of recirculation ballot.
- The 802.1 WG plenary voted 13-0-0 in favour of this action.
- The ballot closed on 28th June 2000. The results at close of ballot were:
 - Approve: 25, Disapprove: 1, Abstain: 0
- The results after ballot resolution were:
 - Approve: 26, Disapprove: 0, Abstain: 0

- Moved: Jeffree
- Second: Frazier
- For:
- Against:
- Abstain:

4.03-ME-802.1v Protocol Aware VLANs Conditional App to LMSC Ballot- --Jeffree

(see file dot1motions.pdf)

5 **Jeffree/Frazier**

9/0/1 Approved at 8:26

SEC Motion

- SEC conditionally approves forwarding P802.1v to LMSC (Sponsor) Ballot pending successful completion of recirculation ballot.
- The 802.1 WG plenary voted 13-0-0 in favour of this action.
- The ballot closed on 5th June 2000. The results at close of ballot were:
 - Approve: 18, Disapprove: 1, Abstain: 2
- The results after ballot resolution were:
 - Approve: 19, Disapprove: 0, Abstain: 0

- Moved: Jeffree
- Second: Frazier
- For:
- Against:
- Abstain:

4.04-ME*-New PAR - 802.3ag (802.3 Maintenance)- --Thompson

Approved as part of the consent agenda

5 **4.05-ME-Liaison Letter to SC25 WG3- --Thompson**

Thompson presents draft of letter.

Nikolich takes the gavel as Carlo excuses himself for a moment.

10 The WG vote was 50/5/62. Large abstention rate due to presence of optics heads in 802.3.

(see file liaisonSC25LCTL_ILD.pdf)

15 **Motion to approve liaison letter to SC25 WG3**

Thompson/Grow

8/0/1 Approved at 8:28

20

Draft Liaison Statement from IEEE 802.3 to ISO/IEC SC25/WG3

Subject: LCTL & ILD Specifications

Date: July 13, 2000

IEEE 802.3 wishes to offer guidance on the specification of LCTL (attenuation unbalance, far end) and ILD (insertion loss deviation):

1. LCTL is an important parameter in determining the electromagnetic performance of balanced cabling and should therefore be specified, if practical.
2. The noise contribution associated with ILD has already been taken into account by FDDI TP-PMD, which referenced by the specification for 100BASE-TX CSMA/CD. We recommend that the approach adopted by TP-PMD be considered for the specification of ILD noise in future cabling standards.

Other topics

IEEE 802.3 is formally considering the adoption of the attached as the link specification for 100BASE-TX. This would replace the current link specification that is contained within the TP-PMD standard. The specification, which is in initial ballot between now and our November meeting, is attached for your information and comment.

Your input on our questions on DTE Power was received with appreciation and has been factored into our decisions on achievable power levels. Thank you very much.

We will next meet again during the 2nd week of November in Tampa Florida and the 2nd week of March in Hilton Head, South Carolina. We also have an interim meeting of our 10 GbE and DTE Task Forces scheduled for the Boston area in September.

Motion: Flatman/DiMinico

Submit the above to the Exec as a Liaison letter to SC25/WG3

Y: 50 N: 5 Ab 62 PASS

Exec Vote: Thompson/Grow: Y N Ab

4.06-ME-1802.3rev to LMSC Ballot- --Thompson

Thompson presents results of 1802.3rev WG ballot, 100% approval after resolution of comments.

5 Thompson clarifies that no technical change was made to the document.

(see file 1802Dot3Rev.pdf)

Thompson/Grow

10

8/0/1 Approved at 8:32.

P1802.3Rev

Working Group Ballot Results

- Ballot Closed - 9th July
- Ballot results: Pass
 - Response Ratio (> 50%): 131/191 = 68.6%
 - Abstention Ratio (< 30%): 39/130 = 29.8%
 - Approval Ratio (> 75%): 92/92 = 100%
- Comments received: 24
 - 21 Editorial
 - 1 Technical
 - 2 Technical Required

IEEE 802.3 Motion

IEEE 802.3 Working Group accepts the resolution to all comments received in the Working Group ballot of P1802.3Rev Draft 2.0, and authorise the editor to generate Draft 3.0.

IEEE 802.3 requests that the P802 LMSC Executive Committee forwards Draft 3.0 for Sponsor Ballot Pool formation and LMSC sponsor ballot.

IEEE 802.3 authorises the IEEE P1802.3Rev Task Force to conduct meetings and recirculation ballots as necessary to resolve comments received during the Sponsor ballot.

IEEE 802.3 requests that the P802 LMSC Executive Committee forward P1802.3Rev to RevCom (by 31/10) based on successful Sponsor ballot with no new technical disapprove votes.

M:David Law

S: Bill Quakenbush

Tech 75%/

PASSED

Date:13 July 00

Y: 85

N: 0

A: 14

Time:0952

802 Motion: Approve above action. Thompson/Grow

Y____ N____ Ab____ @ : PM Thurs 13 July '00

4.07-ME-New PAR - 802.11b Higher Rate- --Kerry

(see file secmotionshayes.pdf)

5 Vic Hayes presents in lieu of Stuart Kerry.

Why was WG vote so low? 14 people out of all of 802.11? It was an interim meeting.
Did 802.11 meet quorum requirements at the interim meeting?

10 How was there a WG meeting at an interim when there was no quorum?
Hayes asserts that the interim meeting was authorized to generate and approve the PAR.
Carlo states that we have never approved a PAR that had not been approved by a WG.

Al Petrick asserts that at the March meeting, 802.11 pre-approved this action.

15 Nikolich suggests that 802.11 should conduct a WG ballot by email, send us the results, and we can vote on it electronically.

Motion

20 **To presubmit the PAR for further Higher data Rate extension in the 2.4 GHz band to NesCom pending the following actions:**
a) the 802.11 WG performs an email ballot to affirm the forwarding of the PAR, (approves+disapproves amounting to at least 50% of the WG voting members).
b) the SEC reviews the results of (a) and has an email ballot to forward the PAR to the standards board for approval.

25 Hayes/Nikolich

9/0/0 Approved at 8:52

Date/Time 11 May 2000

Number 214

Mover Shoemake

Seconde Andren

Motion to approve the PAR and 5 Criteria
In documents 00/114r2 and 00/115r3, respectively,
And forward the PAR and 5 Criteria to the
IEEE 802 Executive Committee for approval

For14 **Against** 0 **Abstain** 1

Motion Pass

4.08-ME-802.11d to LMSC Ballot- --Kerry

(see file secmotionshayes.pdf)

5 WG vote on motion was 58/0/2. Letter ballot results were unanimous in favor.
Frazier asks that this item and 4.09 be considered after item 4.11 to allow time for the members to gather the correct statistics.
Chairman, mover and seconder agree.

At 9:50 pm, Hayes announces that he is now ready to present the motion.

10 Hayes presents WG LB tally on 802.11d: 4 disapproves+2 disapproves from “ex-voters”. Several chairs point out that composition of the ballot pool cannot change during the course of a ballot, including its recirculation.

15 It is apparent that there were outstanding negative comments, and that these were recirculated. Carlo suggests that the mover withdraw the motion and that the WG attempt to resolve the outstanding negatives. If the negatives cannot be resolved, the negative comments must be presented to the SEC, along with a request to forward for LMSC ballot.

Hayes, Petrick and Bob O’Hara agree to withdraw the motion, and communicate with balloters.

20

Date/Time 13 July 2000
Number 228
Mover O'Hara
Seconde Zegelin
Motion that 802.11d Draft 2 (file 802.11d-D2.pdf)
Be forwarded to ExCom to be issued for sponsor ballot

For 58 **Against** 0 **Abstain** 2

Motion Pass

LB result was: 86 approve, 4 disapproving voters (plus 2 ex voters)

3 disapproving voters were present and voted approve

On the final recirc. (all comments were recirculated with the comment resolutions of 7 pages), concluded on June 12, 2000, there were 28 editorial comments.

4.09-ME-802.11 Liaison Letter to SC6 8802-11 PDAM2- --Kerry

(see file secmotionshayes.pdf)

5 Motion:

Moved that the SEC chair ensures that the USA votes Approve with comments on the Fast Track procedure on 8802-11 DAM2 (802.11b) with the errata sheet and the corrigendum 1 as material to be used to update the draft.

10 Hayes/Nikolich 6/0/2 Approved 10:08

Date/Time 13 July 2000

Number 224

Mover Poncini

Seconde Hayes

Motion Move to recommend an approval vote for ISO Version of 8802-11 amd2 and to submit the 802.11b cor1 as comments to the 8802-11 amd2 documents, and additional posting of the comments to the 802.11 WEB site.

For 35 **Against** 0 **Abstain** 7

Motion Pass

4.10-ME-802.16 ETSI Liaison Letters- --Marks-10

(see file 80216I-00_19.pdf)

(see file 80216I-00_20.pdf)

5 (see file 80216I-00_21.pdf)

Marks presents three liaison letters to ETSI.

Motion:

10

Approve 3 802.16 liaison letters to ETSI

Marks/Nikolich

15 **7/0/1 Approved at 9:03.**

Project	IEEE 802.16 Broadband Wireless Access Working Group	
Title	ETSI BRAN Liaison Letter	
Date Submitted	2000-07-13	
Source	Roger Marks, Chair, 802.16 NIST 325 Broadway, MC 813.00 Boulder, CO 80303	Voice: 303-497-3037 Fax: 303-497-7828 E-mail:r.b.marks@ieee.org
Re:	IEEE 802.16l-00/17 < http://ieee802.org/16/liaison/docs/80216l-00_17.pdf >	
Abstract	This letter replies to an ETSI BRAN liaison statement (Document BRAN19d112)	
Purpose	To further the coordination between 802.16 and ETSI.	
Notice	This document has been prepared to assist IEEE 802.16. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) reserve(s) the right to add, amend or withdraw material contained herein.	
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IEEE Patent Policy	<p>The contributor is familiar with the IEEE 802.16 Patent Policy and Procedures (Version 1.0) <http://ieee802.org/16/ipr/patents/policy.html>, including the statement "IEEE standards may include the known use of patent(s), including patent applications, if there is technical justification in the opinion of the standards-developing committee and provided the IEEE receives assurance from the patent holder that it will license applicants under reasonable terms and conditions for the purpose of implementing the standard."</p> <p>Early disclosure to the Working Group of patent information that might be relevant to the standard is essential to reduce the possibility for delays in the development process and increase the likelihood that the draft publication will be approved for publication. Please notify the Chair <mailto:r.b.marks@ieee.org> as early as possible, in written or electronic form, of any patents (granted or under application) that may cover technology that is under consideration by or has been approved by IEEE 802.16. The Chair will disclose this notification via the IEEE 802.16 web site <http://ieee802.org/16/ipr/patents/letters>.</p>	

IEEE 802.16 Working Group on Broadband Wireless Access

<http://wirelessman.org>

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Boulder, CO 80303 USA
Tel: +1 303 497 3037
Fax: +1 303 497 7828
<mailto:r.b.marks@ieee.org>

13 July 2000

Dr.-Ing. Jamshid Khun-Jush, Chairman, ETSI BRAN
<mailto:Jamshid.Khun-Jush@eed.ericsson.se>

Dear Jamshid:

On behalf of IEEE 802.16, I thank you for your letter of 06 July and (Document BRAN19d112). Thank you also for attending 802.16 Session # 8 (10-14 July, San Diego, CA) and discussing the ETSI BRAN/802.16 cooperation agreement with me.

Based on your status report, it appears that BRAN-HA and 802.16 appear to remain reasonably consistent in their approaches.

We appreciate and accept BRAN's appointment of Dave Williams as liaison from BRAN to 802.16.

Regarding our status following our Session #8 (10-14 July 2000), I have the following to report:

- Our 802.16.1 project (Air Interface for Fixed Broadband Wireless Access Systems, 10-66 GHz) is moving to a Final Task Group Review by electronic comment submission. The review, based on the PHY of IEEE [802.16.1p-00/07r2](#) and the MAC of IEEE [802.16.1mc-00/21r1](#), will run from 4 August until 1 September and lead to resolution at our Session #9 (11-15 September, Denver, Colorado, USA). At the time, we expect to initiate a Working Group Letter Ballot at the 802.16 level. We still anticipate Working Group approval before the end of the year.
- Our 802.16.2 project is reporting its status to ETSI TM4 in a liaison letter that I am forwarding to you.
- Our 802.16.3 project (Air Interface for Fixed Broadband Wireless Access Systems, Licensed Bands, 2-11 GHz) is progressing through Functional Requirements specification. We provide additional detail in a separate letter.
- Our WirelessHUMAN™ Study Group (studying Wireless High-Speed Unlicensed Metropolitan Area Network) has been extended until November and been authorized to develop a Project Authorization Request (PAR) to initiate the formation of a standardization project.

You may be aware of a press release dated 11 July 2000 from "IEEE Industry Standards and Technology Organization (ISTO)" relating to a broadband wireless access "standard." Please be aware that ISTO is not accredited to write standards and is separate from the IEEE Standards Association. Its actions do not affect our program in IEEE 802.16.

Regarding the proposed formal agreement between BRAN-HA and IEEE 802.16, I was disappointed to receive your email of 3 July. I understand that message to indicate that the ETSI Secretariat does not accept that agreement. While I appreciate your alternative proposal to attach a non-detailed Annex item to the IEEE/ETSI agreement, we find that we would prefer a less formal arrangement. Regarding that agreements three items, it seems that Item 2 may be difficult to agree on formally. Regarding Item 1,

We essentially extend to BRAN the offer made in that agreement. Namely, BRAN is welcome to appoint a Liaison to 802.16. That liaison may receive all group notices and may attend all group meetings subject to the normal registration fees. The liaison is eligible to provide input documents and to recommend document changes with the same privileges of an observer. Liaisons may appoint replacement delegates to attend meetings and make presentations.

Regarding Item 3, document exchange in our case is generally quite open and liberal. While are draft standards are currently limited due to IEEE copyright restrictions, we anticipated those restrictions ending by the end of this year due to a change of policy in which IEEE 802 standards may become available free of charge. In such a case, I expect us to remove the restrictions on our drafts.

Given that we are offering to comply with these two terms of the proposed agreement, we hope that BRAN will offer to reciprocate.

Finally, please note that IEEE 802 strives to maintain a fully open process and not only welcomes but encourages the comments and participation of all people worldwide. It is the willingness of participants to come forward with comments and suggestions that has been the key to IEEE 802's success and acceptance throughout the world. Please let your members and participants know that we look forward to their involvement, whether as Members, Observers, or at any other level, in our efforts.

Sincerely,



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

cc: Jim Carlo, Chair, IEEE 802 LAN/MAN Standards Committee

Project	IEEE 802.16 Broadband Wireless Access Working Group	
Title	ETSI TM4 Liaison Letter	
Date Submitted	2000-07-13	
Source	Roger Marks, Chair, 802.16 NIST 325 Broadway, MC 813.00 Boulder, CO 80303	Voice: 303-497-3037 Fax: 303-497-7828 mailto:r.b.marks@ieee.org
Re:	IEEE 802.161-00/15 < http://ieee802.org/16/liaison/docs/802161-00_15.pdf >	
Abstract	This letter acknowledges an ETSI TM4 liaison letter and provides additional information.	
Purpose		
Notice	This document has been prepared to assist IEEE 802.16. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) reserve(s) the right to add, amend or withdraw material contained herein.	
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IEEE 802.16 Working Group on Broadband Wireless Access

<http://wirelessman.org>

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13 July 2000

Dr. Roberto Macchi
Chairman ETSI WG-TM4
<mailto:roberto.macchi@icn.siemens.it>

Dear Dr. Macchi,

On behalf of IEEE 802.16, I thank ETSI WG-TM4 for the Liaison Letter [TM4(00)23_03Annex06] of 23 June and for the interesting explanations offered by Barry Lewis.

We have had two comprehensive presentations on the TM4 works, done by our Liaison Officer, Marianna Goldhammer. The TM4 works were extensively presented to the 802.16.2 Coexistence group and to the 802.16.3 **Task Group**.

Both groups expressed their high level of interest in the following TM4 working documents:

1. Output documents, WP2:

- Annex 07-TDD study final document(TM-4087)
- Annex 09-TM-4099 final document
- Annex 13-TM-4106 final output(part 3 to rev.EN301 213) including corrections
- Annex 14-TM-4110 final output rev. to EN301021
- Annex 18 and 19- New work item to add MP-MP option to EN301 213 part 1.

2. New work items:

- PMP technical report on cross-compatibility NFD values
- Steerable antenna – DTR//TM 4115
- 32GHz antenna – DEN/TM 4057-4.

3. Other documents

- 26GHz general part – EN 301 213-1
- Conformance testing – EN 301 126.

We would appreciate if our Liaison Officer would be permitted to transfer to us the relevant documents. This would help us provide the desired global applicability for our standards.

Significant progress has been made in the development of the 802.16.2 coexistence document. It will be sufficiently complete and stable by October. Therefore the 802.16.2 coexistence task group plans to forward a copy of the current draft version of the Recommended Practices for Coexistence document to ETSI TM4 in October 2000.

2000-07-13

IEEE 802.16l-00/20

Best regards,

Roger B. Marks

Chair, IEEE 802.16 Working Group on Broadband Wireless Access

cc: Barry Lewis, ETSI WG-TM4 Liaison to IEEE 802.16
Marianna Goldhammer, IEEE 802.16 Liaison to ETSI WG-TM4
Jim Carlo, Chair, IEEE 802 LAN/MAN Standards Committee
Jamshid Khun-Jush, Chair, ETSI BRAN

Project	IEEE 802.16 Broadband Wireless Access Working Group	
Title	ETSI BRAN Liaison Letter	
Date Submitted	2000-07-13	
Source	Roger Marks, Chair, 802.16 NIST 325 Broadway, MC 813.00 Boulder, CO 80303	Voice: 303-497-3037 Fax: 303-497-7828 E-mail:r.b.marks@ieee.org
Re:	IEEE 802.16l-00/18 < http://ieee802.org/16/liaison/docs/80216l-00_18.pdf >	
Abstract	This letter replies to an ETSI BRAN liaison statement (Document BRAN19d111)	
Purpose	To further the coordination between 802.16 and ETSI.	
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IEEE Patent Policy	<p>The contributor is familiar with the IEEE 802.16 Patent Policy and Procedures (Version 1.0) <http://ieee802.org/16/ipr/patents/policy.html>, including the statement "IEEE standards may include the known use of patent(s), including patent applications, if there is technical justification in the opinion of the standards-developing committee and provided the IEEE receives assurance from the patent holder that it will license applicants under reasonable terms and conditions for the purpose of implementing the standard."</p> <p>Early disclosure to the Working Group of patent information that might be relevant to the standard is essential to reduce the possibility for delays in the development process and increase the likelihood that the draft publication will be approved for publication. Please notify the Chair <mailto:r.b.marks@ieee.org> as early as possible, in written or electronic form, of any patents (granted or under application) that may cover technology that is under consideration by or has been approved by IEEE 802.16. The Chair will disclose this notification via the IEEE 802.16 web site <http://ieee802.org/16/ipr/patents/letters>.</p>	

IEEE 802.16 Working Group on Broadband Wireless Access

<http://wirelessman.org>

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13 July 2000

Dr.-Ing. Jamshid Khun-Jush, Chairman, ETSI BRAN
<mailto:Jamshid.Khun-Jush@eed.ericsson.se>

Dear Jamshid:

IEEE 802.16 (Broadband Wireless Access) thanks ETSI BRAN for the timely liaison contribution informing us of your new work item on "FWA below 11GHz" (Document BRAN19d111 or [IEEE 802.16l-00/18](#)) and your meeting of 25 August 2000.

IEEE 802.16 is also developing a standard for BWA below 11 GHz. You can obtain a copy of the draft "Functional Requirements for the 802.16.3 Interoperability Standard" for your information and comment (Document [IEEE 802.16.3-00/02r3](#)) from our Web site. We would appreciate your views and comments in time for our next meeting, which will be held on 12-15 September 2000 in Denver, Colorado, USA. At that meeting we plan to finalize the Functional Requirements.

We look forward to work with you in close cooperation with the aim of achieving maximum commonality and worldwide standards.

Contact person: David Trinkwon

Sincerely,



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

cc: Jim Carlo, Chair, IEEE 802 LAN/MAN Standards Committee

4.11-ME-Letter to IEEE-ISTO- --Carlo

(see file istoslides.pdf)

- 5 Carlo distributes offending BWIF press release.
Carlo recaps charter of ISTO
Carlo presents draft of position statement

(see file istolet.pdf)

- 10 Agreement to strike item 3) from the letter.

Marks presents 802.16's view. Marks suggests several changes to the position statement and reads four motions passed by the 802.16 WG.

- 15 802.16 approved the following motions:

20 (1) Motion for the IEEE LMSC executive committee to consider and report back to 802.16.3 Task Group: IEEE LMSC expects the IEEE, IEEE-ISTO, IEEE-SA and any other IEEE organization to immediately disassociate from the BWIF industry group and publicly retract any association with it. This shall include an IEEE press release covering the disassociation. 30-2-0

(2) Motion for the IEEE LMSC executive committee to consider: Any letter that the IEEE LMSC executive committee submits to other IEEE offices on the issue of the BWIF press release must include the content of the previous motion. 34-2-0

25 (3) Motion for the IEEE LMSC executive committee to consider: In particular, that the IEEE shall accomplish disassociation from BWIF sponsorship prior to the July 26, 2000 inaugural BWIF meeting. 32-2-0

30 (4) Motion for the IEEE LMSC executive committee: That IEEE initiate a review of the IEEE-ISTO procedures and processes associated with standards development and take any action necessary to assure the integrity of the IEEE Standards process and report back to the IEEE LMSC. 36-0-0

Heile states that 802.15 supports sending the position statement 16/0/0 on a roll call vote.

35 Thompson states that 802.3 passed a motion expressing support for the position statement by 63/0/13.

Petrick states that 802.11 passed a motion asking ISTO to audit its policy in communications with the public. This motion passed unanimously on a roll call vote.

40 Jeffree states that 802.1 believes that we should not disseminate this to the press, since we shouldn't be airing the IEEE's dirty laundry in the press, as the press will simply trash the IEEE.

Carlo agrees that we don't need to air the IEEE's dirty laundry.

45 Marks believes that a statement of clarity to the public is needed.

Carlo agrees to strike items 3 and 4 from the position statement. (the first item 3 and 4) to keep the statement factual, And to eliminate "for dissemination to the press".

50 Carlo presents motion from Marks/Heile which reads:

Motion:

IEEE 802 SEC endorses response letter "in principle" and permits Jim Carlo to further edit the letter.

55 Marks/Heile

8/0/1 Approved at 9:46

Response to IEEE-ISTO Press Release

Process for Action (30 Minutes)

- 1) IEEE-ISTO Scope Review
- 2) Summary of Press Release
- 2) Review Proposed Letter of Response (Carlo)
- 3) Working Group Inputs
- 4) Motion

IEEE-ISTO Overview-1

- The IEEE Industry Standards and Technology Organization (IEEE-ISTO) was established on 1 January 1999 as a not-for-profit corporation, tax exempt under Section 501(c)(6) of the U.S. tax code. The IEEE-ISTO is governed by its own [Board of Directors](#), [Bylaws](#), and Articles of Incorporation. The organization is affiliated with the [IEEE](#), and the [IEEE Standards Association](#).
- The formation of the IEEE-ISTO is indicative of IEEE's recognition and response to the dynamic standards development environment, and the need to be able to offer industry increased choice and flexibility through a complete menu of standards development options and services.
- The IEEE-ISTO offers industry groups (e.g., consortia, special interest groups, alliances, forums, working groups) an innovative and flexible operational forum and support services for development and post-development standards and technology development activities. The IEEE-ISTO operates as an umbrella organization to provide the legal forum for industry groups to operate, without the need to incorporate themselves as a legal entity. [Programs of the IEEE-ISTO](#) enjoy the legal protections and insurance benefits of operating within an incorporated, fully insured, non-profit organization.

IEEE-ISTO Overview-2

- The IEEE-ISTO enables industry groups to define their unique rules and procedures (e.g., scope and nature of technical program, membership (dues, categories), voting, consensus requirements, and structure) to build a foundation tailored to the technology, the market, the participants, the required time-frame, and the financial and human resources available to achieve their goals.
- Groups organized within the IEEE-ISTO are able to develop and publish "IEEE-ISTO Industry Group Standards" (e.g., [IEEE-ISTO 5001™ -1999](#), the Nexus 5001 Forum Standard for a Global Embedded Processor Debug Interface). The resulting standards will have the instant global recognition associated with the IEEE name and brand identity, and can then be submitted, as appropriate, to other standards bodies for approval or adoption (e.g., [IETF](#), [ISO](#), [IEC](#), [IEEE](#), [ISO/IEC JTC1](#), [W3C](#)). Standards developed may be distributed as freely as the individual industry groups require and fund.
- The IEEE-ISTO provides a forum not only to develop standards, but also to facilitate the activities that support the implementation and acceptance of standards in the marketplace.

IEEE-ISTO BOD

George W. Arnold, Vice President, Standards & Intellectual Property, Lucent Technologies Bell Laboratories;

Richard J. Holleman, Director of Standards, Intellectual Property & Licensing, IBM Corporation;

Marco W. Migliaro, P.E., Chief Electrical/I&C Engineer, Nuclear Division, Florida Power & Light Company;

Edward M. Roney, Corporate Vice President and Director of Standards and Technology Transfer, Motorola, Inc.

IEEE-ISTO Press Release

NEW ORLEANS--(BUSINESS WIRE) via NewsEdge Corporation -- The IEEE Industry Standards and Technology Organization (IEEE-ISTO) today announced the formation and first meeting of the Broadband Wireless Internet Forum (BWIF). The goal of the BWIF is to provide cost-effective, broadband wireless access, with industry-leading performance and reliability for compelling end-user applications such as high-speed Internet access, premium streaming audio and video content and voice. BWIF becomes the sixth publicly announced industry group to organize as a program of the IEEE-ISTO, which will facilitate the Forum's day-to-day activities. BWIF is an incorporated, non-profit association of industry-leading companies that will work together to **ensure adoption of a single, unified broadband wireless access industry standard**. Members of BWIF will drive product roadmaps that will lower product costs, simplify deployment of advanced services, and ensure the availability of interoperable standards-based solutions based on Vector Orthogonal Frequency Division Multiplexing (VOFDM) technology. BWIF members agree to cross-license to other BWIF members, the technologies required to implement the standard on a worldwide, royalty-free basis.



Jim Carlo - IEEE 802 Chair

July-2000

IEEE 802 Draft Response

- **Subject: Conflict of Interest between IEEE 802 and ISTO Recent Project Announcement on “Broadband Wireless Internet Forum(BWIF)”**
- IEEE Standards are highly regarded throughout the world because they are developed in an open process with rigorous procedures to ensure that all voices are heard and heard again until the quality of the output is fully accepted. IEEE has shown that, with the support of dedicated teams, this process can quickly lead to superb results that are immediately accepted in the global marketplace. As a result of this quality control process, the name “IEEE Standard” is zealously guarded.
- IEEE strongly objects to the ISTO BWIF formation and press release because:
 - 1) It implies by the use of "IEEE Standards" term an ANSI accredited standards based process. The words "IEEE" appeared 34 times and "Standard" 16 times in the press release. This cheapens the value of the highly regarded IEEE standards process. (See Item 1 in addendum)
 - 2) Marketplace confusion has resulted because of the direct conflict with the scope of an IEEE 802 Approved Project (P802.16.3). IEEE 802.16 has been authorized to develop broadband wireless access (BWA) standards according to IEEE-SA rules and due process as accredited by ANSI. The IEEE 802.16 working group is open to full public participation. To date, over one hundred individuals from more than fifty companies have been actively contributing to this process. The ISTO project announced to develop a "single, unified broadband wireless access industry standard" is directly in conflict with the 802.16.3 project. (See Item 2 in addendum)



- 3) Numerous consortiums developing industry specifications are present in the marketplace and IEEE 802 endeavors to work with them to bring their specifications into the IEEE Standards process. In the BWIF case, the consortium rejected attempts by IEEE 802 to collaborate in the development of an open IEEE standard.
- 4) The ISTO management was fully aware of the IEEE 802.16 project and potential conflict as there have been numerous discussions between IEEE 802 members.
- IEEE 802 plans the following actions:
 - 1) Request to the IEEE Executive management that the ISTO dissociate itself with the BWIF prior to the BWIF July 26, 2000 meeting. Guidelines should be added to the ISTO policies and procedures to avoid these conflicts in the future and avoid the use of the term "IEEE Standard" in the context of ISTO activities.
 - 2) Submit this position statement to company members of the BWIF and request that they dissolve the consortium sponsored by the ISTO.
 - 3) Submit this position statement to the Computer Society and IEEE-SA Standards Staff for dissemination to the press.
- Contact Information:
 - Roger Marks (r.marks@ieee.org) - Chair, IEEE 802.16 Broadband Wireless Access
 - Jim Carlo (j.carlo@ieee.org) - Chair, IEEE 802 LAN/MAN Standards Committee



Subject: IEEE 802 Position Statement on IEEE 802.16 Broadband Wireless Access (BWA) Working Group Conflict of Interest with recent IEEE-ISTO announcement.

IEEE Standards are highly regarded throughout the world because they are developed in an open process with rigorous procedures to ensure that all voices are heard, and heard again, until the quality of the output is fully accepted. IEEE has shown that, with the support of dedicated teams, this process can quickly lead to superb results that are immediately accepted in the global marketplace. As a result of this quality control process, the name “IEEE Standard” is zealously guarded.

IEEE 802 strongly objects to ISTO’s formation of the Broadband Wireless Internet Forum (BWIF) and the associated press release because:

- 1) The press release implies an accredited standards process. The word “standard” appears 16 times (and “IEEE” 34 times) in the press release. This confusion cheapens the value of the highly-regarded IEEE Standards process. The confusion is enhanced by mention three times of affiliation between ISTO and the IEEE Standards Association. Nowhere does the announcement state the difference between specification produced by this forum and an authentic IEEE Standard.
- 2) Marketplace confusion has resulted because of the direct conflict with the scope of an IEEE-SA Standards Board Approved Project (802.16.3) that has been authorized to develop a broadband wireless access (BWA) standard according to accredited IEEE-SA rules and due process. The IEEE 802.16 Working Group on Broadband Wireless Access developing these standards is open to full public participation. To date, well over 400 individuals from well over 100 companies have participated in the Working Group. The ISTO announcement of a “single, unified broadband wireless access industry standard” is in direct conflict (See Addendum for details)

IEEE 802 makes the following requests:

- 1) The IEEE Executive Director should act to ensure that the ISTO dissociates itself with the BWIF prior to the BWIF’s July 26, 2000 meeting.
- 2) The ISTO policies should be modified to avoid projects competitive with IEEE Standards projects unless requested by the IEEE Standards Sponsor.
- 3) The terms “IEEE Industry Standard” and “IEEE-ISTO Industry Standard” should be eliminated in favor of the term “ISTO Industry Standard.”
- 4) IEEE policy and procedures should clarify the difference between an ISTO-generated “Industry Standard” and an authentic IEEE Standard with a statement such as “ISTO is not accredited to write standards. It is separate from, and its actions do not affect programs in, the IEEE Standards Association.” IEEE should issue a press release clarifying these issues with regard to the BWIF announcement.

IEEE 802 will submit this position statement to the IEEE Executive Director, the IEEE-SA Board of Governors, IEEE-SA Standards Board, the IEEE Computer Society SAB, and the IEEE Microwave Theory and Techniques Society for their information and action.

Contact Information:

Roger Marks (r.b.marks@ieee.org) - Chair, IEEE 802.16 Broadband Wireless Access

Jim Carlo (j.carlo@ieee.org) - Chair, IEEE 802 LAN/MAN Standards Committee

ADDENDUM

The ISTO press release mentions the following concepts that conflict/overlap with Project 802.16.3:

“...cost-effective, broadband wireless access”

The 802.16.3 PAR (entitled “Telecommunications and Information Exchange Between Systems - LAN/MAN Specific Requirements - Air Interface for Fixed Broadband Wireless Access Systems in Licensed Bands from 2 to 11 GHz”) includes the following in its purpose statement: “To enable rapid worldwide deployment of innovative, cost-effective and interoperable multi-vendor broadband wireless access products.”

“...streaming audio and video content and voice”

The 802.16.3 PAR scope says: “The specification enables access to data, video, and voice services with a specified quality of service.”

“Multichannel Multipoint Distribution Service (MMDS) solutions”

The term “MMDS” refers to the U.S. FCC spectrum allocations within the “MDS” bands designated for public network access. These bands are all between 2 and 3 GHz.

According to its scope statement, the 802.16.3 PAR “applies to systems operating between 2 and 11 GHz” “in licensed bands designated for public network access.”

“Vector OFDM”

The 802.16.3 Task Group has received a contribution explaining the applicability of OFDM technology to its interoperability standard.

4.12-ME- - -

Empty agenda Item

5 4.13-ME- - -

Empty agenda Item

4.14-MI-Affirm 802.15 SG on Bluetooth Radio2- --Heile

10

Motion:

Move to form a Radio2 study group within 802.15 to track the activities of the Bluetooth Radio2 working group and recommend a course of action.

15

Heile/Nikolich

5/0/5 Approved at 9:14

20 4.15-MI-Affirm 802.15 SG on Low Rate WPAN- --Heile

Motion:

Move to form an 802.15 SG on Low Rate WPAN with the mission of drafting a PAR for submission to ExCom at November 2000 meeting.

25

Heile/Nikolich

9/0/1 Approved at 10:17

30

4.16-MI-Affirm renewal of 802.16 WirelessHuman SG- --Marks

Motion:

Affirm renewal of the 802.16 wirelessHuman study group until the end of the november 2000 IEEE 802 Plenary session.

35

Marks/Nikolich

8/0/1 Approved at 10:20

40

4.17-MI-Affirm renewal of Resilient Packet Ring SG- --Takefman

(see file RPRSGsecprep.pdf)

45

Motion:

Renew the charter of the Resilient Packet Ring Study Group through the end of the November, 2000 Plenary Session and reaffirm Mike Takefman as chair.

50

Frazier/Rigsbee

9/0/0 Approved at 10:23

Project: IEEE 802.15 Working Group for Wireless Personal Area Networks (WPANs)

Submission Title: [WG Proposal to form Radio2 Study Group]

Date Submitted: [July 12, 2000]

Source: [Bob Heile] Company [GTE]

Address [40 Sylvan Road, Waltham, MA, 02451]

Voice:[781-466-2057], FAX: [781-466-2575], E-Mail:[bheile@bbn.com]

Re: []

Abstract: [Background and rationale to form a Radio2 Study Group]

Purpose: [To secure endorsement to form a Radio2 Study Group within 802.15.]

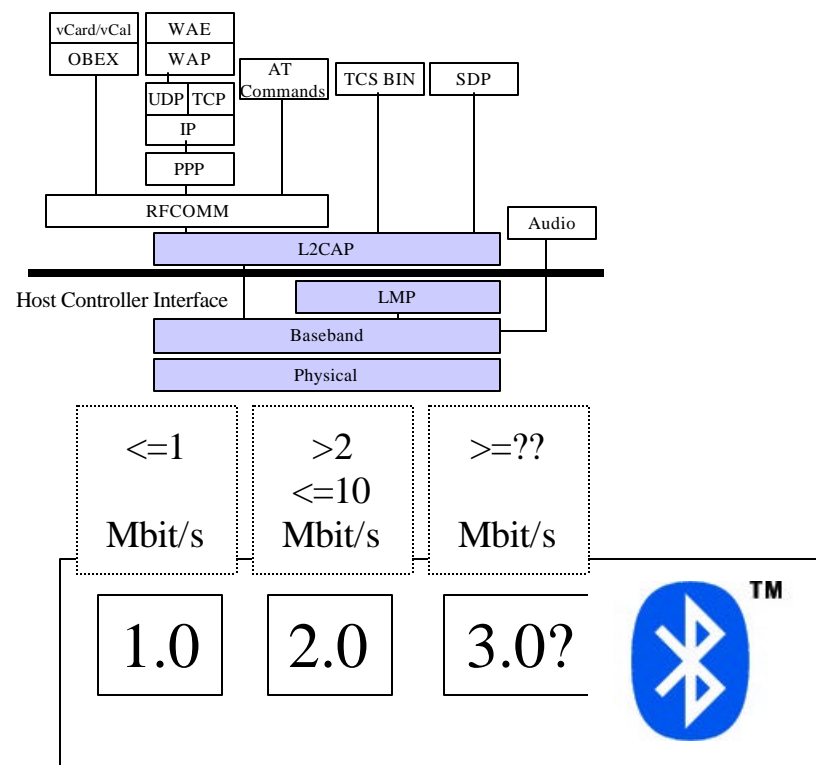
Notice: This document has been prepared to assist the IEEE 802.15. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) reserve(s) 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 802.15.

Proposal to Form a Radio2 Study Group

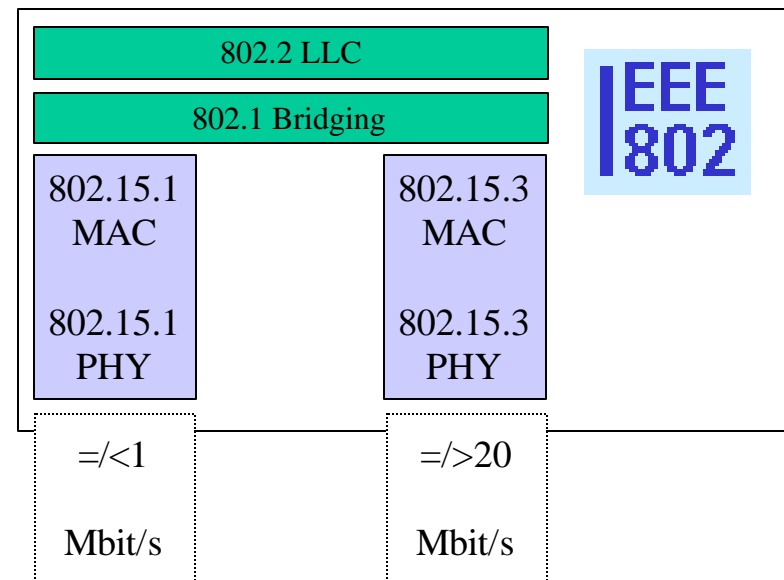
Bluetooth Current/Assumptions

- 1.0 Foundation
- 2.0 Specification
 - 2.4 GHz
 - 100% Backward Compatible to Foundation
 - Higher rate ~2-10Mbit/s
- 3.0 Specification?
 - 2.4 or 5 GHz?
 - 100% Backward Compatible to Foundation & 2.0 Specification
 - Higher rate ~??Mbps

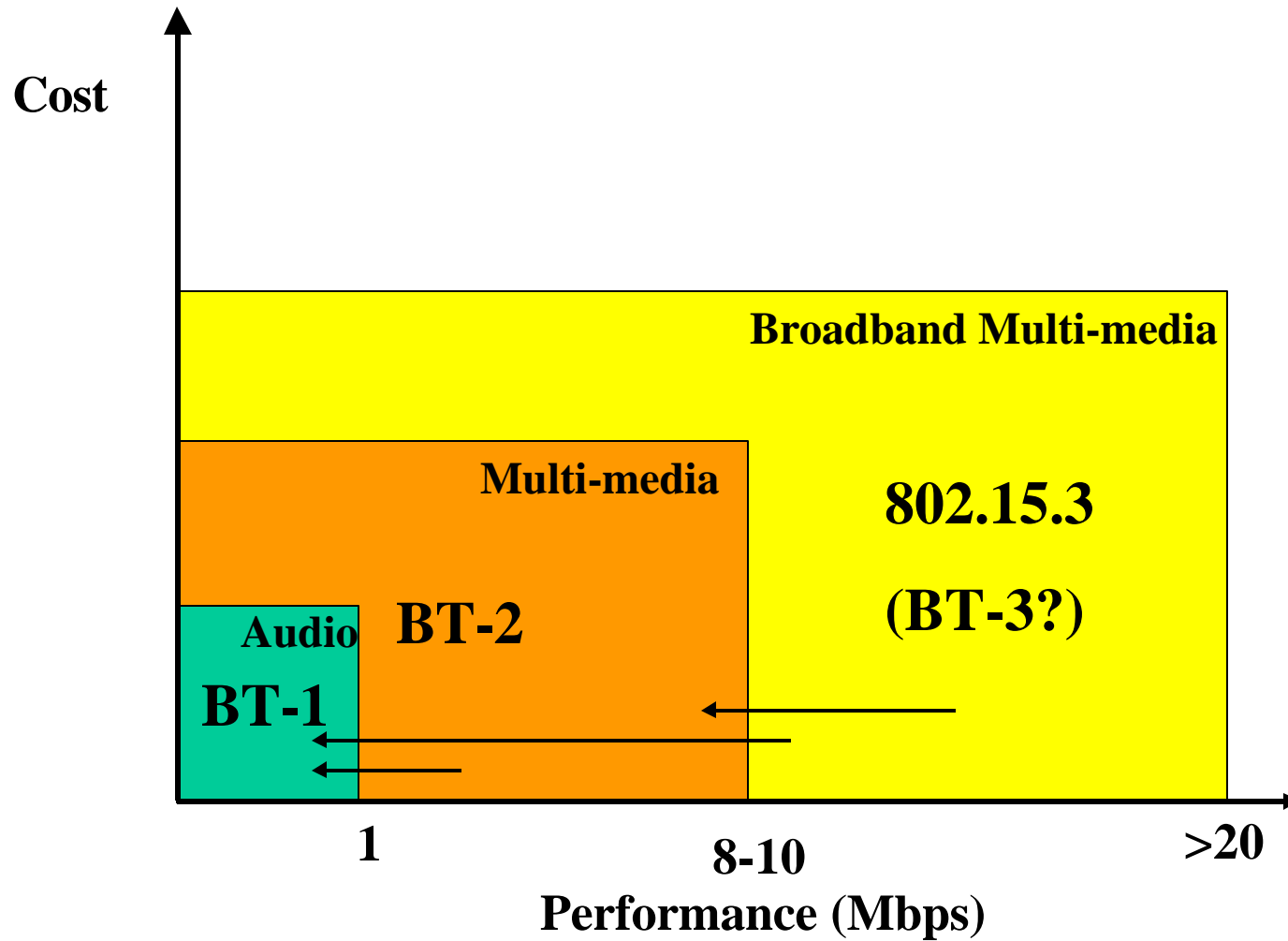


IEEE Current

- 802.15.1
 - Draft passes WG & Sponsor
 - Draft is sent to RevCom 9Feb01
 - Draft approved 21Mar01
 - 802.15.1 Published Apr01
- 802.15.3
 - Goal of backward compatibility path to 802.15.1



Market Segmentation



Collaboration Proposal with Bluetooth SIG

Agreement between BT-PM and 802.15 at Bluetooth
Congress 2000, June 16, 2000

- 802.15.1 tracks BT-1 (1.1) as baseline standard
- 802.15 Radio2 study group to determine how to track BT-2
- BSIG PM and IEEE 802.15 determine how to establish guidelines for adoption of externally defined radio standards by BSIG PM
- BSIG PM and IEEE 802.15 establish common marketing message

Scope of Proposed Study Group

- Provide a formal vehicle within IEEE802.15 to track the activities of the Bluetooth SIG Radio2 Working Group and recommend appropriate action to 802.
 - 2.0 Specification/Radio2 could be an extension to the existing 802.15.1 PAR
 - 2.0 Specification could be a supplement to 802.15.1
 - 2.0 Specification may become available to the IEEE in 2001 as another derivative work product
 - or something else

Proposed Timeline

- July00: Create Study Group
- Nov00: Present Tutorial
 - Extend Study Group
- Mar01: SG concludes or submits PAR for either Supplement or Derivative Standard

Proposed Study Group Leadership

- Tom Siep, Texas Instruments, Chair
- Michael Dydyk, Motorola, Vice Chair

Motion to the 802.15 Working Group

- Move to form a Radio2 Study Group within 802.15 to track the activities of the Bluetooth Radio2 Working Group and recommend a course of action

Moved:siep

Second:barr

Y/N/A

Motion to the SEC

- Move to form a Radio2 Study Group within 802.15 to track the activities of the Bluetooth Radio2 Working Group and recommend a course of action

Moved: Bob Heile

Second:

Y/N/A

July, 2000

doc.: IEEE 802.15-00/234r1

Project: IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs)

Submission Title: [Low Data Rate WPAN]

Date Submitted: [12 July, 2000]

Source: [Sean Middleton] Company [Philips Semiconductors]

Address [1251 McKay Dr., San Jose, CA 95131, USA]

Voice:[408-474-7426], FAX: [408-474-7247], E-Mail:[Sean.Middleton@Philips.com]

Re: [Ad-hoc interest in forming a study group.]

Abstract: [Applications and features of Low Data Rate WPAN. Low Data Rate WPAN differences from existing solutions. Attendees to an ad-hoc Low Data Rate meeting.]

Purpose: [Show sufficient value to allow the formation of a new Low Data Rate study group.]

Notice: This document has been prepared to assist the IEEE P802.15. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) reserve(s) the right to add, amend or withdraw material contained herein.

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Low Data Rate WPAN

Sean Middleton

Philips Semiconductors

Applications

- Sensors & actuators
- Interactive toys
- Smart badges
- Health monitoring
- Computing peripherals
- Remote control
- Home Automation
- Automatic Meter Reading

Features

- Raw Data Rate 2Kb/sec to 200Kb/sec
- Range 1m to 10m (interest in ~100m)
- Battery Life multi-month to nearly infinite
- Latency < 3ms to 1 hour
- Location Aware Yes, but optional
- Nodes per Nwk 16 to 1024 active nodes
- Temperature -40 to +85 C
- Complexity 20% of BT BOM or 25% of device BOM
- Freq. Band Unlicensed and international band
- Coexist & Interop Goal to coexist, but no goal to interop

Level of Interest

- 16 attendees
- Approximately 12 companies

Differences from Other Approaches

- Data Rate - substantially less than typical LAN or PAN rates
- Complexity - extremely basic
- Location awareness
- Number of nodes - much more than 802.15
- Battery life - Multiple month to infinite
- Temperature - broader supported range

Proposed Leadership

- Sean Middleton, Philips Semiconductor

Motion to working group

- Motion to form study group for a low rate WPAN with the mission of drafting a PAR for submission to ExCom at November 2000 meeting.
 - Moved: Rick Alfvín
 - Second: Edul Batliwala
 - 23Y/ 1N/ 5A

Motion to the Executive Committee

- Motion to form study group for a low rate WPAN with the mission of drafting a PAR for submission to ExCom at November 2000 meeting.
 - Moved: Bob Heile
 - Second: Stuart Kerry
 - Y/N/A

RPRSG ECSG Status

July 13, 2000 SEC Meeting

Mike Takefman

RPRSG Meeting Summary

- **30 people / 19 organizations**
- **13 presentations**
- **MAC Layer Model & 802.1D/Q bridging discussed**

will forward a description to 802.1 for comment

- **PAR and 5 Criteria complete**
revisit based on comments from 802.*

RPRSG Interim Meeting

- **August 28/29, 2000 in San Jose**
802.1D/Q compatibility
Simulation / Evaluation Criteria
Draft Objectives
Press Release

1. Broad Market Potential

- Broad sets of applicability.
 - Multiple vendors and numerous users.
 - Balanced costs (LAN versus attached stations).
-

- **Presentations given to the Resilient Packet Ring Study Group has identified customer demand for resilient packet rings in the following application areas:**
 - ISP Intra-POP LANs
 - Inter-POP MANs and WANs (e.g. ISP; MSO; *LEC)
 - Enterprise Campus LAN Backbones
 - Enterprise MANs and WANs
 - Multi-provider customer access MANs
- **An efficient bandwidth sharing mechanism for ring topologies will provide optimum cost / performance for the identified application areas.**
- **At an 802 tutorial session, 33 individuals representing 14 organizations (including vendors of computer systems, networking systems, networking silicon, and Internet Service Providers) expressed interest in working on a standards project in this area. An RPRSG interim meeting was attended by 26 individuals representing 13 organizations. An RPRSG plenary meeting was attended by 30 individuals representing 19 organizations.**
- **In Metropolitan and Wide Area Networks, the medium (fiber optic cable) represents a significant portion of the total hardware cost. This standard will optimize the cost balance between the network medium and the station attachment hardware for ring topologies.**

2. Compatibility

- 802. Overview and Architecture
 - 802.1D, 802.1Q, 802.1f.
 - Systems management standards.
-

- **The Resilient Packet Ring standard will be fully compatible with the 802 Overview and Architecture document.**
- **The Resilient Packet Ring standard will be compatible with the relevant portions of 802.1D, 802.1Q and 802.1f.**
- **The Resilient Packet Ring standard will be compatible with the Simple Network Management Protocol. The MIB for RPR will be defined and submitted to the IETF.**
- **Selection of the frame format for the RPR is a subject of investigation for the working group. At the present time the 802.3 frame format with either the TYPE or LENGTH interpretation is being given prime consideration.**

3. Distinct Identity

- Substantially different from other IEEE 802 standards.
 - One unique solution per problem (not two solutions to a problem).
 - Easy for the document reader to select the relevant specification.
-

- **There is no other IEEE 802 standard which addresses high speed (622 Mbps and above) ring topologies optimized for data transmission.**
- **There is no other IEEE 802 standard which specifies a bandwidth sharing algorithm for data rates in excess of 1 Gbps.**
- **This standard will provide a solution which provides high speed, scalable, resilient ring based networks featuring spatial reuse and protection mechanisms (capable of sub 50 ms switching).**
- **The standard will define a single Media Access Control algorithm, along with multiple Physical Layer options, formatted in a fashion similar to other 802 standards.**

4. Technical Feasibility

- Demonstrated system feasibility.
 - Proven technology, reasonable testing.
 - Confidence in reliability.
-

- **Presentations given to the RPRSG have demonstrated the technical feasibility of candidate protocols using simulation. Empirical results will be presented at a future meeting.**
- **Several implementations of candidate protocols exist in the industry, embodied in commercially available products comprising:**
 - Systems (routers, switches, Add drop nodes for optical networks, hubs)**
 - Host interfaces (NICs)**
 - Chipsets**
 - Optical components**
- **Implementations of candidate protocols are currently deployed in major Service Provider and enterprise environments.**
- **Simulations have been used to demonstrate the feasibility of reliable protocols under a range of operating conditions. Traffic models, configurations and metrics for evaluating candidate protocols will be developed as part of the working group.**

5. Economic Feasibility

- Known cost factors, reliable data.
 - Reasonable cost for performance.
 - Consideration of installation costs.
-

- **Several implementations of high speed resilient packet ring networks exist in the industry from different vendors. The cost factors for the various components and sub-assemblies, as well as complete systems, are well known.**
- **In high speed networks, fiber optic components dominate the cost of a station. For data rates of 1 Gbps and below, the cost associated with these components is declining rapidly as technologies such as Gigabit Ethernet and Fiber Channel increase in volume. For data rates greater than 1 Gbps, this standard, as well as 802.3ae, and other industry standards (Fibre Channel, InfiniBand, etc) will generate the volumes necessary in order to produce similar cost reductions.**
- **The costs associated with a network based on this standard will be competitive with other technologies operating at similar data transmission rates. One of the goals of this project is to eliminate layers of equipment and reduce the port counts in a typical customer's network, thus reducing cost.**
- **The cost of installations based on a ring topology has been given prime consideration in the development of this project proposal. Ring topologies are preferred for MAN and WAN applications because they entail a lower installation cost than a mesh topology.**

4.18- -Break- -- -15

4.19-MI-Kill the Friday Plenary Rules Change-Nikolich

5 (see file killtheplenary.pdf)

Nikolich reads updates to rules change to require information to be submitted to the recording sec'y by 9:00 am Friday morning. WG members ask that information be posted to web earlier. Rigsbee and Marks speak in favor of earlier posting.

10 Thompson notes that the contingency about the midnight deadline was put in to place because of an abuse by the exec some number of years ago, and he doesn't want to see it repeated.

Motion:

15 **Adopt the rules change to eliminate the Friday plenary as presented by Paul.**

Nikolich/Rigsbee

10/0/0 Approved 10:45 pm

20

(loud applause)

Carlo thanks Greg Kohn and Jennifer Longman for the editorial process tutorial session and Howard Frazier for coordinating it. General applause.

25

4.20-MI-LMSC Scope Statement- --Nikolich

Motion:

30 **Add the following SCOPE statement to the IEEE 802 operating rules via the rules approval process.**

“The scope of IEEE LMSC is to develop, maintain, enable and promote, on a global basis, accredited networking standards and recommended practices”

35 Nikolich/Hayes

10/0/0 Approved 10:50 pm

4.21-MI-Procedure for Communication with External Organizations- --Hayes

40

Hayes presents draft of change to procedure 3.

Grow expresses concerns about the encouragement of informal communication. Remove “encourage”.

Marks if the proposals entirely replace procedure 3? Answer is yes.

45 (see file procedure3.pdf)

Motion:

To letter ballot: Rules change on External Communications

50

Nikolich/Hayes

10/0/0 Approved at 10:56

55 Hayes presents proposal for procedure 10.

Rigsbee objects to encouragement of informal communication “remove encourage”

Motion:

2. LAN MAN STANDARDS COMMITTEE PLENARY

The Plenary session consists of the Opening ~~the opening and closing~~ Plenary meetings, Executive Committee meetings and Working Group meetings. The Plenary meeting is a meeting of individuals interested in local and metropolitan area network standards. The function of the Plenary meetings is information dissemination:

- a) Status reports from the Working Groups and Technical Advisory Groups.
- b) Liaison reports from other standards organizations such as ASC X3, ECMA, etc.
- c) Reports on schedules for future Plenary and Working Group meetings.
- d) Announcements and general news.

The main object of the Opening ~~Opening~~ Plenary meeting will be to welcome new attendees and to inform the 802 membership about what is being done in the Working Groups and Executive Committee Study Groups. This report must include background on the relationship of the work to other Groups. It should not be a detailed statement about Standards Numbers and Progress. ~~This should be done at the Closing Plenary meeting through web posting.~~

Each Working Group, Technical Advisory Group, and Executive Committee Study Group Chair shall provide a status report to the SEC Recording Secretary no later than 9AM Friday morning of the Plenary meeting week. This status report shall include a description of the progress made during the week, as well as plans for further work and future meetings. The Recording Secretary shall post these status reports on the 802 web page no later than one week after the close of the Plenary meeting.

5.3.1 Study Group Operation

Progress of each Study Group shall be presented at Opening ~~opening and closing~~ Plenary meetings by the Working Group, TAG, or ECSG Chair. Study Groups may elect officers, other than the Chair, if necessary and will follow the general operating procedures for Working Groups specified in 5.1.3.5 and 5.1.4. Because of the limited time duration of a Study Group no letter ballots are permitted.

Procedure 4

PROCEDURE FOR LIMITING THE LENGTH OF THE IEEE LMSC EXECUTIVE COMMITTEE MEETINGS

7. The Executive Committee meetings shall end promptly ~~at~~ no later than 10:30AM on Monday morning and at midnight on Thursday evening. ~~noon on Monday mornings and at midnight on Thursday evenings~~ the announced time.
8. ~~When the Executive Committee meeting on Thursday evening fails to cover all agenda items (except for informational items), the clock stops at midnight for the sole purpose of voting on a Motion to adjourn until the beginning of the Friday Closing Plenary session at which time a specified list of agenda items will be addressed. Discussion on this motion will be limited to the establishment of the Friday agenda.~~

July 12, 2000

Proposed changed **Procedure 3 PROCEDURE FOR COORDINATION WITH OTHER STANDARDS BODIES** 4.21

- IEEE 802 communications
 - All communications with standards bodies outside of LMSC shall be approved by the Executive Committee prior to release.
 - All communications shall be sent under the signature of the LMSC Chair as the position of IEEE 802 and shall be copied to the SEC.
- Working group communications
 - All communications with standards bodies outside of LMSC that are not "Information Only" shall be reviewed by the Executive Committee prior to release.
 - All communications with standards bodies outside of LMSC that are "Information Only" can go directly to the standards body.
 - All communications shall be sent under the signature of the Working group Chair(s) as the position of the working group(s) and shall include the LMSC Chair in the communication distribution list.
- Incoming liaison letters to Executive Committee members shall be sent, as a minimum to the LMSC Chair.
- Informal communications are encouraged but should not imply that they are a formal position of the IEEE 802 or of the working group



Vic Hayes, Regulatory ombudsman

July-2000

Proposed new **Procedure 10 PROCEDURE FOR COMMUNICATION WITH GOVERNMENT BODIES** 4.21

- IEEE 802 position statements
 - All communications with government bodies shall be approved by the Executive Committee prior to release.
 - All communications shall be sent under the signature of the LMSC Chair as the position of IEEE 802 (stated in the first paragraph) and shall be copied to the SEC and the IEEE SA Standards Board Secretary and shall be posted on the IEEE 802 web site and reviewed after 5 years.
- Working group position statements
 - All communications with government bodies shall be approved by a majority of the working group and shall reviewed by the Executive Committee prior to release.
 - All communications shall be sent under the signature of the Working group Chair(s) as the position of the working group(s) (stated in the first paragraph) and shall include the LMSC Chair in the communication distribution list.
- Incoming liaison letters to Executive Committee members shall be sent, as a minimum to the LMSC Chair.
- Informal communications are encouraged but should not imply that they are a formal position of the IEEE 802 or of the working group
- Proposed position statements that need to be authored by other IEEE entities shall be approved by the SEC and forwarded to the IEEE SA Standards Board Secretary for further processing.



Vic Hayes, Regulatory ombudsman

July-2000

To initiate SEC letter ballot on a Rules change to add procedure 10 Communications with Government Bodies

Nikolich/Hayes

5 **10/0/0 Approved 11:00**

4.22-MI-Just Say No to Albuquerque- --Frazier

Frazier offers motion to go anywhere but Albuquerque. Dies for lack of a second.

10

4.23-MI-Future Meeting Venues- --Rigsbee

July 2003 Denver 9, La Jolla 0, New York 8, SF 2, Brighton UK 6

March 2004 Tampa 6, New York 6, Hilton Head 3, SF 7, Scottsdale AZ 0, San Antonio 1, La Jolla 0, none of the above 2

15

Marks expresses desire to go outside North America on a regular basis. Carlo wants to go to Europe, UK is not Europe. Many members express fondness for UK and Europe.

July 2004 Scottsdale AZ 6, San Antonio 11, La Jolla 0, Maui 8

20

November 2004 Tampa 6, San Antonio 9, Hilton Head 4 , Scottsdale 4, Maui 8

4.24-MI-Equipment Purchase (laptop)- --Rigsbee

Motion

25

Authorize Exec Secy to acquire new Hi-performance Dell laptop computer to support registration database functions. Current laptop will be made available for network server functions. Old Dell xPi 150 CD will be used for Onsite Web access for web registration for 802 attendees. Amount for new laptop not to exceed \$5k.

Rigsbee/{ seconder not recorded }

30

Rigsbee states that existing machine was purchased three years ago. It is out of date. Warranty has expired.

Thompson states that a backup device can be purchased for far less money.

Frazier states that a server could be purchased for far less money.

Frazier challenges assertion that machine is three years old. Reads minutes from march 1999 meeting, at which \$5k was allocated to purchase a laptop for the identical purpose.

35

2/0/7 Disapproved 11:28

4.25-MI- -

40

Empty agenda Item

4.26-MI- -

45

Empty agenda Item

4.27-DT-802 Attendance Projections- --Nikolich

(see file July2000AttendanceData.pdf)

50

(see file July2000AttendanceGraph.pdf)

(see file July2000ProjectPlan.pdf)

Nikolich states that we need a better method for estimating attendance.

Several members state that we can't predict the future.

55

Marks questions validity of prior meeting numbers, particularly numbers for his group.

If you don't check a box on the registration form, you get allocated to dot3

Attendance and Voting Member estimates as of July 1999
PLEASE PROVIDE UPDATES TO PAUL NIKOLICH by THURSDAY AFTERNOON

802 Attendance and Voter records and projections																					
Attendance for each 802 Working Group (obtained from Buzz's database and chair's estimates)																	.0b	.0, .x	ECSSG	IEEE	totals
		dot 3	dot 11	dot 16	dot 15	dot 1	dot 5	dot 14	dot 8	dot 10	dot 6	dot 12	dot 9	dot 2	dot 4	dot 7	QoS	staff&FtF			
Jul-95 Maui, HI	Jul-95	132	73			24	40	52	2	12	1	32	11	3	2	0			382		
Nov-95 Montreal, PQ	Nov-95	91	47			50	15	86	3	6	1	23	9	1	1	0			332		
Mar-96 San Diego, CA	Mar-96	195	71			72	33	113	2	1	1	26	11	1	1	0			526		
Jul-96 Enschede, Neth.	Jul-96	129	31			51	21	108	2	1	1	7	6	1	1	0			358		
Nov-96 Vancouver, BC	Nov-96	243	59			67	24	123	4	2	1	14	8	1	1	0			546		
Mar-97 Irvine, CA	Mar-97	262	61			57	24	93	11	2	1	13	8	2	1	0			534		
Jul-97 Maui, HI	Jul-97	250	60			59	10	78	3	2	1	6	5	1	1	0			475		
Nov-97 Montreal, PQ	Nov-97	210	83			57	29	47	5	5	0	8	2	3	0	0			449		
Mar-98 Irvine, CA	Mar-98	232	108			54	18	42	7	3	3	6	0	2	0	0			475		
Jul-98 San Diego, CA	Jul-98	175	104	1		40	22	48	4	1	3	1	1	1	0	0	7		401		
Nov-98 Albuquerque, NM	Nov-98	169	90	41		35	17	46	3	1	2	2	3	1	0	0	7		417		
Mar-99 Austin, TX	Mar-99	192	71	54		49	10	40	4	0	0	0	0	0	0	0	1		421		
Jul-99 Montreal, PQ	Jul-99	208	60	109	36	30	7	36	5	0	0	0	0	0	0	0			491		
Nov-99 Kauai, HI	Nov-99	208	85	103	25	32	6	0	6	0		1	1	1	1			5	474		
Mar-00 Albuquerque, NM	Mar-00	287	103	109	48	33	8	12	0										600		
Jul-00 San Diego, CA	Jul-00	408	182	148	90	31	5	10			1	3		1				11	890		
Nov-00 Tampa, FL	Nov-00	300	100	140	60	45	1												646		
Mar-01 Hilton Head, SC	Mar-01	175	100	140	60	45	1												521		
Jul-01 Portland, OR	Jul-01	150	90	140	60	45	1												486		
Nov-01 Austin, TX	Nov-01	125	90	140	60	45	1												461		
Mar-02 tbd	Mar-02																				
Jul-02 Vancouver, CN	Jul-02																				
Nov-02 Kauai, HI	Nov-02																				

7/14/00 rev07_00_802proj
Please submit updates to Paul Nikolich by Thursday afternoon

Project	Title	Pg Count	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99	Jan-00	Feb-00	Mar-00	Apr-00	May-00	Jun-00	Jul-00	Aug-00	Sep-00	Oct-00	Nov-00	Dec-00	Jan-01	Feb-01	Mar-01	Apr-01	May-01	Jun-01	Jul-01	Aug-01	Sep-01	Oct-01	Nov-01				
802	Operating Rules	Revised 7/95									revised																												
802	Func. Rqmts. Doc.	Revised 11/91																																					
802.1	Tony Jeffree, chair														Tony Jeffree, elected																								
	O & A revision	34																				F	A		I														
	s Mult. Span. Tree						W															S		F	A		I												
	t d Maint.											W										S		F	A		I												
	u q Maint.											W										S		F	A		I												
	v lLAN Class prot and port	P									W											S		F	A		I												
	w Rapid Reconfig.	P												W								S		F	A		I												
	x PortBased Net. Access													P								W					S					F	A						
802.3	Geoff Thompson, chair														reaffirmed																								
	ad Link Aggr						W				S			F			A					I																	
	ae 10Gbps Enet	sg					sg				P											W		S			F	A		I									
	af DTE Power	cfi					sg				P											W		S			F	A		I									
	ag 1802.3 Maint										P			W								S		F	A		I												
802.5	Bob Love, chair														reaffirmed																								
	v 1000M TR	100	W								S			F			A					H			I														
	w maint		S								F		A				I																						
	x 802.1q SrcRout	W												X																									
	z Link Aggregation	W												X																									
802.11	Stuart Kerry, chair														Stuart Kerry, elected																								
	a 20Mbps 5 GHz Phy		S				F		A		I																												
	b 5-11Mbps 2.4 GHz Phy		S				F		A		I																												
	e QoS Enhancement						sg							P								W		S			F		A		I								
	f Inter-Access Point Protocol													P								W		S			F		A		I								
	b corr-1 Corrīgenda										P			W								S		F		A		I											
	d Regulatory Domain						P?				W											S		F		A		I											
	sg 22 Mbps Phy													sg								P																	
802.15	Bob Heile, chair			C, ch apt											reaffirmed																								
	15.1 Base Std	P, origin as dot11	sg								W											S		F	A		I												
	15.2 Coexistence						sg				P											W		S			F	A		I									
	15.3 High Rate (20Mbps)										sg				P							W		S			F	A		I									
	sg Bluetooth Radio2																					sg					F	P											
	sg Low Rate WPAN																					sg																	
802.16	Roger Marks, chair			C, ch apt											reaffirmed																								
	16.1 Air Intf. For Fixed BWA (10-66GHz)		P																			W		S		R	F		A		I								
	16.2 Coexistence						P															W		S			F		A		I								
	16.3 2-11 GHz licensed bands										sg				P							W		S			F	W			S								
	sg 2-60 GHz unlicensed														sg							P																	
ECSG	Spatial Reuse Protocol														ecsg							P																	
SEC	current occupants																																						
802	Chair	Jim Carlo																																					
802	Vice Chair	Paul Nikolich																																					
802	Exec. Secy.	Buzz Rigsbee																																					
802	Recording Secy	Howard Frazier																																					
802	Treasurer	Bob Grow																																					
802	Regulatory Liaison	Vic Hayes																																					

C=Charter WG by Exec
P=Exec app. of PAR
W=App. for WG Ballot
S=Exec app. for Sponsor Ballot

R=Sponsor Ballot recirc
F=Exec fwd to Stds Bd
A=Stds Board App.
I=Pub. Issued

H= Hibernate
X= Withdrawn
T= Tutorial
sg=Study Group
D= Disband

4.28-DT-Networking 802 meetings- --Nikolich

(see file networkservice.pdf)

- 5 **Nikolich presents goals and plan in bullet form. Features web server, internet access.
Several members express concerns about the costs
Don Berry volunteers to be the “802 Champion” and present detailed plan at next meeting.**

Motion:

- 10 **Allocate \$10K for providing network services at next meeting.**

Nikolich/Hayes

3/6/0 Disapproved at 11:38

15

Motion:

Authorize Don Berry to obtain bids for netowrking services at the nov 2000 plenary.

- 20 **Nikolich/Frazier**

8/1/1 Approved at 11:56

802 Networking Service Plan

Objectives:

- 1) Printer sharing via LAN
- 2) Centralized document storage and retrieval via WEB server
- 3) Internet Access via LAN

To Proceed:

- 1) Need 802 'champion'--any volunteers?
- 2) Design
- 3) Implement
- 4) Maintenance and support at meeting
- 5) Outsource to local network consultant for Nov meeting

Motion:

Moved: Paul Nikolich

Second: Vic Hayes

Allocate \$10k for providing network service at next meeting

Yes___3___ No__6___ Abs_____

Note: Don Berry from Microsoft will provide a network design and estimate for costs before the next meeting.

4.29-DT-Audit Status- --Grow

Grow has submitted documents to IEEE for audit 14 weeks ago, heard no response. Owes copies of checks. Rigsbee owes them copies of our agreements with hotels for 1999.

5 Carlo asks if there are any issues with giving copies of the agreements with the hotels. Rigsbee says there are no Issues with sending copies of the agreements. Grow confirms that IEEE needs copies of the agreements.

Frazier asks about status of agreement with FacetoFaceEvents? Agreement has not been signed. Carlo proposes sending agreement to IEEE, and let them to send it back to us and tell us to sign it.

10 Frazier expresses opinion that agreement with FacetoFaceEvents should be signed before sending to IEEE.

Rigsbee gets action item to execute and sign agreement with FacetoFaceEvents by end of July 2000.

Rigsbee gets action item to send a copy of the agreement with FacetoFaceEvents covering 1999 to IEEE by end of July 2000.

15 **4.30-DT-Support for Interim Meetings- --Rigsbee**

Rigsbee presents 802 interim meeting proposal

Frazier suggests that Rigsbee put together a proposal to be submitted in November for an interim during CY2001.

20

4.31-DT- - -

Empty agenda Item

25 **4.32-DT- - -**

Empty agenda Item

4.33-II-Position Paper to FCC From 802.11 and 802.15- --Hayes-5 -11:20 PM

30

Rigsbee notes that this should be listed on the agenda as a Motion External. Frazier agrees. Hayes drafts a motion.

See file (fccletter.pdf)

35 **Motion:**

Submit the position paper to the FCC

Hayes/Heile

40

5/0/4 Approved at 11:52

**IEEE P802.11
Wireless LANs**

Draft 5, letter to the FCC on Docket No. 99-231

Date: July 13, 2000

Author: Jim Zyren Jerry Loraine
Intersil Corporation Micro Linear Corporation

July 13, 2000

Magalie R. Salas, Esquire
Secretary
Federal Communications Commission
445 12th St. SW
Washington, DC 20554

Re: Amendment to Part 15 of the Commission’s Rules for Spread Spectrum Devices, ET Docket 99-231

Dear Ms. Salas:

IEEE 802.11, the Working Group for Wireless LANs¹ and IEEE 802.15, the Working Group for Wireless Personal Area Networks² (“the Working Groups”) within the IEEE 802 LAN/MAN Standards Committee (“the Committee”) are writing to the Commission in regard to ET Docket 99-231: Amendment to Part 15 of the Commission’s Rules for Spread Spectrum Devices.

We wish to ensure that the CW Jammer test remains in the Commission’s rules, elimination of which was not proposed in the Notice (FCC ET Docket No. 99-231).

On October 4, 1999 the Committee submitted a letter to the Commission stating its position regarding proposed changes to procedures for compliance testing of Direct Sequence Spread Spectrum (DSSS) devices. Specifically, the Committee supported addition of a separate mathematical calculation to support the results of the CW jammer test. However, the Committee was concerned about the Gaussian interference test as critical parameters of this test are unspecified.

¹ IEEE 802.11 approved the submission of the paper with 47 members approving, 1 disapproving and 7 abstaining.

² IEEE 802.15 aproved the submission with 12 voting members approving and 1 disapproving.

The Gaussian interference test was proposed as an ALTERNATIVE, not as a replacement to the CW Jammer test. Therefore, elimination of the CW jammer test is not a logical outcome of this proceeding. Removal of the test would become an unfair restriction for future applicants for approval of their devices because they can not get approval under equal condition as their competition that already have devices approved under the existing rules.

Had the Notice provided additional information about the removal of the test, the Working Groups could have raised their additional justification for its retention

The Working Groups urge the Commission to retain the CW Jammer test supported by a separate mathematical calculation of system processing gain, as described in the Commission's Notice.

Signed by

Stuart J. Kerry, Chair IEEE 802.11

Philips Semiconductors, Inc

1251 McKay Drive, M4 Building

San Jose, CA 95131-1706

Phone: +1 408 474 7356

FAX: +1 408 474 7247

E-Mail: stuart.kerry@philips.com

....

....

Robert Heile, Chair IEEE 802.15

GTE Internetworking Technologies

733 Concord Ave

Cambridge MA 02138 USA

Phone: +1 781 466 2057

FAX: +1 508 222 0515

E-Mail: bheile@bbn.com

Cc: Jim Carlo, Chair, IEEE 802

Secretary of the IEEE SA Standards Board

4.34-II-802.11 Liaison Letter to ETSI-BRAN- --Hayes

(see file etsibranletter.pdf)

5 **Motion:**

Send the liaison letter to ETSI-BRAN

Hayes/Love

10

6/0/4 Approved at 11:54

IEEE P802.11
Wireless LANs

To: Mr Jamshid Khun-Jush, Chairman, ETSI Project BRAN

Cc: Jim Carlo, IEEE P802, Chairman
Howard Frazier, IEEE P802, Recording Secretary
Denise Pribula, IEEE Standards Department, Intellectual Property Manager

Date: July 13, 2000

Subject: re: IEEE P802.11 request to ETSI for considering the adoption of the IEEE P802.11a 5 GHz Wireless LAN standard as a member of HIPERLAN family of standards

Your ref: PLN1803a dated May 2, 2000

Dear ETSI BRAN Officers and Members,

Thank you for your advice that considerations regarding several areas are needed for EP BRAN to be able to make an assessment on the further handling of the IEEE P802.11 request that the IEEE P802.11a 5 GHz Wireless LAN standard be adopted as a member of HIPERLAN family of standards. These areas include regulatory, application and technical aspects.

Unfortunately the arrival of the liaison letter right at the end of the May meeting precluded its consideration until the July Plenary, and consequently we missed the opportunity to arrange attendance at the June BRAN meeting by an 802.11 delegation. We would be pleased to attend at the next available meeting, which we understand is in Stresa during October 3-6, 2000, to pursue a path to resolving the matters raised in your letter. We extend an invitation to BRAN members to attend any future IEEE 802.11 meetings, details of which are available on the IEEE 802 website (<http://www.ieee802.org/11/>). The next meeting will be in Scottsdale, Arizona, September 18-22, 2000. We also suggest that we explore the possibility of a joint ETSI BRAN/IEEE 802.11 meeting in the coming year.

The IEEE 802.11 WG is working to address the key points raised in your liaison letter. In particular, the matters of TPC and DFS are being studied in TGe (MAC Enhancement) and an Ad Hoc Group has been established to consider the harmonisation of existing standards towards adoption of a single global standard. It is anticipated that the Ad Hoc Group will identify overlapping services and applications as well as look at issues of coexistence of the different standards. We anticipate that representations from the Ad Hoc Group will be made during the BRAN#20 meeting in Stresa.

On the matter of IPR, IEEE P802.11 has obtained letters of assurance that owners of all IPR known to us will provide on request licenses without discrimination and for a reasonable fee. These letters ensure that all known IPRs were addressed in sufficient time to avoid the IEEE 802.11 family of standards being blocked at a later stage by the refusal of these IPR owners to grant licenses.

As per your request, a full set of documentation, including standards IEEE 802.11 (1999), IEEE 802.11a and the set of IPR letters are provided as attachments to this liaison.

Sincerely,

Stuart Kerry, Chairman IEEE P802.11,
Standards Working Group for Wireless LANs
811 E. Arques Avenue
M/S 42, PO Box 3409, Sunnyvale, CA 94088-3409
UNITED STATES OF AMERICA

Tel: +1-408-991-4854
Fax: +1-408-991-5758
e-mail: stuart.kerry@philips.com

Attachment 1: ISO/IEC 8802-11: 1999 (IEEE Std 802.11, 1999 Edition)
Attachment 2: IEEE Std 802.11a-1999
Attachment 3: Patent Report (<http://standards.ieee.org/db/patents/patreport.html>)

4.35-II- - -

Empty agenda Item

5 **4.36-II- -**

Empty agenda Item

The meeting was adjourned at 12:00pm.

10

The status reports which follow were submitted by the respective working group chairs.

Respectfully Submitted,
Howard Frazier
Recording Secretary

15

IEEE Project 802
Estimated Statement of Operations
July 2000 Meeting

open	9 July Operating Reserve	46,700	
July 2000 Meeting Income:		Actual	Budget
	294 Registrations@ \$300	88,200	
	557 Registrations@ \$250	139,250	
	Registrations@ \$100	0	
	Subtotal	227,450	125,875
	Deadbeat Registrations	0	0
	Bank Interest	200	200
	Other	850	450
plus	TOTAL Income	228,500	126,525
July 2000 Meeting Expenses:		Estimate	Budget
	Audio Visual Rentals	8,600	5,000
	Bank Charges	25	25
	Copying	8,500	9,750 *
	Credit Card Discounts	6,619	4,641 *
	International Program Fee	22,200	22,200 *
	IEEE 802 Free Standards		
	Meeting Administration	48,200	42,150 *
	Phone & Electrical	3,000	800
	Refreshments	56,000	23,400
	Shipping	3,500	3,000
	Social	42,000	15,600
	Supplies		22
	Other	1,000	
minus	TOTAL Meeting Expense	199,644	126,588
minus	Equipment Expense	8,000	5,000
equals	Jul 2000 Operating Reserve	67,556	
	Net Change in Operating Reserve	20,856	(63)

* Actual charges are based on registration, budget is based on registration forecast.

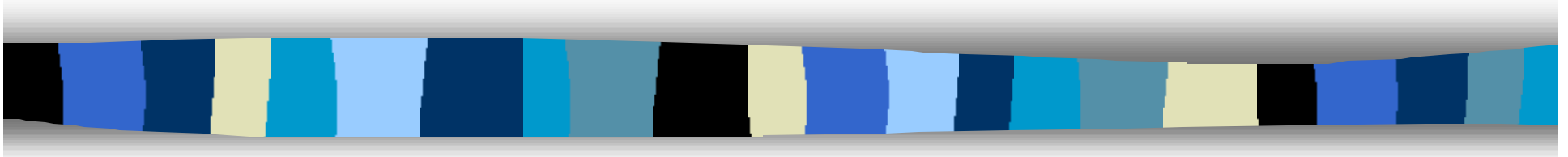
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	557 Registrations@ \$250	139,250	
	Registrations@ \$100	0	
	Subtotal	227,450	125,875
	Deadbeat Registrations	0	0
	Bank Interest	200	200
	Other	850	450
plus	TOTAL Income	228,500	126,525
July 2000 Meeting Expenses:		Estimate	Budget
	Audio Visual Rentals	8,600	5,000
	Bank Charges	25	25
	Copying	8,500	9,750 *
	Credit Card Discounts	6,619	4,641 *
	International Program Fee	22,200	22,200 *
	IEEE 802 Free Standards	62,900	
	Meeting Administration	48,200	42,150 *
	Phone & Electrical	3,000	800
	Refreshments	56,000	23,400
	Shipping	3,500	3,000
	Social	42,000	15,600
	Supplies		22
	Other	1,000	
minus	TOTAL Meeting Expense	262,544	126,588
minus	Equipment Expense	8,000	5,000
equals	Jul 2000 Operating Reserve	4,656	
	Net Change in Operating Reserve	(42,044)	(63)

* Actual charges are based on registration, budget is based on registration forecast.

	1999			2000			2001		
	Austin Actual March	Montreal Actual July	Kauai Actual Nov	Albq. Actual March	LaJolla Estimate July	Tampa Budget Nov	Hilton Head Budget March	Portland Budget July	Austin Budget Nov
Meeting Income:									
Registrations	415	469	474	598	851	700	600	500	400
Preregistration fee	275	250	250	250	250	250	250	250	250
On-site registration fee	300	300	300	300	300	300	300	300	300
Average Fee	286	266	266	270	267	260	255	255	255
Subtotal	118,800	124,650	126,150	161,700	227,450	182,000	153,000	127,500	102,000
Bank Interest	263	202	213	200	200	200	150	150	150
Other			475	450	850	400	400	375	375
TOTAL Income	119,063	124,852	126,838	162,350	228,500	182,600	153,550	128,025	102,525
Meeting Expenses:	March	July	Nov	March	July	Nov	March	July	Nov
Audio Visual Rentals	4,208	5,911	6,863	4,577	8,600	5,000	6,000	5,000	5,000
Bank Charges	1	133	1	0	25	25	30	30	30
Copying	4,819	2,384	4,818	6,721	8,500	8,400	7,200	6,000	4,800
Credit Card Discounts	3,383	3,245	3,364	4,145	6,619	5,096	4,284	3,570	2,856
IPF/Escrow	37,400	42,000	22,200	22,200	85,100	70,000	60,000	50,000	40,000
Meeting Planners	36,302	32,999	36,547	39,397	48,200	44,300	40,200	35,900	31,600
Phone & Electrical	822	618	986	556	3,000	1,000	1,000	1,000	1,000
Refreshments	15,814	9,988	25,626	22,610	56,000	23,100	19,200	16,000	12,800
Shipping	2,248	1,855	4,025	1,631	3,500	3,000	4,000	3,000	3,500
Social	9,596	7,125	23,411	18,426	42,000	16,100	12,000	10,000	8,000
Supplies	0	0	5	22	0	0	0	0	0
Other	1,100	70	2,806	223	1,000	1,500	2,000		1,500
Meeting Equipment	4,924	20,150	22,482	5,796	5,000	5,000	5,000	5,000	5,000
TOTAL Meeting Expense	120,617	126,479	153,134	126,305	267,544	182,521	160,914	135,500	116,086
NET to Operating Reserve	(1,554)	(1,627)	(26,296)	36,045	(39,044)	79	(7,364)	(7,475)	(13,561)
Opening Reserve	49,480	47,963	66,296	39,293	75,338	36,294	36,373	29,009	21,534
Projected Closing Reserve	47,926	46,336	40,000	75,338	36,294	36,373	29,009	21,534	7,973
Projected Closing Cash	36,726	35,136	28,800	64,138	25,094	25,173	17,809	10,334	(3,227)

802.1 - Activities & status



Tony Jeffree, WG Chair

13th July 2000



Areas of work

- 802 Architecture
- Interworking between 802 technologies
 - “Technical Plenary” if needed
- MAC Bridging
 - “traditional” bridging
 - VLAN bridging
- LAN management
- Website:
<http://www.ieee.org/groups/802/1/>



Status of current projects - (1)

- Standard 802 revision (Overview & Architecture)
 - Awaiting Sponsor confirmation ballot
- P802.1s - Multiple Spanning Tree support in VLANs
 - Further Task Group ballot on Draft 7



Status of current projects - (2)

- P802.1t - Tech & ed corrections to 802.1D MAC Bridges
 - Draft 8 to Recirculation ballot, then to Sponsor Ballot
- P802.1u - Tech & ed corrections to 802.1Q VLANs
 - Draft 7 to Sponsor Ballot



Status of current projects - (3)

- P802.1v - VLAN classification by protocol and port
 - Draft 4 to RecRecirculation ballot, then to Sponsor Ballot
- P802.1w - Rapid Spanning Tree reconfiguration
 - Draft 6 to Working Group ballot



Status of current projects - (4)

- P802.1X - Port based network access control
 - Draft 7 to Confirmation Ballot

802.3 CSMA/CD Working Group Status

Major Activities this week (July 2K):

- P802.3ae 10 Gigabit Ethernet
App'd mat'l for MAC & PCS
App'd 2 PMDs, not done yet.
- P802.3af DTE Power via MDI
Review lab work, start draft work
- 1802.3 Rev. (10BASE-T Conformance)
P802.3rev draft fwd to Sponsor ballot
- Maintenance #6 revision PAR to Nescom
- Maintenance #6 Pkg to WG Ballot

802.3 CSMA/CD Working Group Officers

- 802.3 Chair: Geoff Thompson
(thompson@ieee.org)
- 802.3 Vice Chair: David Law
(davel@pdd.3Com.com)
- 802.3 Secretary: Bob Grow
(bob.grow@intel.com)
- P802.3ae 10 Gig E'net: Jonathan Thatcher
(jonathan@worldwidepackets.com)
- P802.3af DTE Power via MDI:
Steve Carlson (scarlson@esta.org)

- 802.3 CSMA/CD Web site
- Information always available on our web site:
<http://grouper.ieee.org/groups/802/3/index.html>

**IEEE P802.3ae Task Force Interim Meeting
IEEE P802.3af DTE Power via MDI Task Force
Interim Meeting**

Hosted by Enterasys Networks

Tuesday, Sept 12 thru Thursday, Sept 14, 2000

Hotel tbd

Boston area

IEEE P802.11, Wireless LANs

[Http://www.ieee802.org/11](http://www.ieee802.org/11)

Chair: Stuart Kerry

Vice Chair: Al Petrick

Co-Vice Chair: Harry Worstell

Secretary: Tim Godfrey

IEEE P802.11, Wireless LANs

802.11d
802.11b-cor1

802.11e
802.11f

Liaison and Contact with
regulatory agencies

Study Group for
Higher Rate 802.11b

MAC

2.4 GHz
Frequency.
Hopping
Spread
Spectrum

1 Mbit/s
2 Mbit/s

2.4 GHz
Direct
Sequence
Spread
Spectrum

2 Mbit/s
1 Mbit/s

Infra-
Red

1 Mbit/s
2 Mbit/s

2.4 GHz
Higher
data rate
extension

802.11b

5.5 Mbit/s
11 Mbit/s

5 GHz
High data
rate
extension

802.11a

6, 12, 24 Mbit/s
9-54 Mbit/s

Legend: italic (and red) = optional

IEEE P802.11, Wireless LANs

**802.11d Regulatory
domain update**

**Chair: Bob O'Hara
WG Reconfirmation Letter Ballot 22**

**802.11b-cor1
corrigendum MIB**

**Chair: Carl Andren
Approved ISO version 8802-11amd2**

**802.11e
MAC enhancements
QoS/Security**

**Chair: John Fakatselis
Completed functional requirements**

**802.11f Rec.
Practices Inter-
Access Point Prot.**

**Chair: Dave Bagby
Completed functional requirements**

**Study Group for
Higher rates of .11b**

**Chair: Matthew Shoemake
Submitted PAR. Drafting procedure, func.
requirements and comparison criteria**

IEEE P802.11, Wireless LANs

Regulatory matters

- **Received a status report on FCC Docket 99-231**
- **Rules change in the 2.45 GHz band**
 - Wide band Frequency Hopping
 - Test requirements for Direct Sequence
- **Interesting compromise proposal filed**
 - To add rules similar to the CEPT/ETSI regulations
- **No actions taken**
- **Vote to approve IS 8802-11/DAM1**
 - 6-54 Mbit/s in the 5 GHz band

IEEE P802.11, Wireless LANs

TGd, Regulatory domains

- **Resolved no votes by contacting no voters and without making changes to the resolution comments document for LB 22**
- **Submit results to 802 chairperson for final approval to SEC**

Study Group MAC Enhancements

- **SEC approved 2 PARs for submission to NesCom**
 - **802.11e (Supplement for MAC enhancements on QoS and security)**
 - **802.11f ([Recommended Practices for Multi-Vendor Access Point Interoperability via Inter-Access Point Protocol across Distribution Systems supporting IEEE P802.11 operation.]**

IEEE P802.11, Wireless LANs

TGb-cor1, Repair MIB

- **Proposed to include PICS reference number correction**
- **Will become an errata sheet**
- **Draft will go out for Sponsor Ballot**

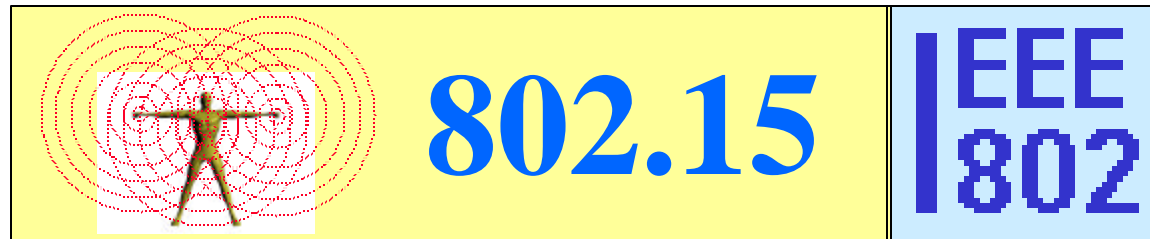
Study Group 802.11b improvement

- **Received no comments or objections to PAR and 5 Criteria**
- **Submitted PAR to SEC and received approval contingent on a WG reaffirmation of PAR by e-mail LB**
- **Drafted IEEE Press Release, Proposal Selection Process, Functional Requirements and Comparison Criteria**

IEEE P802.11, Wireless LANs

Interim meeting

- **September 18-21, 2000, Hosted by Motorola**
- **Radisson Resort & Spa, Scottsdale, Arizona, USA**
- **Co-located with 802.1 and 802.15**
- **Objectives:**
 - **Process results of TGd LB 22**
 - **Process results of 802.11b-cor1 ISO version of 8802-11amd2**
 - **Continue work on 802.11e and 802.11f and HRb SG**
 - **Send letters to liaison groups and to regulatory agencies as needed**
 - **Approve WG operating rules**



7th Session of meetings of the IEEE 802.15 Working Group for Wireless Personal Area Networks

July 10-14, 2000

Closing Report to 802

Hyatt Regency La Jolla
3777 La Jolla Village Drive
San Diego, CA. 92122

Objectives of the LaJolla Meeting

July 10-14, 2000

WG: Call for Interest on Low Rate and SIG Radio2 SGs

TG1: Comment Resolution

Planning for update to D0.7.2

Begin production of D0.8

Plan for production of D1.0

TG2: MAC & PHY Model Presentations.

Present several detailed PHY Model results.

Present MAC Model results using the PHY Model available results.

Review updated outline of Recommended Practice.

Bluetooth Coexistence Working Group Liaison

Objectives of the LaJolla Meeting

July 10-14, 2000

- TG3** **Summarize Conference Call results & vote on acceptance of work**
Continuation of CFA Presentation
Continue CFP Presentation
Initiate subcommittees work to analyze and compare
PHY/MAC/Host Radio Interface proposals. ----Also
include QOS, Coexistence, Bluetooth and System
liaisons.
- MC:** **Report/Review Seattle action items**
Review status of ongoing activities

TG1-Bluetooth Summary

- All technical, most “E” LB3 Comments resolved, summarized in –00/159r7 worksheet.
- LB3 Comment Resolution 10-13Jul00, post meeting, and possibly into Aug00.
- Once resolved, apply edits from 00/159r7, BSIG v1.1, et. al. to next Draft
- LB(4) Recirculation, est. Sep00
- Draft ready for Sponsor Ballot prior to Nov00 Plenary a possibility, but not likely

TG1-Bluetooth

September 2000 Objectives

- Comment Resolution follow-up
- Begin production of D0.8
- Plan for production of D1.0

- See 00/181r0 for details of planning process

TG2-Coexistence Deliverables

- Coexistence Model
 - Model describing the mutual interference of WLAN and WPAN upon one another.
- Coexistence Mechanisms
 - Mechanisms or techniques to facilitate coexistence of WLAN and WPAN devices.
- Both to be documented in an IEEE Recommended Practice

TG2-Coexistence

Current Coexistence Organization

- TG2 is within 802.15 Working Group
- All 802.11 members are encouraged to participate
- Only 802.11 liaisons can vote in TG2
- Both 802.11 and 802.15 vote on the Recommended Practice

TG2-Coexistence

New Proposed Organization

- A Fully Joint Coexistence Task Group.
- Multiple Co-Chairmen
 - Steve Shellhammer (802.15)
 - New co-chair (802.11)
 - Later add another new co-chair (802.16)
- TG meetings part of both 802.11 & 802.15 meeting plans
- All 802.11 and 802.15 members can vote

TG2-Coexistence

New Proposed Organization

- New title: *Wireless Coexistence Task Group*
- Jointly address all 802 Wireless Coexistence Issues
- A forum for collaboration between 802.11, 802.15 and 802.16 on all issues of coexistence arising with Wireless 802 Working Groups

TG2-Coexistence

Coexistence Presentations

- Rich Ditch, *Bluetooth SIG Coexistence Working Group Liaison Report #1, 00/228r0*.
 - Described BT SIG Coexistence WG
 - Looking at applications and environments
 - Expected Interferers
 - Look first at impact of other on Bluetooth
 - Look next at impact of Bluetooth on others
 - Not doing PHY or MAC layer simulations

TG2-Coexistence

Coexistence Presentations

- Peter Voltz, *Physical Layer Model of the Impact of Bluetooth on IEEE 802.11b, 00/220r0.*
 - BER versus Signal-to-Interferer Ratio (SIR)
 - Included Multipath delay spread
 - Still need to add equalizer into model

TG2-Coexistence

Coexistence Presentations

- Jim Lansford, Bluetooth *Physical Layer Modeling Update*, 00/229r0.
 - Environment Description (Geometry)
 - PHY/MAC Model Interface
 - Initial Simulation

TG2-Coexistence

Coexistence Presentations

- Gary Kelson, *Berkeley Wireless Research Center, 00/221r0*.
 - Overview of Research Center
 - Mostly interested in implementations.
 - Universal Spectrum Sharing (USS) Project.
 - Thinking about Uncoordinated Coexistence Mechanisms.

TG2-Coexistence

Coexistence Presentations

- Steve Shellhammer, *TG2 Submission to Bluetooth SIGnal*, 00/160r1.
 - For regular column on IEEE 802.15
 - Review comments from Ian Gifford
 - Made some edits from r0 to r1
 - Emailed 00/160r1 to Ian Gifford and Bruce Kraemer

TG2-Coexistence

Coexistence Presentations

- Nada Golmie, *MAC Layer Model Parameters for First Experiment, 00/222r0.*
 - Simplified scenario (2 BT & 2 802.11)
 - Describe BT and 802.11b Traffic
 - Intended to validate by experimentation

TG2-Coexistence

Coexistence Presentations

- Steve Shellhammer, *TG2 Project Plan*, 00/089r1.
 - Updated the TG2 Project plan.
 - Continue working on *Coexistence Model*.
 - Call for *Coexistence Mechanisms* in September.
 - Presentations on Coexistence Mechanisms
 - November 2000
 - January 2001

TG2-Coexistence

Objectives for September Meeting

- Bluetooth Coexistence WG Liaison Report
- Results of First Integrated PHY/MAC Model Application
- Presentation on RF Propagation Model
- Call for Coexistence Mechanisms
- Work on Evaluation Criteria for Coexistence Mechanisms.

TG3-High Rate WPAN

Goals of the July Meeting

- ✓ Approve results of conference calls
 - ✓ 110r10P802-15_TG3-Criteria-Definition
- ✓ Continuation of CFP Presentations
- ✓ Initiate sub-committee work to analyze and compare PHY/MAC proposals.
- ✓ Update criteria definition if required.
- ✓ Identify SEP00 Objectives & Graphic

TG3-High Rate WPAN

Summary of July Meeting

- Proposals
 - 5 PHY, 1 MAC, 4 PHY/MAC
 - 2.4 GHz, 5 GHz, UWB
- July Submissions Summary
- July Document Summary
 - Updated Criteria Document – 00/110r11
 - Evaluation Process Flowchart – 00/180r2

TG3-High Rate WPAN --Proposals

- Intersil (March) – Waveform
- Rypinski (March) – PHY/MAC – 5 GHz
- Motorola (Davis) – PHY/MAC – 5 GHz
- Motorola (De Courville/Dydyk) – PHY – 5 GHz
OFDM
- Intermec - MAC
- Kodak – PHY/MAC – 2.4 GHz
- Supergold – PHY – 2.4 GHz
- TI – PHY – 2.4 GHz
- Xtreme Spectrum – PHY - UWB
- Broadcom – PHY – 2.4 GHz or 5 GHz
- Radiata – PHY/MAC – 5 GHz OFDM
- LinCom – PHY/MAC – 2.4 GHz (withdrawn)

TG3-High Rate WPAN July Submissions Summary

00/051	HRSG-Desirable-PHY-Modulation-wrt-HR	doc	Roberts/Kraer
00/077	HRSG Case for DOQPSK High-Rate Physical Medium Modulation	pdf	Rypinski
00/195	TG3 XtremeSpectrum Multimedia Data Rate WPAN Proposal	ppt	Rofheart
00/196	TG3 A COFDM Scheme for IEEE's High Rate WPAN	ppt	Skellern
00/199	TG3 Texas Instruments Physical Layer Presentation	ppt	Dabak
00/200	TG3 Texas Instruments Physical Layer Submission	doc	Dabak
00/201	TG3 An OFDM Solution Providing Compatibility Between the Next Generation of High Rate Wireless PANs and Wireless LANs	doc	de Courville
00/205	TG3 MAC Proposal for High Rate WPAN	ppt	Kinney
00/206	TG3 Physical Layer proposal for the High Rate 802.15.3 Standard	ppt	Davis
00/207	TG3 Physical Layer submission for the High Rate 802.15.3 Standard	doc	Davis
00/208	A MAC Layer proposal for the High Rate 802.15.3 Standard	ppt	Davis
00/209	A MAC Layer submission for the High Rate 802.15.3 Standard	doc	Davis
00/210	SuperGold Encoding for High Rate WPAN PHY Layer	ppt	O'Farrell
00/211	Broadcom Frequency Hopping, multimode QAM PHY for HRWPAN	ppt	Karaoguz
00/212	TG3 Eastman-Kodak-HighRate-MAC-Proposal	ppt	Heberling
00/213	TG3 Reusable SW Components	doc	Heberling
00/214	TG3 - Kodak - High Rate PHY Proposal	ppt	Carlson
00/215	TG3 - Eastman Kodak Support Document for PHY Proposal	doc	Carlson
00/225	TG3 - An OFDM Solution Providing Compatibility Between the Next Generation of High Rate Wireless PANs and Wirelss LANs	ppt	de Courville /E

TG3-High Rate WPAN

July Document Summary

00/110	TG3-Criteria-Definitions	doc	DuVal
00/165	TG3-July00 Meeting Objectives and Agenda	xls	Barr
00/170	TG3 July00 Minutes	doc	Kinney
00/174	WG-TG3 Opening Report July00	ppt	Barr
00/178	WG-TG3 Closing Report July00	ppt	Barr
00/180	TG3 Evaluation Process Flow Chart	ppt	Allen
00/191	TG3 BSIG PM Pitch 16Jun00	ppt	Barr
00/226	TG3 Proposal Eval Form		Evans
00/227	TG3-Proposed-Criteria-Changes	ppt	Alfvin
00/230	TG3_Pugh-Selection-Clarification	ppt	Allen
00/236	TG3 Proposal to Reinstate the Pugh Matrix Sensitivity Values	ppt	Nafie

TG3-High Rate WPAN Status and Plans for TG3

- Construction of Initial Draft

Goal: everything you need to know to construct the lower layers of high rate WPAN (future Bluetooth?)

- Schedule

Goal: Produce a Standard by the end of 2001 or early 2002

- Next Steps

Goal: Selection of candidate MAC/PHY, September, 2000. Working Group draft, May, 2001. Sponsor ballot, November, 2001.

TG3-High Rate WPAN Teleconference Calls

- Held every Tuesday between F2F meetings starting July 25.
- Evaluation and ranking of proposals in order to prepare initial draft recommendation for September.
- Three teams:
 - System – Mary DuVal – TI
 - PHY – James Gilb – Mobilian
 - MAC – Allen Heberling - Kodak

TG3-High Rate WPAN

September Meeting Goals

- Summarize Conference Call results & vote on acceptance of work
 - Approve other work items
 - Selection initial PHY/MAC candidates
- Folding CFA data into Criteria Document – Document Complete – Vote on acceptance
- Call for Patents

Executive Committee Action on Study Group Proposals

- Bluetooth Radio2 Study group approved
- Low Rate WPAN Study Group approved

Next Meeting

**Joint IEEE Interim 802.11, 802.15 and 802.1 Standards Meetings
September 18-21, 2000
Hosted By:
Motorola**

Hotel Information: Radisson Resort & Spa
7171 North Scottsdale Road
Scottsdale, AZ 85253-3696
USA

Direct Reservations Phone: 1-800-333-3333
Reservation Facsimile: +001 480-948-9843
Phone: +001 480-991-3800

Hotel Reservation Deadline: Thursday, August 10, 2000

Archive, Mailing List, URLs

- Web Page
 - <http://www.ieee802.org/15/>
- Mailing List
 - stds-802-wpan@majordomo.ieee.org
- Bluetooth Special Interest Group
 - <http://www.bluetooth.com/>
- Home RF Working Group
 - <http://www.homerf.org/>

To add your name to IEEE mailing list please send an e-mail to Mike McInnis: michael.d.mcinnis@boeing.com

S o L o n g a n d T h a n k s f o r a l l t h e F i

Hitchhikers Guide to the Galaxy

Acronym's & Glossary

- IEEE (Institute of Electrical and Electronics Engineers, Inc.)
- MAC (Medium Access Control) Layer
- PHY (Physical) Layer
- TG (Task Group)
- SG (Study Group)
- MC (Marketing Committee)
- WG (Working Group)
- WPAN (Wireless Personal Area Networking)
- Bluetooth (Bluetooth Special Interest Group is the codename for a technology specification for small form factor, low-cost, short range radio links between mobile PCs, mobile phones and other portable devices.)
- HomeRF (The HRFWG plans to publish the SWAP specification by fall of 1998 and companies may begin product development shortly thereafter.)

IEEE 802.16 Session #8 Report

Session #8 of the IEEE 802.16 Working Group on Broadband Wireless Access took place on 10-13 July 2000 as part of the [July IEEE 802 Plenary Meeting](#) in La Jolla, California, USA.

Working Group 802.16

The IEEE 802.16 Working Group on Broadband Wireless Access Standards is creating the WirelessMAN™ family of standards for wireless metropolitan area networks. The mission of Working Group 802.16 is "to develop standards and recommended practices to support the development and deployment of fixed broadband wireless access systems." 802.16 is a unit of the [802 LAN/MAN Standards Committee](#), the premier transnational forum for wired and wireless networking standardization.

Task Group 1

Task Group 1 (TG1) is developing an Air Interface for Fixed Broadband Wireless Access Systems (10-66 GHz) under IEEE PAR 802.16.1. At Session #8, the group accepted a revised PHY [802.16.1p-00/07r2](#) after considering several proposals on Forward Error Correction and a proposed major edit [802.16.1pc-00/38](#) of the previous draft. TG1 then resolved to develop its MAC draft on the basis of [802.16.1mc-00/21r1](#). In order to remain on schedule for completion of a Working Group draft of 802.16.1 before the end of the year, the Task Group agreed to move to a Final Task Group Review. This electronic comment submittal process, soliciting specific change requests, will begin by 4 August and close on 1 September. The plan gives an editorial team almost three weeks to produce a single coherent document based on [802.16.1p-00/07r2](#), [802.16.1mc-00/21r1](#), and the 802.16.1 Functional Requirements [802.16s-99/00r1](#). The intent is to, at Session #9, review the results and initiate a Working Group Letter Ballot based on an updated version.

Task Group 2

Task Group 2 (TG2) is developing a Recommended Practice on Coexistence of Broadband Wireless Access Systems under IEEE PAR 802.16.2. The draft document was reviewed and changes recommended for several sections. Modeling results were reviewed, with results incorporated into document as appropriate. The timeline was revised ([802.16.2-00/02r2](#)), but the process remains on schedule to initiate a Working Group letter ballot in November.

Task Group 3

Task Group 3 (TG3) is developing an Air Interface for Fixed Broadband Wireless Access Systems in Licensed Bands from 2 to 11 GHz under IEEE PAR 802.16.3. TG3 continued to focus mainly on developing its Functional Requirements; it and completed resolution of the many comments it had received. A new version will be accompanied by a Call for Comments in time for comment resolution at Session #9. TG3 also developed a list of Key Characteristics of the 802.16.3 Air Interface Standard ([802.16.3-00/07r1](#)) and it issued its reactions to a press release from the IEEE-ISTO ([802.16.3-00/08](#)). Four motions recommended in this document were later approved by Working Group 802.16.

WirelessHUMAN™ Study Group

The Wireless High-Speed Unlicensed Metropolitan Area Network (WirelessHUMAN™) Study Group is studying standardization for broadband fixed wireless access in the 5-6 GHz

license-exempt bands, with primary focus on the 5.25-5.35 GHz and 5.725-5.825 GHz bands. It conducted a well-attended tutorial ([802.16hp-00/08](#)) for IEEE 802 on Monday 10 July. It then met during the week and issued a Study Group Report ([802.16hp-00/09](#)) requesting its renewal through Session #10, with an indication of intent to draft a Project Authorization Request (PAR) based on standards that either exist or are in development. The Study Group report includes text of a Call for Contributions and of two liaison letters. On 13 July, 802.16 voted to continue the Study Group through Session #10 based on this report. This decision was affirmed by the IEEE 802 Executive Committee on 13 July.

Liaison Letters

Based on a previous liaison letter and a meeting between the 802.16 Chair and ETSI BRAN Chair Jamshid Khun-Jush, 802.16 issued a Liaison Letter to ETSI BRAN [802.16l-00/19](#). Based on input from TG3, 802.16 issued a second ETSI BRAN Liaison Letter ([802.16l-00/21](#)). Based on input from TG2, 802.16 issued a Liaison Letter to ETSI TM4 ([802.16l-00/20](#)). All three of these letters were approved by the IEEE 802 Executive Committee on 13 July.

IEEE 802 Position Statement on IEEE 802.16 Broadband Wireless Access (BWA) Working Group Conflict of Interest with recent IEEE-ISTO announcement

Based on input from 802.16 and several other 802 Working Group, IEEE 802 issued an [IEEE 802 Position Statement on IEEE 802.16 Broadband Wireless Access \(BWA\) Working Group Conflict of Interest with recent IEEE-ISTO announcement](#).

Attendance and Membership

At Session #8, the 802.16 membership increased by 28, from 78 to 106. In addition, four people earned membership status but did not claim it. The total sign-in attendance at the meeting was approximately 165.

Future Meetings

The Working Group voted on 13 July to hold Session #11 in Tel Aviv, Israel on 22-26 January 2001. The host will be Naftali Chayat of BreezeCOM. **Session #9** will be held in Denver, Colorado, USA on 11-15 September in conjunction with the [IEEE Radio and Wireless Conference](#); a meeting announcement will be issued soon. Session #10 will be held in Tampa, Florida, USA on 6-10 November in conjunction with an IEEE 802 Plenary Meeting.

Roger Marks

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See [IEEE 802.16 Web Site](#)

RPRSG ECSG Status

July 13, 2000 SEC Meeting

Mike Takefman

RPRSG Meeting Summary

- **30 people / 19 organizations**
- **13 presentations**
- **MAC Layer Model & 802.1D/Q bridging discussed**

will forward a description to 802.1 for comment

- **PAR and 5 Criteria complete**
revisit based on comments from 802.*

RPRSG Interim Meeting

- **August 28/29, 2000 in San Jose**
802.1D/Q compatibility
Simulation / Evaluation Criteria
Draft Objectives
Press Release

1. Broad Market Potential

- Broad sets of applicability.
 - Multiple vendors and numerous users.
 - Balanced costs (LAN versus attached stations).
-

- **Presentations given to the Resilient Packet Ring Study Group has identified customer demand for resilient packet rings in the following application areas:**
 - ISP Intra-POP LANs
 - Inter-POP MANs and WANs (e.g. ISP; MSO; *LEC)
 - Enterprise Campus LAN Backbones
 - Enterprise MANs and WANs
 - Multi-provider customer access MANs
- **An efficient bandwidth sharing mechanism for ring topologies will provide optimum cost / performance for the identified application areas.**
- **At an 802 tutorial session, 33 individuals representing 14 organizations (including vendors of computer systems, networking systems, networking silicon, and Internet Service Providers) expressed interest in working on a standards project in this area. An RPRSG interim meeting was attended by 26 individuals representing 13 organizations. An RPRSG plenary meeting was attended by 30 individuals representing 19 organizations.**
- **In Metropolitan and Wide Area Networks, the medium (fiber optic cable) represents a significant portion of the total hardware cost. This standard will optimize the cost balance between the network medium and the station attachment hardware for ring topologies.**

2. Compatibility

- 802. Overview and Architecture
 - 802.1D, 802.1Q, 802.1f.
 - Systems management standards.
-

- **The Resilient Packet Ring standard will be fully compatible with the 802 Overview and Architecture document.**
- **The Resilient Packet Ring standard will be compatible with the relevant portions of 802.1D, 802.1Q and 802.1f.**
- **The Resilient Packet Ring standard will be compatible with the Simple Network Management Protocol. The MIB for RPR will be defined and submitted to the IETF.**
- **Selection of the frame format for the RPR is a subject of investigation for the working group. At the present time the 802.3 frame format with either the TYPE or LENGTH interpretation is being given prime consideration.**

3. Distinct Identity

- Substantially different from other IEEE 802 standards.
 - One unique solution per problem (not two solutions to a problem).
 - Easy for the document reader to select the relevant specification.
-

- **There is no other IEEE 802 standard which addresses high speed (622 Mbps and above) ring topologies optimized for data transmission.**
- **There is no other IEEE 802 standard which specifies a bandwidth sharing algorithm for data rates in excess of 1 Gbps.**
- **This standard will provide a solution which provides high speed, scalable, resilient ring based networks featuring spatial reuse and protection mechanisms (capable of sub 50 ms switching).**
- **The standard will define a single Media Access Control algorithm, along with multiple Physical Layer options, formatted in a fashion similar to other 802 standards.**

4. Technical Feasibility

- Demonstrated system feasibility.
 - Proven technology, reasonable testing.
 - Confidence in reliability.
-

- **Presentations given to the RPRSG have demonstrated the technical feasibility of candidate protocols using simulation. Empirical results will be presented at a future meeting.**
- **Several implementations of candidate protocols exist in the industry, embodied in commercially available products comprising:**
 - Systems (routers, switches, Add drop nodes for optical networks, hubs)**
 - Host interfaces (NICs)**
 - Chipsets**
 - Optical components**
- **Implementations of candidate protocols are currently deployed in major Service Provider and enterprise environments.**
- **Simulations have been used to demonstrate the feasibility of reliable protocols under a range of operating conditions. Traffic models, configurations and metrics for evaluating candidate protocols will be developed as part of the working group.**

5. Economic Feasibility

- Known cost factors, reliable data.
 - Reasonable cost for performance.
 - Consideration of installation costs.
-

- **Several implementations of high speed resilient packet ring networks exist in the industry from different vendors. The cost factors for the various components and sub-assemblies, as well as complete systems, are well known.**
- **In high speed networks, fiber optic components dominate the cost of a station. For data rates of 1 Gbps and below, the cost associated with these components is declining rapidly as technologies such as Gigabit Ethernet and Fiber Channel increase in volume. For data rates greater than 1 Gbps, this standard, as well as 802.3ae, and other industry standards (Fibre Channel, InfiniBand, etc) will generate the volumes necessary in order to produce similar cost reductions.**
- **The costs associated with a network based on this standard will be competitive with other technologies operating at similar data transmission rates. One of the goals of this project is to eliminate layers of equipment and reduce the port counts in a typical customer's network, thus reducing cost.**
- **The cost of installations based on a ring topology has been given prime consideration in the development of this project proposal. Ring topologies are preferred for MAN and WAN applications because they entail a lower installation cost than a mesh topology.**