



19th Session of meetings of the IEEE
802.15 Working Group for Wireless
Personal Area Networks

Closing Report, July 12, 2002

Hyatt Regency Vancouver
British Columbia, Canada

**IEEE 802.15.1 (Bluetooth)
Closing Report
Vancouver, BC**

IEEE 802.15.1 (Bluetooth)

- Decided not to pursue ISO/IEC fast track filing
 - IEEE is sufficiently interantional
 - Reduces confusion of what is up to date

IEEE 802.15.2
WLAN/WPAN Coexistence Task Group
Closing Report
Vancouver, BC

Working Group Letter Ballots

- Completed two letter ballots on May 1
- Ballot Review committee resolved all comments
- Attempted to contact No voters to review comment resolution.
- Letter Ballot 14 (IEEE 802.15)
 - 79.3% approval after comment resolution
- Letter Ballot 34 (IEEE 802.11)
 - 71.5% approval after comment resolution

Motion

- Apply comment resolution database 02/219r5 and 02/236r5 to draft version D05 producing version D06 to be sent out for a 20-day IEEE 802.15 Working Group Recirculation Letter Ballot
 - Move: Steve Shellhammer
 - Second: David Cypher
 - Passed Unanimously

802.15 Task Group 3 High Rate WPANs
Closing Report
July 2002, Vancouver, BC
Canada

Goals for July

- ✓ Conference call status, including approval of any ad hoc business.
- + Letter Ballot Comment resolution
- ExCom Sponsor Ballot Prep (Letter Ballot)
 - Will need WG motion to authorize forwarding to ExCom
 - White paper clarifying coexistence methods supporting our PAR
- Update Draft as Required (D11)
- Ballot Recirculation

LB12 Results

- 75 out of 89 voters returned a ballot
- 41 voted yes (66.1 %)
- 21 voted no (33.9 %)
- 4 abstained (6.1 % of total votes)
- 58 resolved yes (93.5 %)
- 4 unsatisfied resolution (6.5 %)

LB12 No Voter Status

	NO (22)	E	T	TR	Total	Reply Status	Unsatisfied Resolution
1	Akahane	27	-	2	29	Resolved	
2	Bain	24	23	9	56	Resolved	
3	Chen, KC	3	-	6	9	Resolved	
4	Dydyk	3	3	-	6	Resolved	
5	Golmie	-	1	-	1	Resolved	
6	Huang	23	4	13	40	Resolved	
7	Lansford	-	1	-	1	Resolved	Signed off on hard copy.
8	Rofheart	-	-	3	3	Resolved	
9	Young	5	2	12	19	Resolved	
10	Cypher	2	-	6	8	Unresolved	# 89
11	Gubbi	24	-	42	66	Unresolved	24 unsatisfied (No response)
12	Chen, HK	3	-	6	9	Unresolved	# 1754
13	DuVal	59	26	10	95	Resolved	
14	Heberling	33	83	59	175	Resolved	
15	Herold	-	1	-	1	Resolved	
16	Kerry	-	1	-	1	Resolved	Signed off on hard copy.
17	Kleindl	29	6	17	52	Resolved	
18	Liang	-	2	-	2	Resolved	
19	Roberts	142	154	135	431	Resolved	
20	Seals	-	1	4	5	Resolved	Signed off on hard copy.
21	Shellhammer	-	3	7	10	Resolved	
22	Shvodian	124	83	170	377	Unresolved	#1629 & #1648
	Total	501	394	501	1396		

LB17 Results

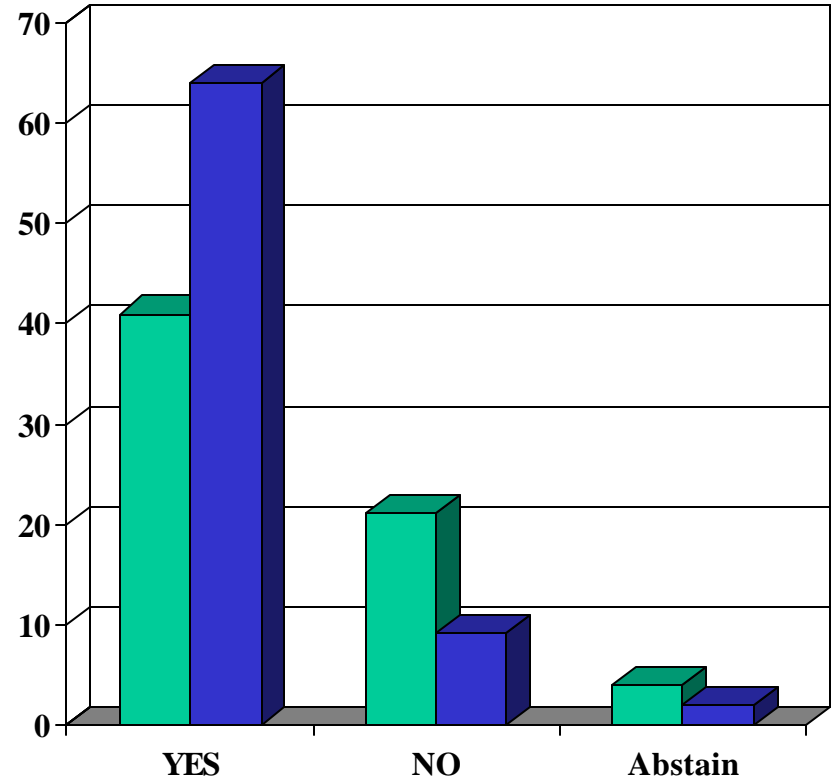
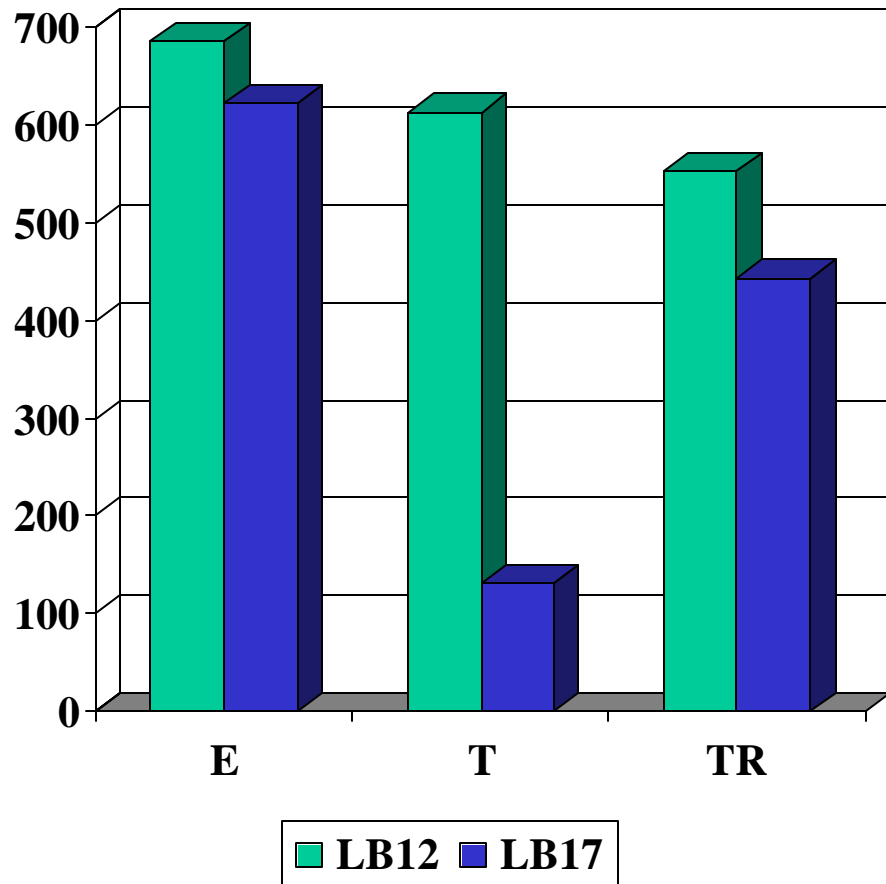
June 12 – July 2

- 75 out of 89 voters
- 64 voted yes (87.7 %)
- 9 voted no (12.3 %)
- 2 abstained (2.7 % of total votes)
- Participation (84.3 %)

LB17 Comment Status

	LB17 Voter	Vote	LB12 Unresolved	Comments			Total	Unresolved			Comments
				E	T	TR		E	T	TR	
1	Allen	Y/C		11	0	0	11		0	0	
2	Bain	N		53	37	10	100		37	10	
3	Barr	Y/C		8	0	0	8		0	0	
4			HK Chen				0			1	No vote, new issue.
5	Cypher	N	Cypher	1	2	1	4		0	0	
6	Gifford	Y/C		57	0	0	57		0	0	
7	Gilb	N		272	38	94	404		33	70	
8			Gubbi				0			24	Unresponsive
9	Heberling	N		110	6	208	324		8	136	
10	Rasor	N		6	0	26	32		0	3	
11	Roberts	Y/C		50	3	1	54		3	1	
12	Schrader	N		1	1	9	11		1	7	
13	Shellhamer	Y/C		0	8	0	8		8	0	
14	Shvodian	N	Shvodian	55	33	96	184		23	77	
				624	128	445	1197		113	329	

LB12 – LB17 Comparison



LB17 Comment Resolution Process

- **Ballot Resolution Committee Formed**
 - Parallel comment resolution in Vancouver
 - Email comment resolution until ad hoc
 - August 6-8 ad hoc meeting
- **Major Issues Resolved in Vancouver**
 - Security Suite will have multiple options (no mandatory)
 - Mode 2 (ECMQV, NtruEncrypt-251, RSA 1024)
 - Mode 3 (ECMQV Implicit and X.509, RSA 1024 X.509)
 - Power Save (ALMOST)
- Editorial comments to be resolved by editor
- 15-day recirculation prior to September interim

802.15.3 Ballot Resolution Committee

- Chair: James P. Gilb, Ph.D.
- Members:
 - Jim Allen
 - Jay Bain
 - John Barr
 - Al Heberling
 - Bob Huang
 - Jeyhan Karaoguz
 - Mark Schrader
 - Bill Shvodian

Next Steps

- Bi-Weekly Conference Calls
 - 10AM C(hair)DT Tuesdays starting July 23
- Resolve comments and prepare for second recirculation
- Start sponsor ballot pool preparation
- Resolve comments and prepare for final recirculation during September interim Meeting.
- Final comment resolution and preparation for sponsor ballot at November plenary Meeting.
- Party in Hawaii!!!

Motion to Authorize Recirculation Ballot

- Motion: Authorize 802.15 TG3 20-day recirculation letter ballot following BRC completion of comment resolution for LB17. Starts August 16 and ends September 5.
- *TG3 Motion—Allen, 2nd –Gilb, Passed - UConsent*
- Moved: Jim Allen
- Second: James Gilb
- Vote: unanimous consent

Goals for September

- Conference call status, including approval of any ad hoc business.
- Letter ballot comment resolution.
- Update draft as required.
- Recirculation ballot.

August 6-8 Ad Hoc Meeting

- Sponsored by Motorola, Schaumburg, IL
- 8AM August 6 through 3PM August 8
- Objectives:
 - BRC comment resolution
 - Editing of draft for recirculation

802.15 Task Group 4 Low Rate WPANs
Closing Report
July 2002, Vancouver, BC
Canada

802.15 Task Group 4 Low Rate WPANS

Results after LB 18 on IEEE P802.15.4 Draft D15 :

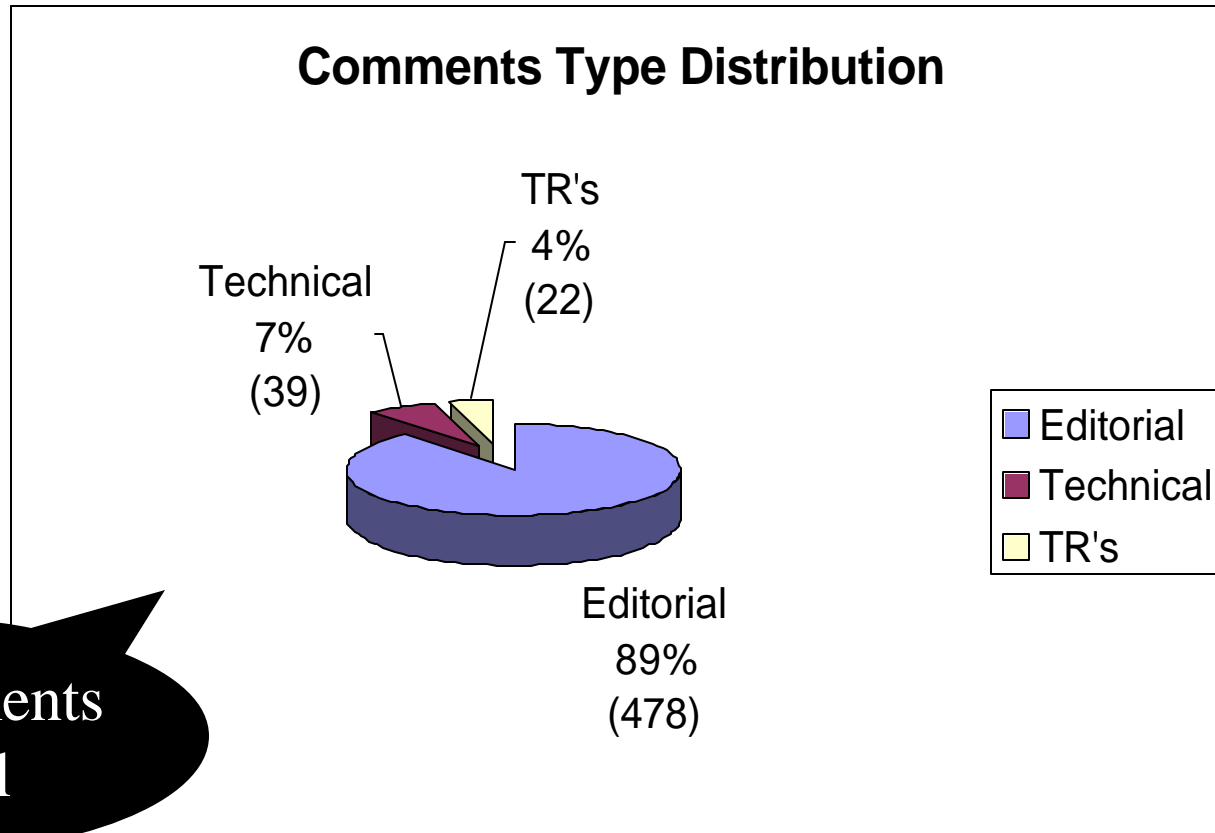
Ballot Completed July 9, 2002

- 77 out of 89 voters have participated
- 66 Yes
- 4 No
- 5 Abstained

Approval: 94.3%

Participation: 84.3%

TG4 Team LB18's Comment Classification



539 Comments
in Total

Who made these comments?

LB18	E	T	TR
Bourgeois, Monique	112	4	
Cypher, David	21	2	20
Gifford, Ian	14	1	
Gorday, Paul	9		
Gutierrez, Jose	15		
Jamieson, Phil	285	24	
Liang, Li	4		
Rasor, Gregg			1
Shellhammer, Steve			1
van Leeuwen, Hans	18	8	
	478	39	22

Legend
Voted NO
Non Voter
Non Core
Core

LB15

Dydyk, Michael

1

LB13

Gubbi, Rajugopal

69

539 Comments

T/TR Comments Resolution

LB18	T	TR
Bourgeois, Monique	4 => 0	
Cypher, David	2 => 0	20 => 0
Gifford, Ian	1 => 0	
Gorday, Paul		
Gutierrez, Jose		
Jamieson, Phil	24 => 0	
Liang, Li		
Rasor, Gregg		1=> 0
Shellhammer, Steve		1=> 0
van Leeuwen, Hans	8 => 0	

Legend
Voted NO
Non Voter
Non Core
Core

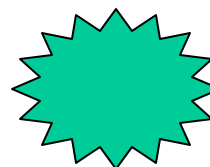
LB15

Dydyk, Michael

1 => 0

LB13

Gubbi, Rajugopal



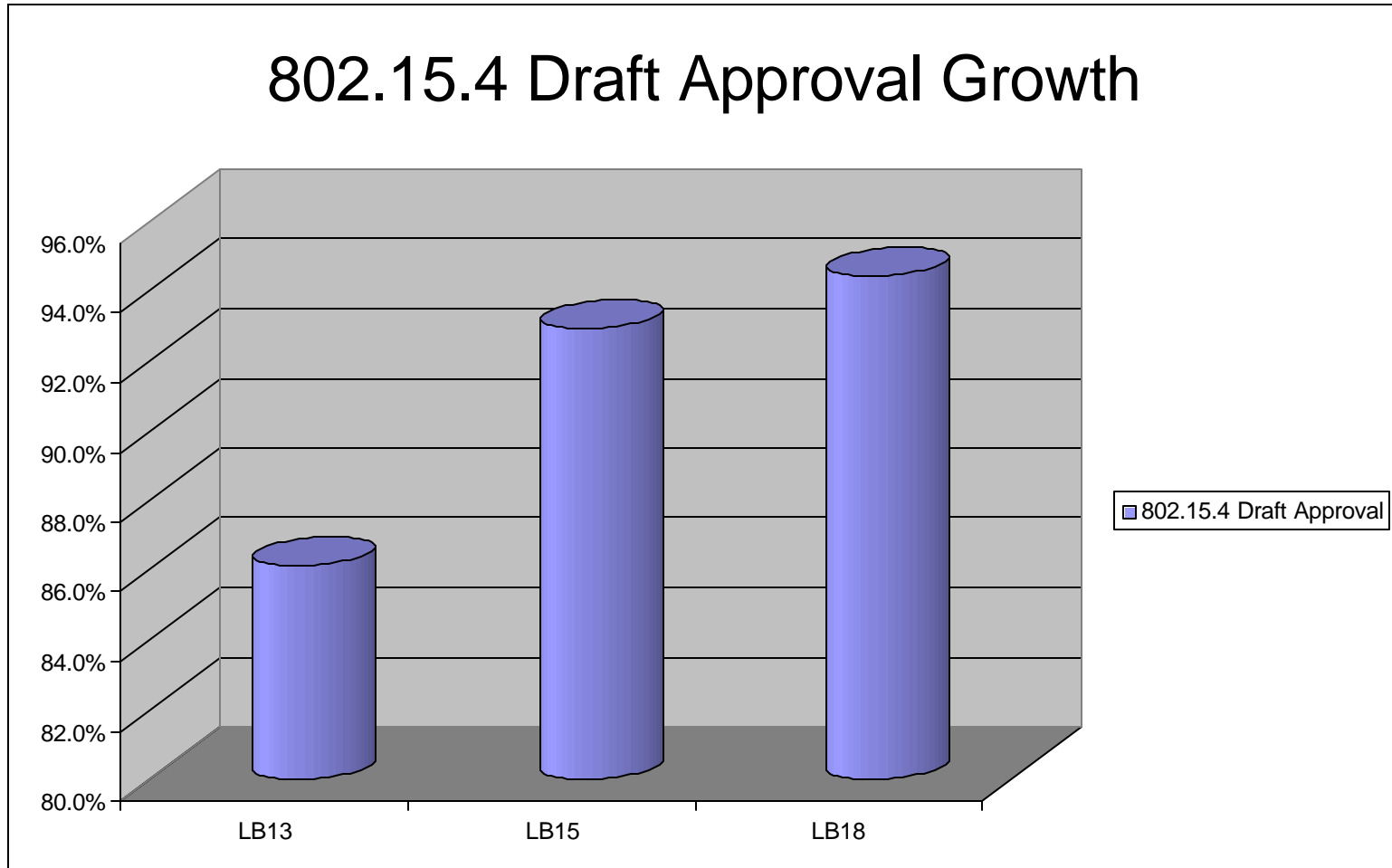
- In LB 13 submitted 69 TR's
 - 58 Accepted / 18 Rejected
- Since January 15th, several attempts to contact him have been made, seeking feedback from comment resolution.
 - 14 e-mails requesting his feedback
 - One voice mail per week from Jan-15 to Apr-1 (11 weeks)
 - Never succeeded in engaging in a discussion.

On April 1st, TG4 decided to send an e-mail informing him that our group can not continue “hunting” him.

TG4 invited him to participate in LB15 (Apr-17) to review the latest draft.

Heard from him this week commenting on the sponsor ballot group...

TG4 Performance



How we addressed coexistence?

- Clear Channel Assessment
 - Listen before talk
- Dynamic Channel Selection
 - Devices are Frequency Agile
- Spread Spectrum Modulation
 - RF Energy is spread
- Link Quality Assessment
 - Selection of appropriate channel for network operation
- Narrowband channel usage
 - 802.15.4 looks as a NB interference for 802.11b

How we addressed coexistence?

- Limited Duty Cycle
 - Devices expected to run with a 1% duty cycle
- Reduced Transmit Power
 - Nominal output power of 0 dBm
- Neighbor network capability/ air time share
 - Guaranteed Time slots can be coordinated to allow other neighboring networks to operate

In addition we have--

- Partnered with 802.15.2 and 802.15.3 task group members
- “Straw man” proposal for quantification of coexistence St. Louis (May 2002)
- TG3 and TG4 editors cooperated to create and refine Coexistence Annexes in respective drafts.
- Ongoing cooperation with Coexistence SG

Schedule for confirmation ballot and resolution meeting

- Confirmation Ballot to start on August 16th and conclude on August 31.
- Final resolution meeting scheduled for the 802.11-15-18 Interim in Monterey, CA, September 9-13, 2002.

Task Group 4 Low Rate WPANS

Project Timeline

	2000		2001												2002												2003		
	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
Press Release	x																												
Call for application created by 11/09/00	x																												
Call for intent for proposal created by 12/1/00		x																											
Call for proposal by 01/17/00			x																										
Selection criteria doc created by 01/01			x																										
Start decision process by 03/01.				x																									
Present proposals 03/01				x		x				x																			
Working proposal selected by the 07/01									x																				
Low rate pocket guide (book).																	x	x	x	x	=>								
Proposal draft completed by 12/01.									x	x	x	x	x	x															
1st letter ballot completed by 01/02.													x	x															
Resolution of comments completed by 03/02.														x	x	x													
Re-circulation completed by 04/02.																	x												
Resolve re-circulation comments																		x											
2nd re-circulation																			x										
Resolve 2nd re-circulation comments.																				x									
3rd re-circulation																					x								
Resolve 3rd re-circulation comments.																						x							
Sponsor ballot completed by 11/02.																							x	x					
Sponsor ballot comment resolution.																									x				
Re-circulation completed by 1/03.																											x	x	
RevCom Approval																												x	

Motion to the Working Group

Move to seek conditional approval from
the SEC to forward IEEE P802.15.4
Draft D16 to Sponsor Ballot per
Procedure 10 of the LMSC rules dated
November 2001

Mover: Jose Gutierrez Second: Jim Allen
29-0-4

Motion to the SEC

Move to seek conditional approval to forward IEEE P802.15.4 Draft D16 to Sponsor Ballot per Procedure 10 of the LMSC rules dated November 2001

Mover: Bob Heile Second: Stuart Kerry

10-0-0

Instructed not to forward outstanding comments with package

IEEE802.15.SG3a Closing Report Vancouver, BC, Canada

*Attendance at SG3a for the week in
Vancouver: 71*

IEEE802.15.SG3a Closing Report

1. Heard 9 channel model contributions which were subdivided into two categories

Path Loss Models

- 02/280r0 – Shor
- 02/278r0 – Ghassemzadeh
- 02/281r0 – Kunisch
- 02/285r0 – Molisch
- 02/301r3 - Siwiak

Multipath Model

- 02/283r0 – Ghassemzadeh
- 02/240r0 – Pendergrass
- 02/286r0 – Cramer
- 02/279r0 – Foerster

IEEE802.15.SG3a Closing Report

2. Heard a contribution on antenna Q impact on antenna efficiency
 - 02/295r0 – Caimi
3. Worked on selection criteria document 02/105 (4 hours).
4. The channel model subcommittee met in ad-hoc for 4 hours and in full-committee for 2 hours to start processing the channel model data and working on a channel model for use by proposers.

IEEE802.15.SG3a Closing Report

5. Had an Antenna Ad-Hoc committee, which submitted text that indicated the Antenna was considered part of a PHY proposal. The text has been submitted but not acted upon by the whole committee.
6. PAR & 5C – Submit to WG15 for approval during the September meeting
7. Passed unanimously a motion to renew the charter of the study group.
8. Work Plan Going Forth – via email and with periodic conference calls. Scheduled two conference calls:
 - August 8 - default time of 11 AM EDT
 - August 29 – default time of 6 PM EDT

802.15.3a Study Group Charter Renewal Motion

- This is a motion to ask 802.15 to renew the 802.15.SG3a alternate PHY study group charter for another four months.

Proposer: Rick Roberts

Second:

passed: Unanimous Consent

Publicity Committee
802.11/.15
Closing Report-Vancouver, BC, CA
Brian Mathews, PC Chair 802.11
Jim Meyer, PC Chair 802.15

Agenda

AGENDA - IEEE 802.11 Publicity Ad-Hoc MEETING						
July 8-12, 2002						
Vancouver, British Columbia						
Tuesday, July 9, 2002 -10:30 AM - 12:00 PM						
1	II	Meeting Call to Order	-	MATHEWS	0	10:30 AM
2	DT	Review Objectives	-	MATHEWS	5	10:30 AM
3	DT	Report from WECA	-	EATON	15	10:35 AM
4	DT	Introduction to WiMedia	-	MEYER	5	10:50 AM
5	DT	New Activity - meet with IEEE staff	-	MATHEWS	20	10:55 AM
6	DT	Develop plan for future IEEE 802.11 workshop event	-	MATHEWS	15	11:15 AM
7	DT	Media Analyst list update	-	MATHEWS	10	11:30 AM
8	DT	Summary reporting for media and IEEE press announcements	-	MATHEWS	20	11:40 AM
9	DT	Ajourn for the session	-	MATHEWS		12:00 PM
		ME - Motion, External		MI - Motion, Internal		
		DT- Discussion Topic		II - Information Item		

Meeting Objectives

- Report from WECA
- Joint 802.11/.15 Publicity committee New Activities – meet with IEEE staff
- Develop plan for IEEE802.11 Workshop event
- Develop procedure for accurate and timely summary reporting for media & analysts
- Update Conference Calendar
- Media Analyst list update

 - Reviewed and completed

Publicity Committee

- Chartered as a joint ad-hoc group under the chairs of 802.11 and 802.15 to generate a common theme and joint publicity documents, press announcements, recommendations to the WG, IEEE etc...of the technical accomplishments, and issues resulting from the interim and plenary sessions as well as address external issues which are directly related to the development of 802.11 and 802.15 standards.
 - This information is posted on the 802.11/.15 websites
 - Used by the WG chairs and vice-chairs for communication to media, press and media analysts, IEEE staff and affiliated industry bodies
- Everyone can vote and participate in straw polls, motions, debates and discussions
- 14 people in attendance at the Vancouver PC meeting

WECA Update

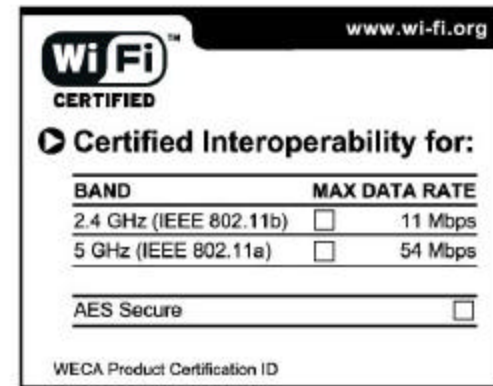
(presented by Dennis Eaton)

- Key announcements from June Member Meeting in Miami
 - WECA intends to change its name to Wi-Fi Alliance
 - New branding plan was announced
 - SSN submitted and accepted as candidate for interim security initiative



The Wi-Fi certified logo will be used for 802.11b and 802.11a...

← fixed width 2" →



expandable height ↓

... Along with a capabilities label to show product certifications

WECA Status (Cont.)

- Successful tradeshow at N+I – Tokyo
 - Interviews and press conference with many Japanese
 - 12 companies participated in pavilion
 - Areas of primary interest continue to be (in priority order)
 - Wi-Fi in hot spots
 - 802.11a certification
 - Security
- Completed second round of 802.11a interoperability testing at end of May
 - Expect third round to be in August
 - Anticipate test bed in place and formal certification starting closely thereafter
- Next Member's meeting Sept 24 – 26, Rome, Italy
- Next Trade Show – Nov 18 - 22, Comdex, Las Vegas
- 370+ certified products and growing steadily

WiMedia Alliance

A Preview for IEEE Members

July 7, 2002

Mission Statement

“To promote wireless multimedia connectivity and interoperability between devices in a personal area



Technical History

- WPAN SG formed March '98 by IEEE 802.11 WG to investigate need for a supplemental wireless network standard
 - **Specifically targeted to provide very low power consumption, low complexity, wireless connectivity among devices within or entering a Personal Operating Space (POS)**
- 802.15 Working Group for Wireless Personal Area Networks WPANs™ formed March '99
- P802.15.3 High Rate (HR) Task Group (TG3) for Wireless Personal Area Networks (WPANs™) chartered March 2000 to draft and publish a new standard for high-rate (20Mbit/s or greater) WPANs™
 - **Provide for low power, low cost solutions addressing the needs of portable consumer digital imaging and multimedia applications.**

Business Purpose

- **Define, establish and support one or more specifications that provide for wireless multimedia connectivity and interoperability between devices for personal use in a networked environment (e.g. PAN)**
- **Provide a neutral forum for enhancement and augmentation of the standards**
- **Foster the rapid adoption of these specifications and standards by developers of related products and services**
- **Create & enforce product certification criteria for multi-vendor interoperability**
- **Educate businesses and consumers about the benefits and applications for wireless multimedia products in a personal network**
- **Establish liaisons with other organizations that develop specifications and standards for wireless products**
- **Foster competition in development of products and services and comply with all antitrust laws**

IEEE Staff Discussion

- Jerry Walker & Jennifer Longman attended
- Roger Marks of 802.16 will continue as central point for submitting text for inclusion in the IEEE802 newsletter
- Goal is to post the newsletter after each Plenary meeting
- Guidelines for how to refer to the IEEE and 802 in marketing materials are on the IEEE web site under “Newsroom”

Communication with media and industry analysts

- Suggestions:
 - 802.11/.15 could offer speakers to present at industry events
 - Hold press/analyst briefing in conjunction with an industry event
 - Hold press/analyst briefing in conjunction with an 802 session
 - Conference Call briefing for key members of press & industry analysts shortly after each meeting
 - Set up an 802.11/.15 Workshop event specifically to educate press/analysts about .11/.15
- Straw poll overwhelmingly supported holding a Conference Call after IEEE802.11/.15 meetings

Post Session Media/Analyst Conference Call

- **When?** Soon after session, e.g. Wed. of following week
- **Who?** WG Chairs, PC Chairs, possibly some TG Chairs, IEEE Marketing Staff/PR, invited media/press/analysts (need to refine our list)
- **What?** Content would be review (paraphrase) of summary report generated from WG Closing Plenary reports and then possibly Q&A (if manageable on a large call)
 - Summary report (oriented for press/media & analysts) available on web site or via e-mail in advance of call
- **How?** Must determine if IEEE has conference call capability already in place to support this and cost

Communication with media and industry analysts

- Key is getting accurate and timely summary information from WG Chairs
- Suggestion was made to develop a short list of questions WG Chairs should try to answer in their summary reports
- Remainder of PC meeting was spent developing a preliminary list of questions

Communication with media and industry analysts

- Brainstorm list of questions to be addressed in summary report
 - What was accomplished at the meeting?
 - What major objectives were resolved
 - What objectives remain?
 - What are the key objectives for the next meeting?
 - What is the next major milestone in the IEEE process?
 - When will it occur?
 - When will the standard approved by the IEEE?
 - Were there any major proposals?
 - Who made the proposal?
 - Were any important options ruled out?
 - How many presentations were made? Who's making them?
- List to be reviewed with IEEE staff and WG /TG Chairs

Media/Analyst List

Update July 2002			
<u>Company/Journal</u>	<u>Key Contact</u>	<u>Phone</u>	<u>Email</u>
Allied Business	Navin Sabharwal, Research Director	516-624-3113 X20	
ChipCenter	Lee Goldberg, Senior Technical Editor	609-720-0014	
CommsDesign	Rob Keenan, Editor-in-Chief		
Dataquest	Joe Byrne, Principal Analyst		
Dataquest	Stan Brueeule, Principal Analyst		
EE Times & CSD	Patrick Mannion, Senior Editor & Editor-in-Chief	516-562-5060	
Electronic Buyers News	Darrell Dunn, Assistant Managing Editor	817-485-2995	
FarPoint Group	Craig MathiasPrincipal	508-881-6467	
IDC	Ken Furer, WLAN IC Analyst		
ISD	Ron Wilson, Editorial Director	750-996-1992	
Microwaves & RF	Jack Browne, Editor-in-Chief		
Nikkei Electronics	Rocky Aida, Technology Editor		
Planet802.11	Matthew Peretz, Managing Editor	203-662-2886	
Portable Design	Rich Nass, Editor-in-Chief		
Semico Research	Bob Merritt, Director of Emerging Markets		
Wireless System Design	Cheryl Ajluni, Editor-in-Chief	408-776-2934	

Meeting Objectives for September

- Review July newsletter and TG Chair summaries
- Report from WECA & WiMedia
- Preparation for post-meeting Conference Call
 - Review list of invited press/analysts, verify invitations
 - Review strawman pre-drafted summaries
 - Verify conference call arrangements
 - Date/Time
 - Call-in number
 - Procedures

Archive, Mailing List, URLs

- Web Page: <http://www.ieee802.org/15/>
- General Mailing List: stds-802-wpan@ieee.org
- Voter/Nearly List: stds-802-15@ieee.org
- TG1 list: stds-802-15-1@ieee.org
- TG2 list: stds-802-15-2@ieee.org
- TG3 list: stds-802-15-3@ieee.org
- TG4 list: stds-802-15-4@ieee.org
- SG3a list: stds-802-15-sg3a@ieee.org
- Lists restricted to those on the list to reduce SPAM. To send to the list you must use the exact email address on the list as the 'from' address. Alias addresses such as ieee.org will not work.

To add your name to IEEE mailing list please send an e-mail
to alfvin@ieee.org