
IEEE P802.11
Wireless LANs

Tentative Minutes of the IEEE P802.11 Full Working Group**David Intercontinental Hotel, Tel Aviv, Israel****10 – 14 January, 2000****Monday, 10 January Opening Session IEEE P802.11****1. Opening of Session**

Meeting called to order by Vic Hayes in the Chair at 0845 hrs. Agenda of 60th session of 802.11 is in doc.: 9282dr18W-Tent-agenda-Tel-Aviv-Jan-00.ppt).

- Introduction and welcome- Naftali Chayat.
Lunch at 12:00, 3rd floor, two breaks at 10:00 and 15:00
- Objectives for this session:
 - To resolve LB results of TGd
 - To start looking at the technical material for MAC enhancements and IAPP
 - To resolve LB results of TGb
 - To respond to Regulatory events and needs
- Tim Godfrey, acting Secretary, is present and ready to take the minutes.
- Roll Call
 - 1.1.1. The 20 people in the room introduced themselves.
- Voting Rights
 - 1.1.2. Vic Hayes summarized the regulations regarding voting rights.
Participation in debates, moving and seconding, is only permitted by voting members, in all 802.11 meetings (at all levels of Plenary and Working Group).
Chairs may permit observers to participate in debate
In study groups all attendees have voting rights.
To become a voting member and to maintain voting member status:
Participate in at least 2 out of 4 consecutive plenary meetings. An initial non-voting member obtains voting rights at the third meeting.
One interim may be substituted for a plenary
Participation in at least 75% of each meeting, in the room
Voting members will get a token to be used at votes
All members have voting rights at task group meetings
Voting rights may be lost:
After failing to pay the conference fee
After missing two out of three consecutive letter ballots

- Attendance List; Registration
 - 1.1.3. Dennis Kuwahara, Attendance Book Officer
 - 1.1.4. Attendance List: The attendance list has to be recorded for voting membership registration. It was circulated with Dennis Kuwahara supervising.
 - 1.1.5. Verify Email address in attendance book.
- Logistics
 - 1.1.6. Continental breakfast included with Hotel
 - 1.1.7. Breaks 10:00 and 15:00
 - 1.1.8. Printing – not available until the printer arrives. Printing through network.
 - 1.1.9. Documentation is electronic format, via network and memory card.
 - 1.1.10. Submissions must adhere to template rules (document number, format, etc). Document should be provided on network a meeting before agenda item.
 - 1.1.11. We do not have paper copy distribution.
- Current member status:
 - 1.1.12. Voting members 92 at the beginning of this meeting
 - 1.1.13. Nearly voting members 17
 - 1.1.14. Aspiring voting members 63
- Document Officer
 - 1.1.15. Tal Kaitz will manage document numbers and distribution.
- IEEE Patent Policy

Vic Hayes, 802.11 Chair explained the IEEE Patent Policy as per Clause 5 of the IEEE Standards Board Bylaws and per Clause 6.3 of the IEEE Standards Operations Manual. He specifically asked for notification from members of patents or patent applications applicable to the Published standards or draft standard and for patent holders to submit the requested statement. The Chair will write to the patent holders or submitters asking for their position on use of the patent.
- Individual Representation

All attendees are representing themselves as individuals and not companies and/or any special organization.
- Anti-Trust Laws

Discussion of price is disallowed in 802.11 sessions due to the threat of price fixing. Price fixing discussions are governed by Anti-Trust Laws and are illegal.
- Copyrights

If you know of copyrighted or proprietary material that is in the standard as we have drafts now, please let the group know so the Chair has the opportunity to request release. Standards Publication shall constitute a "work made for hire" as defined by the Copyright Act. IEEE owns the copyright of the standards publication.
- Press Relations

Official statements of 802.11 are by motion of the group only. Check with Vic or Stuart.
- Other Announcements

None

2. Approval of the minutes of past meetings

- Not possible due to lack of Quorum
- Matters Arising from the Minutes
 - 1.1.1. There were no matters arising from the minutes.

3. Reports

- Report on Letter Ballot 20
 - ◆ Motion number 1 (to submit 802.11d to Sponsor Ballot)
 - ◆ *Approved without comments: 56*
 - ◆ *Approved with comments: 0*
 - ◆ *Disapproved with comments: 10 (plus one ex-member)*
 - ◆ *Approval ratio: 84% (required $\geq 75\%$)*
 - ◆ Motion number 2 (to submit IEEE 802.11b-cor/D1.0 to Sponsor Ballot)
 - ◆ *Approved without comments: 64*
 - ◆ *Approved with comments: 3*
 - ◆ *Disapproved with comments: 0*
 - ◆ Questions / Discussion –
 - ◆ what is the procedure?
 - ◆ We are mandated to work on this. We can make a new draft and send it out for recirculation ballot. Recirculation ballot needs to be at least 10 days.
- Report from the November Executive Committee meeting
 - 1.1.2. PAR approval P802.11b corrigenda – approved.
 - 1.1.3. Letter to UK RadioComs Agency – withdrawn, will come back with ExCom letter ballot.
 - 1.1.4. Letter to FCC – Approved with 6 abstentions.
 - 1.1.5. Proposed letter to ITU Rapporteur on Radio LAN – withdrawn. Difficulty within Boeing (sponsoring organization).
 - 1.1.6. Report on Extension of MAC Enhancements Study Group.

4. Review of Contributions

- Submissions
 - 1.1.1. None

5. Unfinished Business

- Study Group Enhanced 802.11
- MAC
- IAPP
- TGb-cor
- Regulatory issues

6. New Business

- Korean Regulations

7. Comments on the Agenda

- None

8. Adoption of the agenda 01/243-r1

Motion 00/60P01 (158) To adopt the amended Meeting Agenda

Moved: Dennis Kuwahara

Seconded: John Fakatselis

Discussion: none

Motion passes: 5-0-0

The meeting continued with the approved agenda.

9. Unfinished Business

- TGd
 - 1.1.1. Chairman Bob O'Hara is not present, Al Petrick will be chair for this meeting. Sessions during week as planned
- MAC Enhancements, IAPP
 - 1.1.2. Chairman John Fakatselis
- 802.11b Corregendum
 - 1.1.3. Tim Godfrey, Chairman for this meeting.
- Regulatory Issues
 - 1.1.4. Dennis Kuwahara.
 - 1.1.4.1. First meeting of ITU-R JRG was cancelled. This week, representatives are gathering information on what is required to submit recommendations to JRG to carry into ITU-R. Requests help in drafting a document. We must propose how we minimize or mitigate impact on existing users of the 5GHz band.
 - 1.1.5. Questions
 - 1.1.5.1. Anything on docket 99/231? No.
 - 1.1.6. Filing from CUBE? Commented on files that were filed on behalf of 802.11 against WBFH. FCC planning report and order in the first half of this year. A paper was presented detailing the decision making procedure within IEEE to present to the FCC.
 - 1.1.7. UK document was edited and reviewed by Ad-Hoc regulatory group. Sent to ExCom for ballot. If it passes, it will be filed January 28th.

10. New Business

- Korean Regulations
 - 1.1.8. In Korea, they are planning to regulate for wireless local loop directly below 2.4GHz band 2.395 to 2.405. This will interfere with 802.11 channels. WLL devices will be interfered with by 802.11 devices. Korean regulators want to restrict 802.11 devices. We

need to write a letter to Korean regulators to explain why they should not pass regulations that adversely affect the 802.11 2.4GHz band.

- Report on 802.16 Liaison (Naftali Chayat)
 - 1.1.9. 802.16 is in the stage of developing their initial proposals and criteria. 10 to 60 GHz band. There were more than 10 initial proposals both in MAC and PHY. A strong camp of companies support DOCSIS cable modem standard. Another camp of companies oppose DOCSIS, and have other proposals. Proposal to use 802.11a OFDM PHY was made but withdrawn due to lack of support. A new study group is being formed for frequencies below 10GHz. OFDM will have a better chance of acceptance. The group is discussing whether to address only licensed frequency bands, or also include unlicensed.
 - 1.1.10. Questions
 - 1.1.10.1. What bands below 10GHz are being considered? 3.5Ghz is one.

11. Adjourn for subgroups

- The Plenary meeting adjourned at 10:00 hrs.

Wednesday, 12 January 2000 Joint Meeting of IEEE P802.11 and P802.15

Scheduled: 1:00pm – 3:00pm

The minutes of the joint meeting are recorded separately in doc: IEEE P802.11-00/014.

Copy of Motion made in Joint Meeting:

Motion 00/60P02 (159)	To approve the agenda as proposed (802.11)
Moved Erwin Noble	
Second Denis Kuwahara	

Discussion: none

Motion Passes: 802.11 6-0-0

Wednesday, 12 January 2000 Meeting of IEEE P802.11

Scheduled: 3:30pm – 5:30pm

1. Opening of Session

Meeting called to order by Vic Hayes in the Chair at 1515 hrs. Agenda of 60th session of 802.11 is in doc.: IEEE P802.11-00/xxx (archive file 9282dr18W-Tent-agenda-Tel-Aviv-Jan-00.ppt).

2. Roll Call – skip (roll call done in previous joint session)**3. Agenda Update**

3.1. Old Business

- 10.1 Regulations
- 10.2 Study Group Enhanced 802.11
- 10.3 TGd
- 10.4 TGb-cor

4. Adoption of the agenda

Motion 00/60P03(161) To adopt the amended Meeting Agenda

Moved: John Fakatselis

Seconded: Alan Winkofsky

Discussion: none

Motion passes: 5-0-0

The meeting continued with the approved agenda.

5. Announcements

Plenary on Friday will start at 08:00.

6. Old Business

- Regulations

Jim Allen presents Eastman Kodak's proposal to FCC. Objective to get 4 non-overlapping channels in band instead of 3, with low cost. The proposal included power vs bandwidth use, channelization, and co-ordination with Europe. This proposal is an alternative to Wideband FH. This proposal must be submitted in this comment period. It is believed that this will also have to go out for comment, causing a 2 month delay in WBFH. The belief is that the FCC will appreciate the global co-ordination in contrast to other proposals such as WBFH. This proposal will be distributed through the 802.11 and 802.15 email reflectors for members.

Proposal: adopt ETS 300 328 with its definition of 100mW peak output power and output power density (10dBm/MHz peak EIRP) in the pass band from 2.4GHz to 2.4835GHz. For wideband data transmission systems greater than 4MHz of bandwidth, this results in a output power statistically similar to the requirements of FCC 15.249. Adopt spurious emissions limit at the band edges in accordance with ETS 300 328. These are approximately 30dB below the passband for wideband emissions.

There was no objection to schedule additional Ad-Hoc regulatory meetings.

- Study Group Enhanced 802.11

There are no motions to forward. We are working on requirements, acting as a task group. The next item is to prepare the evaluation criteria for proposals. We will draft guidelines and publish on the web, so we can have proposal submissions in March, 2000. We intend to have a working draft for ballot in November. We have more work to do on IAPP.

Chair requests SG to prepare an HTML page for call for proposals.

- 802.11d

Comment Resolution on Letter Ballot 20. All comments have been addressed. Most were accepted.

Teleconferences in the evening coordinated with the commentors. There are still outstanding comments that will be addressed. A proposed plan has been developed to continue the work this week, and keep the session open for another 2 weeks. Teleconferences and web site will allow for another recirculation before the March meeting.

The chair proposes that a 15 day recirculation ballot be made, starting on February 16th, closing on March 2, 2000.

- 802.11b-COR

All comments were editorial, and were accepted. They have been edited into the Word document.

Motion: 00/60P04 (162) To approve the dispositions of Letter Ballot 20 comments in document 00/003r1, and the edited 802.11b-cor-MIB-Corrections-Draft-1.1 as an editorial update, and forward to the 802.11b editor for conversion to Framemaker format. To submit the resulting document, 802.11b-cor-MIB-Corrections-Draft-2.0, to the March, 2000 Executive Committee meeting for Sponsor Ballot.

Moved: Tim Godfrey

Seconded: (none needed)

Discussion: None

Motion Passes: 4-0-0

7. New Business

None

8. Closure (16:00)

Friday, 14 January 2000 Full WG Closing Plenary of IEEE 802.11**Scheduled: 8:00AM – 10:30AM****1. Opening**

The closing plenary was opened by Vic Hayes at 08:00, and Tim Godfrey, Acting Secretary was ready to take notes. 17 persons were present.

- **Announcements**
 - 802.11a has been printed and being sent to people on the list.
 - 802.11b is going to printer, PDF is being made.
- **Document List Update**
 - The document list was reviewed. New documents since the Monday WG plenary are docs: 802.11-00/004 - 023. 00/007 and 00/023 are not on the server, and will be distributed later.
- **Agenda Adjustments**
 - Reports from subgroups
 - TGd
 - SG MAC Enhancements
 - Regulations
 - TGb-cor

Motion: to approve the agenda 00/60P3 (163)

Moved: John Fakatselis

Second: Erwin Noble

No Discussion

Motion Passes 8-0-0

2. Reports from Subgroups

- **TGd (Report in document 00/011).**

Addressed all 60 comments, provided recommended text for 47 of 60. There 13 remaining comments to provide text for.

Documents for recirculation IEEE 802.11d/D2.0

Motion: To adopt the suggested outline for completing the revised text of document IEEE Std 802.11d/D1.3 and submitting it to recirculation ballot.

Moved: Al Petrick:

No Discussion

Motion Passes 8-0-0

Motion: To approve the resolutions of the comments of letter ballot 20 for 802.11d and the editing of the draft to reflect those resolutions:

Moved: Al Petrick

No Discussion

Motion Passes 7-0-0

- SG MAC Enhancements (full report in document 00/).

1.1.1. Agenda covered this week at study group:

- ◆ No Papers presented
- ◆ Established Requirements definition process
- ◆ Generated Requirements document draft. Doc 00/008r2
- ◆ Generated Evaluation Criteria of proposals draft Doc 00/023
- ◆ Generated and approved IEEE 802.11 Call for proposals for MAC Enhancements and Inter Access Point Protocol. Document 00/024

Motion : To Approve for public announcement the call for proposals on MAC Enhancements and IAPP as described in document 00/024.

Moved: John Fakatselis

No Discussion

Motion Passes 9-0-0

- Ad-Hoc Regulatory Group

Report on exchanges with Korea on WLL WLAN issue. (Document 00/023).

The decision was to take no action, so there is no motion.

- 802.11b-cor

Formatting changes have been incorporated into draft after additional comments were received. Document to be forwarded to 802.11b editor. Output document is "802.11b-cor-MIB-Corrections-Draft-1.1.doc"

3. Unfinished Business

4.1 Output documents

802.11d for completing and recirculation ballot

Announce teleconferences

Call for proposals for Enhanced MAC and IAPP

Work on 802.11b-cor and submit to Sponsor Ballot

Objectives for Next meeting (March 2000)

Process TGD recirculation ballot results

Work on 802.11b-cor and submit to sponsor ballot

Submit PARs Enhanced MAC and IAPP to ExCom

Regulatory matters if needed

Find (new) officers

Other Interim Meetings Required

No

4. New Business

Name of 802.11b-cor: A Nescom member wants to rename 802.11b-cor to 802.11e

Motion: To direct the 802.11 chair to represent to NesCom 802.11's strong desire to have the final specification named 802.11b with suffix extension.

Moved: Peter Ecclesine

Second: Denis Kuwahara

Discussion: None

Motion Passes: 7-0-0

Motion: to Adjourn this meeting until the teleconference scheduled to approve 802.11d for its recirculation. The session continues.

Moved: Al Petrick

Second: Denis Kuwahara

Discussion: None

Motion Passes: 6-0-0

The committee wishes to thank Breezecom for hosting the meeting, and providing excellent organization.

5. Closure

Meeting adjourned at 09:00.

Attendance list for the meeting held at **David Intercontinental Hotel, Tel Aviv**

<i>Full name</i>	<i>status</i>	<i>att.</i>	<i>phone</i>	<i>company</i>	<i>e_mail</i>
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Tentative meeting schedule

Date	Place	Hotel	Type	Host
March 6-10, 2000	Albuquerque, NM	Hyatt Regency	Plenary	
May 8-12, 2000	Seattle, WA	Renaissance Madison Hotel	Interim	Boeing
July 10-14, 2000	La Jolla (San Diego), CA	Hyatt Regency	Plenary	
?September 18-22, 2000		Memphis, TN	Interim	FedEx
November 6-10, 2000	Tampa, FL	Hyatt Regency	Plenary	
March 12-16, 2001	Hilton Head	Hyatt Regency	Plenary	
July 9-13, 2000	Portland, OR	Portland Marriott	Plenary	
November 12-16, 2001	Austin, TX	Hyatt Regency Town Lake	Plenary	
March 11-16, 2002	?	?	Plenary	
July 8-12, 2002	Vancouver, BC	Hyatt Regency	Plenary	
November 11-15, 2002	Montreal, PQ	Queen Elizabeth	Plenary	

**IEEE P802.11
Wireless LANs**

**Tentative Minutes of the MAC Enhancement Study Group, Tel
Aviv, Israel**

Date: January 13, 2000

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1. Meetings at the 802.11 January 2000 Interim

1.1. Monday PM

1.1.1. Appointment of Secretary

1.1.1.1. *Tim Godfrey*

1.1.2. Call to order

1.1.3. Agenda

1.1.3.1. *Policies overview*

1.1.3.2. *Voting rights for Study Groups*

1.1.3.3. *Participation in debates*

1.1.3.4. *Key motions*

1.1.3.5. *Study Schedule overview*

1.1.3.6. *Call for papers*

1.1.3.7. *Presentation of papers*

1.1.3.8. *Definition of process to develop requirements (first draft by end of week)*

1.1.3.9. *Evaluation criteria*

1.1.3.10. *Guidelines for paper submissions*

1.1.3.11. *Any new business*

1.1.3.12. *Presentation to WG plenary*

1.1.4. Agenda approved without objection

1.1.5. Policies Overview

1.1.5.1. *Explanation of Study group purpose and status, voting rights, Roberts Rules, key motions*

1.1.5.2. *No Questions*

1.1.6. Study Group Schedule Overview

1.1.6.1. *Review of motion to authorize and charter study group.*

1.1.6.2. *Review of PAR applications and five criteria.*

1.1.6.2.1. *Two PARs, scheduled for approval in March 2000 plenary*

1.1.6.2.1.1. *MAC Enhancements (a standard)*

1.1.6.2.1.2. *Inter Access Point Protocol (a recommended practices document)*

1.1.6.3. *This meeting is chartered to review technical submissions, and start developing the requirements document.*

1.1.6.4. *Straw Poll – who are familiar with the subject matter (about 5)*

1.1.6.5. *Study Group is technically done since we have submitted a PAR. We will function as a task group.*

1.1.6.6. *We need to have a working group draft by November 2000.*

1.1.6.7. *Questions:*

1.1.6.7.1. *Are documents available? Yes, they are on the Server.*

1.1.7. Call for Papers

- 1.1.7.1. *No Papers now (papers and presentations will be accepted later)*

1.1.8. Requirements

1.1.8.1. Categories already defined

- 1.1.8.1.1. *Quality of Service*
- 1.1.8.1.2. *Enhanced Privacy*
- 1.1.8.1.3. *IAPP (in a separate PAR)*
- 1.1.8.1.4. *Load Balancing, Vendor Specific Information. (proprietary elements)*
- 1.1.8.1.5. *Enhanced Authentication*
- 1.1.8.1.6. *Dynamic Frequency Allocation, Power Control*
- 1.1.8.1.7. *DCF acknowledgement, frame aggregation, enhanced PCF mode*

1.1.8.2. Questions?

- 1.1.8.2.1. *Is this standard intended to apply to all PHYs? Yes, there is one MAC and many PHYs.*
- 1.1.8.2.2. *Is it an implicit assumption that voice is voice over IP? No, it is a general term.*

1.1.8.3. Question to group: are there any other areas that need to be addressed in this group?

- 1.1.8.3.1. *(no suggestions)*

1.1.8.4. Add "requirements" column to projects table.

- 1.1.8.4.1. *Application requirements, performance requirements, interoperability and coexistence requirements.*

1.1.8.5. QoS

- 1.1.8.5.1. *Application / Systems Requirements*
 - 1.1.8.5.1.1. *Voice, Audio, Video, Computer Graphics (gaming)*
- 1.1.8.5.2. *Performance Requirements*
 - 1.1.8.5.2.1. *Toll quality voice, broadcast quality video (per MPEG standards), and CD quality audio. Low latency (90mS) for gaming. Forward Error Correction.*
 - 1.1.8.5.2.2. *Refer to 802.16 for performance metrics that have already been defined.*
- 1.1.8.5.3. *Interoperability / Coexistence Requirements*
 - 1.1.8.5.3.1. *Interoperate with existing QoS standards for wired networks and routers.*
 - 1.1.8.5.3.2. *Coexist with 802.15.*
 - 1.1.8.5.3.3. *Interoperate with existing 802.11 standard.*
 - 1.1.8.5.3.4.

1.1.8.6. Presentation of 802.16 99/00r1 requirements document.

- 1.1.8.6.1. *Bearer Services*
 - 1.1.8.6.1.1. *Digital Audio / Video Multicast*
 - 1.1.8.6.1.2. *Digital Telephony*
 - 1.1.8.6.1.3. *Signaling systems and protocols. ATM, IP, bridged LANs.*
 - 1.1.8.6.1.4.

1.1.8.7. Enhanced Privacy

- 1.1.8.7.1. *Application / Systems Requirements*

- 1.1.8.7.1.1.
- 1.1.8.7.2. *Performance Requirements*
 - 1.1.8.7.2.1. Minimum 128 bit encryption.
 - 1.1.8.7.2.2. Key management, length negotiation.
 - 1.1.8.7.2.3. Comply with existing multimedia security standard.
- 1.1.8.7.3. *Interoperability / Coexistence Requirements*
- 1.1.8.8. *IAPP*
 - 1.1.8.8.1. *Application / Systems Requirements*
 - 1.1.8.8.1.1. Relaying
 - 1.1.8.8.1.2. HiperLAN 1 like forwarding
 - 1.1.8.8.1.3. Security
 - 1.1.8.8.1.4. System Administration (eg channel assignments)
 - 1.1.8.8.1.5. Ability to have APs on different subnets.
 - 1.1.8.8.2. *Performance Requirements*
 - 1.1.8.8.2.1. Seamless roaming of both associations and connections. Refer to DECT standards, including access point search functions for stations.
 - 1.1.8.8.3. *Interoperability / Coexistence Requirements*
 - 1.1.8.8.3.1.
- 1.1.8.9. *Load Balancing*
 - 1.1.8.9.1. *Application / Systems Requirements*
 - 1.1.8.9.1.1. Specify load balancing
 - 1.1.8.9.1.2. Specify automated operation vs administrative control.
 - 1.1.8.9.2. *Performance Requirements*
 - 1.1.8.9.3. *Interoperability / Coexistence Requirements*
- 1.1.8.10. *Vendor Specific Information*
 - 1.1.8.10.1. *Application / Systems Requirements*
 - 1.1.8.10.1.1. Allow for proprietary information.
 - 1.1.8.10.1.2. Disallow use of proprietary information for purposes that are already covered in the standard.
- 1.1.8.11. *Enhanced Authentication*
 - 1.1.8.11.1. *Application / Systems Requirements*
 - 1.1.8.11.1.1. Allow different authentication algorithms.
 - 1.1.8.11.1.2. Allow scalable mechanisms for security.
- 1.1.8.12. *Others*
 - 1.1.8.12.1. *Application / Systems Requirements*
 - 1.1.8.12.1.1. Support dynamic channel allocation, HiperLAN 2 compatible PHY power control, DCF and PCF improvements.

1.1.9. Adjourn at 15:00

- 1.1.9.1. *Next session Tuesday at 08:30*

1.2. Tuesday AM

1.2.1. Meeting called to order 08:40

- 1.2.1.1. *Picking up in the process of definition of requirements.*
- 1.2.1.2. *There will be an announcement of a call for proposals.*

1.2.1.3. *We need to create the evaluation criteria for proposals.*

1.2.1.4. *The requirements and evaluation criteria will provide the guidelines for paper submissions.*

1.2.2. Call for papers

1.2.2.1. *No papers (since yesterday)*

1.2.2.2. *802.16 performance metrics papers are in Monday Distribution*

1.2.3. Review of previous progress in requirements

1.2.4. Requirements, contd.

1.2.4.1. *The group annotated 802.16 requirement documents to select specific requirements and performance parameters that are applicable to the 802.11 MAC enhancements.*

1.2.4.2. *The results are captured in document <TBD>*

1.2.5. Adjourn at 10:00

1.3. Tuesday PM

1.3.1. Meeting called to order 13:15

1.3.2. Review of process towards a standard

1.3.2.1. *The group is currently a study group, and will become a task group.*

1.3.2.2. *The group will generate requirements and evaluation criteria for proposals.*

1.3.2.3. *The proposals will go through a process of elimination and/or consolidation to arrive at the final standard.*

1.3.2.4. *The process is based on Roberts Rules, and designed to protect minority opinion. Above 90% agreement is expected. We will address all comments and objections.*

1.3.2.5. *By the end of the week we will have a baseline requirements, and guidelines for proposals.*

1.3.3. Requirements

1.3.3.1. *The group edited the draft requirements document 00/008 "00088S MAC Enhancements Draft Requirements.doc"*

1.3.4. Adjourn at 15:00

1.4. Wednesday AM

1.4.1. Meeting called to order 08:50

1.4.2. Status update

1.4.2.1. *Working on requirements draft*

1.4.2.2. *Distribution of draft 1.0*

1.4.3. Call for Papers

1.4.3.1. *None*

1.4.4. Editing of Requirements document

1.4.4.1. *"00088S-r1 MAC Enhancements Draft Requirements.doc"*

1.4.5. IAPP

1.4.5.1. *We will use the 1996 IAPP proposal as the basis for requirements. Authors of that document will be consulted for input.*

1.4.5.2. *We will generate a requirements matrix during the next session*

1.4.6. Adjourn

1.5. Thursday AM

1.5.1. Call to order 08:45

1.5.2. IAPP agenda

1.5.2.1. *Requirement definition process, IAPP*

1.5.2.2. *Evaluation criteria of proposals Draft*

1.5.2.3. *Guidelines for paper submissions*

1.5.3. Call for Papers

1.5.3.1. *None*

1.5.4. Review of IAPP Recommended Practices PAR

1.5.5. Editing of IAPP requirements matrix

1.5.6. MAC Enhancements: Evaluation Criteria.

1.5.6.1. *Attach the requirements matrix – yes/no column.*

1.5.6.2. *General Areas bring data on:*

1.5.6.2.1. *BER performance per application, under specific conditions.*

1.5.6.2.2. *Throughput requirements per application*

1.5.6.2.3. *Protocol stability*

1.5.6.2.3.1. *Interference tolerance*

1.5.6.2.3.2. *Performance under load, load shedding.*

1.5.6.2.4. *Latency*

1.5.6.2.5. *Performance matrix- general format:*

Scenario		Channel			Output Parameter (top of MAC)		
Class	# chan	PER			Throughput per stream/application	Latency within stream (MAC to MAC delay)	Jitter within stream

Scenario – includes network topology.

1.5.6.3. Discussion

- 1.5.6.3.1. *What is the proper model for PHY and channel behavior?*
- 1.5.6.3.2. *How is FEC specified in terms of a MAC standard?*
- 1.5.6.3.3. *The column of BER isn't relevant to a MAC standard – it should be Frame Error Rate, or undelivered frames.*
- 1.5.6.3.4. *We need to evaluate proposals on the basis of how the protocols react to the behavior or misbehavior of the PHY.*
- 1.5.6.3.5. *We will compare the output of the MAC. What we need to define is what the inputs to the MAC are, and the scenario of the system environment.*
- 1.5.6.3.6. *The MAC protocol may make use of the multi-rate capabilities of the PHY.*
- 1.5.6.3.7. *Define a test case with one access point, two stations (for example), with particular application streams.*
- 1.5.6.3.8. *Is the MAC more than a state machine scheduling delivery of frames?*
- 1.5.6.3.9. *Need compatibility performance metric. Example given from 802.3w (BLAM) where a requirement was made that under no circumstances would a mix of new and old devices perform worse than a network of all old devices.*

1.5.7. Break for ad-hoc subgroup

- 1.5.7.1. *Work on defining test cases for performance matrix.*

1.5.8. Adjourn**1.6. Thursday PM****1.6.1. Called to order 15:30****1.6.2. Review of Performance Test Matrix**

- 1.6.2.1. *Prepared by ad-hoc subgroup.*

1.6.3. Discussion

- 1.6.3.1. *Is this level of testing realistic for the timeframe we are working with?*
- 1.6.3.2. *We need to have a more precise definition of the test cases.*
- 1.6.3.3. *Consider the necessary tool sets that are required for simulation.*

1.6.4. Evaluation Criteria

- 1.6.4.1. *We have draft evaluation criteria for MAC enhancements, but not IAPP.*
- 1.6.4.2. *Request for additional work on these documents in this session. (no offers)*
- 1.6.4.3. *We are leaving this work, and moving on to call for proposals.*

1.6.5. Call for Proposals

- 1.6.5.1. *Review of document 00/024 "Guidelines for proposals" document.*

1.6.6. Motion

- 1.6.6.1. *To approve for public announcement the call for proposals on MAC enhancements and IAPP as described in document 00/024.*
- 1.6.6.2. *Moved by Tal Kaitz*
- 1.6.6.3. *Seconded by Amar Ghori*
- 1.6.6.4. *No discussion*

1.6.6.5. Motion Passes: 10-0-1

1.6.7. New Business

- 1.6.7.1. *None*

1.6.8. Tentative Next Meeting's Agenda

- 1.6.8.1. *Call for papers / proposals*
- 1.6.8.2. *Refine Requirements / services description document*
- 1.6.8.3. *Refine Evaluation Criteria document*
- 1.6.8.4. *Establish and publish detailed schedule*

1.6.9. Adjourn

**IEEE P802.11 – P802.15
Wireless LANs – Wireless PANs**

Tentative Minutes of IEEE P802.11/P802.15 Joint Session

David Intercontinental Hotel, Tel Aviv, Israel

Wednesday, 12 January 2000 Joint Meeting of IEEE P802.11 and P802.15

Scheduled: 1:00pm – 3:00pm

1. Opening

Meeting called to order by Vic Hayes at 1:15 PM and Tim Godfrey, Acting Secretary 802.11 was ready to take the meeting notes. Following agenda 99/282 for 802.11 and 99/181 for 802.15.

1.1 Roll call

All 31 people present at the start of the meeting introduced themselves.

1.2 Document list update

Vic Hayes and Bob Heile noted the following new documents were available to the WGs:

- .New documents from 802.15 have been received but numbers are not assigned yet.

1.3 Announcements

1.3.1 IEEE Publications

IEEE 802.11 Handbook published by IEEE Press by Bob O'Hara and Al Petrick will be available this month.

1.3.2 Social Event

Patricia Farhi, Breezecom: Meet at 17:45 on second floor. Departure at 18:00. Distribution of security letters and conference receipts will be tomorrow.

2 Approval of Minutes

Approval deferred until next meeting due to lack of Quorum

There are no matters arising from the minutes

3 Approval of the Agenda

3.1 Agenda update

No new items added were:

Motion 00/60P02 (159)	To approve the agenda as proposed (802.11)
Moved Erwin Noble	
Second Denis Kuwahara	

Discussion: none

Motion Passes: 802.11 6-0-0

Motion 00/60P01 (160)	To approve the agenda as proposed (802.15)
Moved Todor Cooklev	
Second Mike McInnis	

Discussion: none

Motion Passes: 802.15 19-0-0.

4. Old business

4.1 Summary of WG events and activities

- 802.11 had two letter ballots.
- 802.11b-cor passed with 100% with comments. Comments were accepted and draft has been edited.

- 802.11d was approved with 82%. We are doing comment resolution. Comments have been addressed, and we are 50% through the revisions. We filed our 4th Ex-Parte letter to FCC, and a letter to European regulatory. It is in executive committee waiting approval. We had a letter for filing through Boeing, but the Boeing experts disagreed, so we withdrew it.
- 802.15 Letter Ballot 1 (the draft specification of Bluetooth). Ballot ran for 43 days. Motion failed 18/15/2. Total of 1013 comments, 125 were technical. Technical comments have been reviewed in first pass. Editorial comments are still being worked on.

4.2 Hosted Venues

- May meeting Renaissance Hotel Seattle. More Details at March meeting.
- September meeting may move from Memphis. Alternates are being considered. Motorola has offered to host in Phoenix, AZ. September 18 to 22, 2000.

4.3 Review of Joint Regulatory activities

- Nothing to report on RF lighting.
- Ad-Hoc Regulatory
 - Respond to Korean Radio Research Lab, re Hanaro Korean Local Loop. Email sent to KRRL.
 - Definition of ITU Process.
 - Draft/Identify 5GHz license Exempt Paper
- Questions
 - Has there been any response to the letter on Wide Band FH? No. Jim Allen offers to present information on Kodak's presentation to FCC.
 - Is there any idea of when the FCC will rule on WBFH and the processing gain issue? Possibly March. There is no fixed schedule. Report and Order should be in first quarter.

4.4 802.15 CoExistence SG report

- Document 802.15-00/015r0 was presented.
- Charter to develop a coexistence model for the 2.4GHz ISM band, that we can all agree to, which will help us assess the issues of coexistence in a more quantitative way. Deliver a Recommended Practice for WPAN devices intended to operate in a WLAN environment.
- Coexistence SG would become a Task Group in 802.15. The Liaisons from 802.11 would be able to vote in the Task Group since they have voting rights in 802.15. Progress from the group will be reported in 802.11/15 joint meetings.
- Two Letter Ballots will be submitted, one each for 802.11 and 802.15.
- Anyone attending a coexistence task group session will be given attendance credit for that time in either 802.11 or 802.15.
- The TG was approved by ExCom in Kauai.
- Coexistence model. The purpose is to understand under what circumstances there is a problem, and when there is not, and to develop supporting evidence to justify the recommended practices.
- Collaboration with Bluetooth SIG on WLAN interference is planned. Presentations are being prepared on the subject.
- Coexistence web site in 802.15

4.5 High Rate SG report

- Document 802.15-00/019r1 was presented.
- PAR approved by 802.15 WG. Will be submitted to ExCom in March. PAR is 802.15-99/165r4. Five Criteria are 802.15-99/166r2.
- Began working on organisational issues in anticipation of TG status.
- A series of selection criteria have been developed. Document 802.15-00/007r0.
- PAR scope: There is a class of devices to provide wireless connectivity for fixed or portable devices within a personal operating space. Provide a standard for low complexity, low cost, low power consumption, high data rate wireless devices. High data rate of 20Mbps or more to satisfy Multimedia and QoS capabilities.
- Goals: Bluetooth interoperable, low cost, low power, short range, >20Mbps. Not LAN, business critical, long range, or enterprise coverage.
- Process: Try to include public and startups attempting new ad-hoc standards. CFA/CFP March, call for intent, May, July, presentations and evaluations. Focus criteria on non-WLAN applications.

4.6 802.11 Study Group MAC Enhancements

- Charter of SG to determine needed improvements for 802.11 MAC to improve performance and support new applications. (QoS, improved security,

- SG is ahead of schedule. Two PARs have been submitted. Will be reviewed and approved in March plenary meeting. The MAC enhancements form one PAR, and the Inter Access Point Protocol is another PAR for a Recommended Practice document.
- SG is preparing for TG status beginning in March.
- Working on Requirements document and Evaluation Criteria for Proposals Drafts.
- A formal call for proposals will be made.
- Key Dates: TG established at March 2000 Plenary. Draft for WG letter Ballot by November 2000.

5. New Business**5.1 Ad Hoc Regulatory****5.1.1 Korean regulatory issues already addressed****6. Closure**

The meeting closed at 14:30.

**IEEE P802.11
Wireless LANs**

Tentative Minutes of the 802.11 TGd Task Group, Tel Aviv, Israel

Date: January 13, 2000

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1. Meetings at the 802.11 January 2000 Interim

1.1. Monday Afternoon

1.1.1. Call to Order

1.1.2. Secretary – Tim Godfrey

1.1.3. Agenda for week

1.1.3.1. *Resolve Letter Ballot 20 comments received on 802.11d/D1.0*

1.1.3.1.1. *Document IEEE 802.11-02/002*

1.1.3.1.2. *Host conference call with Bob O'Hara, Chris Zegelin.*

1.1.3.2. *Revise document 802.11d-Draft1..doc and create new document for re-circulation*

1.1.3.2.1. *Doc 802.11d-Draft2.0.doc*

1.1.3.3. *Submit 2.0 draft to WG recirculation Letter Ballot 21.*

1.1.4. Approval of Agenda (no objections)

1.1.5. Letter Ballot Results

1.1.5.1. *80 people on Ballot, 67 votes received.*

1.1.5.2. *10 No Votes with Comments*

1.1.6. Working Documents

1.1.6.1. *802.11d-Draft1.0.doc*

1.1.6.2. *Letter Ballot Comments (document 00/002)*

1.1.7. Comment Resolution

1.1.7.1. *Walk through editorial comments*

1.1.7.2. *Edit Off Line, present tomorrow*

1.1.7.3. *Technical comments will be handled with a follow-up conference call with Bob O and Chris Z.*

1.1.7.4. *Comment de1 Editorial,*

1.1.7.4.1. *Accepted*

1.1.7.5. *Comment de2 Technical*

1.1.7.5.1. *Hopping Pattern issues*

1.1.7.5.2. *Tabled tomorrow*

1.1.7.6. *Comment de3 Technical*

1.1.7.6.1. *Beacon / Probe Response must be equal.*

1.1.7.6.2. *Accepted*

1.1.7.7. *Comment de(4, 5, 6) Technical*

1.1.7.7.1. *MIB naming consistency*

1.1.7.7.2. *Accepted*

1.1.7.8. *Comment de7 Technical*

1.1.7.8.1. *FH terminology usage*

1.1.7.8.2. *Accepted*

1.1.7.9. *Comment de8 Technical*

- 1.1.7.9.1. *Wording of MultiDomainCapable*
- 1.1.7.9.2. *Accepted*
- 1.1.7.10. *Comment de9 Technical*
 - 1.1.7.10.1. *Fix xxxxx in text*
 - 1.1.7.10.2. *Accepted*
- 1.1.7.11. *Comment de10*
 - 1.1.7.11.1. *Grammar error*
 - 1.1.7.11.2. *Accepted*
- 1.1.7.12. *Comment de11 Technical*
 - 1.1.7.12.1. *Correspondence of MIB attribute for capability.*
 - 1.1.7.12.2. *Accepted*
- 1.1.7.13. *Comment de12 Technical*
 - 1.1.7.13.1. *Hop Set numbering (explanation of 0 case)*
 - 1.1.7.13.2. *Accepted*
- 1.1.7.14. *Comment de13 Technical*
 - 1.1.7.14.1. *Consistency of use of 0 hop set.*
 - 1.1.7.14.2. *Tabled*
- 1.1.7.15. *Comment de14 Editorial*
 - 1.1.7.15.1. *Length field*
 - 1.1.7.15.2. *Accepted*
- 1.1.7.16. *Comment de15 Technical*
 - 1.1.7.16.1. *States of flag field*
 - 1.1.7.16.2. *Accepted*
- 1.1.7.17. *Comment de16 Technical*
 - 1.1.7.17.1. *Inconsistency in flag field*
 - 1.1.7.17.2. *Accepted*
- 1.1.7.18. *Comment gsn1 Technical*
 - 1.1.7.18.1. *Response to unsupported elements*
 - 1.1.7.18.2. *Tabled*
- 1.1.7.19. *Comment gsn2 Technical*
 - 1.1.7.19.1. *Phrasing issue*
 - 1.1.7.19.2. *Accepted*
- 1.1.7.20. *Comment gsn3 Technical*
 - 1.1.7.20.1. *Country element in Beacon issues*
 - 1.1.7.20.2. *Tabled*
- 1.1.7.21. *Comment gsn4 Technical*
 - 1.1.7.21.1. *Representation of country specific data*
 - 1.1.7.21.2. *Tabled*
- 1.1.7.22. *Comment gsn5 Technical*
 - 1.1.7.22.1. *Explicit limitation of transmit power and channel.*
 - 1.1.7.22.2. *Tabled*
- 1.1.7.23. *Comment gsn6 Editorial*
 - 1.1.7.23.1. *Hopping algorithms*
 - 1.1.7.23.2. *Accepted*

- 1.1.7.24. *Comment gsn7 editorial*
 - 1.1.7.24.1. *Didn't update when copying existing dot11AuthenticationAlgorithm text*
 - 1.1.7.24.2. *Accepted*
- 1.1.7.25. *Comment gsn8 Editorial*
 - 1.1.7.25.1. *Capitalization and spelling*
 - 1.1.7.25.2. *Accepted*
- 1.1.7.26. *Comment gsn9 editorial*
 - 1.1.7.26.1. *Unknown document reference*
 - 1.1.7.26.2. *Already addressed*
- 1.1.7.27. *Comment gsn10 technical*
 - 1.1.7.27.1. *Use of "Truthvalue" in MIB*
 - 1.1.7.27.2. *Accept*
- 1.1.7.28. *Comment gsn11 technical*
 - 1.1.7.28.1. *Hop pattern algorithms*
 - 1.1.7.28.2. *Accepted*
- 1.1.7.29. *Comment gsn12 technical*
 - 1.1.7.29.1. *Upper channel number*
 - 1.1.7.29.2. *Accepted*
- 1.1.7.30. *Comment gsn13 editorial*
 - 1.1.7.30.1. *Names of existing algorithms*
 - 1.1.7.30.2. *Accepted*
- 1.1.7.31. *Comment gsn14*
 - 1.1.7.31.1. *Out of order elements*
 - 1.1.7.31.2. *Tabled*
- 1.1.7.32. *Comment hmd1 technical*
 - 1.1.7.32.1. *Wording of PAR regarding new regulatory domains. Inconsistency between draft and PAR regarding cross domain mobility..*
 - 1.1.7.32.2. *Refer to Bob – change PAR to include broader scope of work for 802.11d.*
- 1.1.7.33. *Comment hmd2 technical*
 - 1.1.7.33.1. *Country information element country string octet ordering.*
 - 1.1.7.33.2. *Accepted*
- 1.1.7.34. *Comment hmd3 technical*
 - 1.1.7.34.1. *Probe response*
 - 1.1.7.34.2. *Addressed by accepting comment de3*
- 1.1.7.35. *Comment hmd4 technical*
 - 1.1.7.35.1. *Request for referencing of optional request field.*
 - 1.1.7.35.2. *Accepted*
- 1.1.7.36. *Comment hmd5 technical*
 - 1.1.7.36.1. *dot11AuthenticationAlgorithmsEntry copying error*
 - 1.1.7.36.2. *Already addressed*

- 1.1.7.37. *Comment vh1 Technical*
 - 1.1.7.37.1. *Japanese regulations (we need to make “dummy changes” to the draft as a placeholder to fill in the details for the next meeting.*
 - 1.1.7.37.2. *Accepted*
- 1.1.7.38. *Comment vh2 Editorial*
 - 1.1.7.38.1. *Formatting and templates*
 - 1.1.7.38.2. *Accepted*
- 1.1.7.39. *Comment tk1 Technical*
 - 1.1.7.39.1. *Hopping Sequence Mechanism – wants to remove EHCC.*
 - 1.1.7.39.2. *Refer to teleconference.*
- 1.1.7.40. *Comment rab1 Technical*
 - 1.1.7.40.1. *Use of probe response vs Beacon to communicate regulatory information.*
 - 1.1.7.40.2. *Teleconference*
- 1.1.7.41. *Comment VMP1 technical*
 - 1.1.7.41.1. *Limiting mobility to stations, and explicitly excluding APs. Recommends STA only.*
 - 1.1.7.41.2. *Rejected – 802.11 WG to work with regulatory agencies on user enabling of multi-domain operation.*
- 1.1.7.42. *Comment VMP2 technical*
 - 1.1.7.42.1. *Parameters in beacon and probe response frames.*
 - 1.1.7.42.2. *Tabled*
- 1.1.7.43. *Comment VMP3 technical*
 - 1.1.7.43.1. *Association denied status code*
 - 1.1.7.43.2. *Accepted (assign status code 22 in table 19 with corresponding descriptive text as in 802.11b)*
- 1.1.7.44. *Comment dk1 Technical*
 - 1.1.7.44.1. *HCC hop pattern performance questions*
 - 1.1.7.44.2. *Tabled – teleconference.*

1.1.8. Adourn at 17:30

1.2. Tuesday Afternoon

1.2.1. Meeting called to order 15:30

1.2.2. Working document

- 1.2.2.1. *802.11 00/002r2 Comment resolution*

1.2.3. Conference Call Report

- 1.2.3.1. *The comments and minutes from yesterday’s session were emailed to Chris Zegelin and Bob O’Hara.*
- 1.2.3.2. *The results are 002-r2*
- 1.2.3.3. *The remaining comments will be addressed today. We will email the results from today to Bob and Chris, revise the text, and present the results to the Plenary on Friday..*

1.2.4. Comment Resolution

- 1.2.4.1. *The comments that were tabled yesterday and resolved on the teleconference were presented to the group, and the teleconference resolutions were accepted without objection.*
- 1.2.4.2. *Discussion on whether the new changes to Japanese regulations should be incorporated into this draft as “dummy” changes until the details of the new regulations are available.. The commenter could not come to an agreement with the group. The comment was rejected.*
- 1.2.4.3. *Comment MH1 Technical*
 - 1.2.4.3.1. *Option to contain all regulatory information in beacon to assist passive scanning*
 - 1.2.4.3.2. *Accepted.*
- 1.2.4.4. *Comment bo2 Technical*
 - 1.2.4.4.1. *FH Parameters, Beacon*
 - 1.2.4.4.2. *Accepted*
- 1.2.4.5. *Comment bo3 Technical*
 - 1.2.4.5.1. *FH Parameters, Probe Response*
 - 1.2.4.5.2. *Accepted*
- 1.2.4.6. *Comment bo5 Technical*
 - 1.2.4.6.1. *implementation*
 - 1.2.4.6.2. *Accepted*
- 1.2.4.7. *Comment bo6 Technical*
 - 1.2.4.7.1. *hopping pattern from the original standard*
 - 1.2.4.7.2. *Accepted*
- 1.2.4.8. *Comment bo9 Technical*
 - 1.2.4.8.1. *Page 9, lines 9-21, this is not correct*
 - 1.2.4.8.2. *Accepted*
- 1.2.4.9. *Comment bo11 Technical*
 - 1.2.4.9.1. *PICS is required.*
 - 1.2.4.9.2. *Accepted, ask Bob O to write text*
- 1.2.4.10. *Comment bo12 Technical*
 - 1.2.4.10.1. *Explicit changes to the state machines are required.*
 - 1.2.4.10.2. *Accepted*

1.2.5. Changes will be incorporated into text, and reviewed Thursday.

1.2.6. Adjourn 16:30

1.3. Wednesday AM

1.3.1. Called to order 10:30

1.3.2. Comment resolution

- 1.3.2.1. *Conference Calls with Bob O'Hara indicate changes are needed to PICS and State Machines to complete the work.*

1.3.3. Plan of action

- 1.3.3.1. *Continue editing comments at this meeting*
- 1.3.3.2. *Continue work for 2 weeks after the January Interim and make the revised comment resolution document available on the 802.11 website by Jan 31, 2000.*
- 1.3.3.3. *Schedule teleconference call for Feb 7th, 2000 to informally discuss the changes to the draft, and report a revised version of the draft by Feb 8th, 2000.*
- 1.3.3.4. *Schedule an approval teleconference meeting on Feb 15th, 2000*
- 1.3.3.5. *Start recirculation on Feb 16th, 2000, and close on Feb 27th, 2000.*
- 1.3.3.6. *Results available on March 16th, 2000.*

1.3.4. Straw poll

- 1.3.4.1. *In favor of plan of action: 3:0:3*

1.3.5. Motion to adopt the suggested outline for completing the revision of document IEEE Std 802.11d/D1.3, and submitting to recirculation ballot.

- 1.3.5.1. *Moved Denis Kuwahara, Seconded Tal Kaitz*
- 1.3.5.2. *Motion passes 4/0/0*

1.3.6. This plan will be proposed to plenary on Friday.

- 1.3.6.1. *Volunteers taken for editing of comments this week.*

1.3.7. Adjourn**1.4. Thursday PM****1.4.1. Call to order 13:45****1.4.2. Review of progress**

- 1.4.2.1. *Addressed all 60 comments*
- 1.4.2.2. *Rejected 7 comments*
- 1.4.2.3. *Draft has been edited to address 47 out of 60 comments.*
- 1.4.2.4. *13 comments remaining, need text*
- 1.4.2.5. *Work still required for PICS and state machines.*
- 1.4.2.6. *Adopted proposed plan to complete the draft 2.0 and forward for recirculation.*

1.4.3. Agenda update

- 1.4.3.1. *Working documents "0002-r4-8W-Letter-Ballot-20-Comments-802.11d-D1-r4.doc", "802.11d-Draft1.5.doc" (containing edits from comments).*
- 1.4.3.2. *Follow approved plan:*
 - 1.4.3.2.1. *1.7.3.1. Continue editing comments at this meeting*
 - 1.4.3.2.2. *1.7.3.2. Continue work for 2 weeks after the January Interim and make the revised comment resolution*

document available on the 802.11 website by Jan 31, 2000.

- 1.4.3.2.3. 1.7.3.3. Schedule teleconference call for Feb 7th, 2000 to informally discuss the changes to the draft, and report a revised version of the draft by Feb 8th, 2000.
- 1.4.3.2.4. 1.7.3.4. Schedule an approval teleconference meeting on Feb 15th, 2000
- 1.4.3.2.5. 1.7.3.5. Start recirculation on Feb 16th, 2000, and close on Mar 2nd, 2000.
- 1.4.3.2.6. 1.7.3.6. Results available on March 16th, 2000
- 1.4.3.2.7. Call for volunteers for state machine editor "trainees". (Alan Heberling no longer has time to maintain state machines. Telelogic will provide SDT editing tools to 802.11 state machine editor.)
- 1.4.3.2.8. Put request for volunteers onto email reflector to full 802.11 membership.
- 1.4.3.2.9.

1.4.4. Review of changes to draft

- 1.4.4.1. Most were editorial, and edited here.
- 1.4.4.2. Technical issues have been resolved by Bob O'Hara and Chris Zegelin.
- 1.4.4.3. Comments for removing the HCC algorithm were rejected since an algorithmic approach was the intent of this standard.
- 1.4.4.4. Comments regarding leaving "placeholders" for new Japanese regulations were rejected. A new PAR will be requested to address these issues, once they are known.
- 1.4.4.5. Straw poll on accepting changes: 8-0-0

1.4.5. Motion

1.4.5.1. To approve the resolution of the comments of letter ballot 20 for 802.11d and the editing of the draft to reflect those comments.

- 1.4.5.1.1. Moved Vic Hayes
- 1.4.5.1.2. Seconded Denis Kuwahara
- 1.4.5.1.3. **Motion passes 6-0-0**

1.4.6. Results to be forwarded to Plenary tomorrow.

1.4.7. Adjourn

Tentative Minutes of the IEEE 802.11 Ad Hoc Regulatory Group**David Intercontinental Hotel, Tel Aviv, Israel****11-12 January 2000***Meeting Minutes Tuesday 10:30 AM, 11 January 2000*

Chairman: Dennis Kuwahara

Secretary: Bob Huang

In attendance: Dov Andeiman, Sunghyun Choi, Peter Ecclesine, John Fakatselis, Amar Ghorri, Ran Ginosar, Tim Green, Victor Hayes, Frank Howley, Masayuki Ikeda, Jerry Loraine, Tal Knitz, Ryoji Kido, Bill McFarland, Tzvetan Novkov, Al Petrick, Anand Prasad and Alan Winskowski

Dennis Kurahara reviewed the agenda.

The following items were dealt with:

- WLL/802.11 interference in Korea – The Korean Regulatory Agency may be considering limiting lower frequency WLAN channels due to potential interference between adjacent channel operation of WLL and 802.11 systems near (Docs 0004-8W-Issues-S-Korea-Regulations.doc and Korea2.doc).

Disposition: In discussion, it was accepted that the interference from the WWL into 802.11 devices would likely be less than interference received from other (nearby) 802.11 systems. Thus it was not understood why the Korea Radio Research Laboratory (RRL) is considering recommending limiting the use of WLAN channels 1 and 2. The meeting decided to seek clarification as to the proposed regulatory action and its basis. A task was assigned to Jerry Loraine and Bob Huang to draft an EMail message to RRL with the request that a reply be sent for consideration at this meeting of 802.11.

- Establishment of a unified world-wide 5 GHz license exempt band
 - Status: IEEE 802.11 Ad Hoc Regulatory Group Draft contribution (Doc 0264r2), approved at the November meeting, was withdrawn as inappropriate.
 - The ITU and JRG 8A-9B: The meeting received an oral briefing on the US ITU-R process and the international ITU process to assist in planning future activities in unifying worldwide licensed exempted band use in the 5 GHz band. A contribution on the US process and the ITU process was promised.

The meeting adjourned at noon, to continue on the following day.

Meeting Minutes Wednesday 8:30 AM, 12 January 2000

The following items were dealt with:

- 802.11/HYPERLAN0 - The Chairman reported that the correspondence requesting 802.11 technology to be permitted under HYPERLAN0 is progressing in the approval process.
- WLL/802.11 interference in Korea – The Chairman reported that an EMail query (Doc 0013-8R-Korea WLL Reply) was sent to RRL. A reply was not received by the close of the meeting.
- Establishment of a unified world-wide 5 GHz license exempt band - A MS Powerpoint presentation on the ITU process (Doc 0015-8R-ITU-R Process) was reviewed and improved for clarity. The presentation focuses on the ITU-R structure and process as well as the US process and structure for handling ITU-R matters.

The meeting concluded its work and arose at 10:00 AM.