

Tentative Minutes of the IEEE P802.11

**Full Working Group
Plenary Meeting
Vancouver, Canada
November 11-14.1996**

Monday 11-11-96

1.0 Opening Meeting called to order by Vic Hayes at 3:30 in the Saturna Room of the Hotel Vancouver. Agenda of 37th session of 802.11 is in doc.:IEEE P802.11 11-96/131. Review of objectives if this meeting. New secretary¹⁾ George Fishel will install later.

Objectives for this meeting, all groups

Process LMSC (Sponsor) ballot result
Prepare comments to Letter Ballot on CD 8802-11
Conformance testing
Future work

1.0 Secretary: Chair taking notes on PPT files and Bob O'Hara making notes.

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1.1 Roll Call: People in the room were invited to introduce themselves. Moment of silence for the passing Chris Zegelin's wife. Dean Kawaguchi had a card to send to Chris. Stuart Kerry indicated that it was Chris' wish to rerpplace a group collection by individual donation to local charities.

1.2 Voting rights:

Participation in debates, moving and seconding is only permitted by voting members, in all 802.11 meetings (at all levels). The subgroup chairs may permit observers to participate in debates.

Voting at the working group level is by voting members only. Chair may permit observers to participate in debate. To become a voting member:

- participate in at least 2 out of 4 consecutive plenary meetings. Voting rights start at third meeting
- participation in at least 75% in meetings, in the room
- one interim may be exchanged for a plenary
- Voting members will get a token to be used at votes

Voting rights can be maintained:

- by participation in 2 plenary meetings within 4 consecutive plenary meetings
- one interim may be substituted for a plenary

Voting rights may be lost:

- after failing to pay the conference fee
- after missing two out of three consecutive letter ballots

Current state of member status:

- 64 - Voting members
- 28 - Aspiring voting members
- 11 - Nearly voting members

1.3 Attendance list, Registration: The attendance list was circulated, Stuart Kerry supervising - 75% attendance according to the attendance list is required to qualify for attending the meeting as a whole, so make sure to sign the book. Copies of the attendance list are handed out before the end of each meeting.

- important for administration of voting rights that the attendance book is used properly.
- sign per meeting (morning, afternoon, evening). Do not sign ahead.
- place initials. Do not cross or underline.
- circle the letter corresponding to the meeting you attend when signing (F=full 802.11, P=PHY, M=MAC group).

Check e-mail addresses in the book:

- some addresses have been struck, or have a \$-sign added to the right - those received complaints from the reflector
- please strike your e-mail address if you do not use it
- if you do not disagree to receiving very long files, mark bulk e-mail with yes

1.4 Logistics: Document distribution is done using pigeon holes - you will find your copies and messages in the referenced location in the expanding file folders in the slot *in front of* your name.

Document distribution:

- sign in for a slot, remember the letter and number
- pigeon holes are file folders with a letter id on each folder and a number on each slot
- in each folder are numbered slots, each of which is 'owned' by a person
- each person owns slot in front of number

Conference fee to be paid through registration office.

Coffee breaks at 10 AM and 3 PM. Noon to 1:00 PM lunch

1.5 IEEE Patent Policy Vic Hayes explained the IEEE Patent Policy as per Clause 5 of the IEEE Standards By-Laws and per Clause 6.3 of the IEEE Standards Operations Manual. He specifically asked for notification from members of patents applicable to the draft standard and that patent holders submit the requested statement.

1.6 Other announcements

1.6.1 General information available on diskette, Vic Hayes provided a set of diskettes with general information, during the meeting kept by George Fishel. The diskettes containing:

- 1 July mailing
- 2 October mailing (and March 96 tutorials)
- 3 marked up sections of draft (from ballot)
- 4 files with report and comments from ballot
also Part 15 of CFR 47 and spectrum inventory USA (downloaded by Ian Gifford)
- 5 General info, IEEE, 802, 802.11

1.6.2 Volunteers needed for Thursday evening to prepare mailing Richard Payne, Roy Sebring, Johnny Zweig will help on Thursday night with paper work.

2. Approval of the minutes of previous meetings

2.1 **Enschede meeting doc.:** 11-96/109

Motion #1 To approve the minutes 96/109

Motion made by Johnny Zweig
Second by Stuart Kerry

Vote 25-0-3

Motion #1 passes

3. Reports

3.1 the Executive Committee ExCom meeting report made by Vic Hayes.

Old USTAG to ISO/IEC JTC1/SC6 was dissolved and a proposal for a new tag was made. The expected cost for LMSC, US\$ 10 000 will be deducted form the Iinternational Secretariatship Payment.

Reflector for 802 all E-mail will be set-up using the individual reflectors of the WGs.

The controversy about conditional approval to go to Sponsor Ballot or to Standards Board only met with disapprove votes during the e-mail ballot among the ExCom. Meetings will be held this week to resolve the issues.

Proposed rules for e-mail ballots among ExCom met with a lot of comments. Meetings will be held thois week to resolve the issues.

Book distribution. Books will be sent directly to the eligible people; members need to sign up.

In a general rules change of the IEEE Standards Operating Manual, from now on all comments whether from "approve" voters or from coordination must be resolved equally well as on "do not approve" votes.

- 3.2 the editors** Report from the editors made by Bob O on revision 5.09 that will become 5.1
- 3.3 the LMSC (Sponsor) ballot on draft D5.0** Vic Hayes presented the results of the LMSC (Sponsor Ballot) on draft 5.0 as given in doc.: 11-96/135 part 1. The ballot closure was delayed by a week, the return rate was 77 % and the approval rate was 86 %. Main task is to resolve all comments See Document 11-96/135 (parts 1-6).
- 3.4 ISO/IEC JTC1/SC6 meeting 11-96/137** The work item for Wireless LANs was approved and our draft 5.0 was adopted as the Committee Document on 8802-11 on the subject. This will be the only document going for standard within this project. If ETSI would like to give an additional document, they have to apply for a new work item first. Vic Hayes was honoured with the project editorship.
- 3.5 the ITU-R Working party 8A meeting** Ian Gifford and Vic Hayes attended this meeting on mobile services except FPLMTS. Both US regulations as well as references to IEEE P802.11 and ISO CD 8802-11 were added to the draft recommendation. It is interesting to note that this Rec encourages further adoption of unlicensed spectrum in 2.4 and 5.2 GHz areas as well as for additional spectrum for public RLANS under licenses.
- 4. Review of document list by Vic H. IEEE 802.11-96/140 temp.** Additional documents 142 by Naftali Chayat,, replacement for rules for Regulatory Committee and 96/143 on time stamp Keith Amundson.

5. Adoption of the Agenda 11-96/131. Vic presents a Rough Graphic of Outline

Motion #2 *to approve the agenda with change to the start time for Wednesday Plenary to 3:30 PM.*

made by Tom Siep
second Johnny Zweig

Vote: 26-0-4

Motion #2 passes

5 Unfinished Business

- 5.1 destiny of the Draft Standard** Heavy discussion followed on State Machines (MAC and PHY).

Motion #3 *that 802.11 direct the MAC group to create a formal normative description of the MAC protocol operation for inclusion in the re-circulation ballot.*

Motion made by Johnny Zweig
Second by Bob O'Hara

Discussion Followed

Motion #4 *to postpone motion #3 Vote till Wednesday plenary.*

Moved by Dean Kawaguchi
Second by Dave Bagby

Additional discussion

Question called by Dave Bagby second by Johnny Zweig

vote: 26-2-2

Question Called

Vote:12-11-8

Motion #4 Passes**Motion #3 postponed**

- 6.2 Rules for Reg Com** At the last meeting the committee for interaction with regulatory bodies was dissolved. Naftali C presented .document 96/142. Proposal made by Naftali C to accept document 96/142 with a change of voting rules to 25% response be a committee. Discussion follows. Discision made to come up with guide lines for proposal will be presented later.

7. New Business

- 7.1 Nomination for New secretary** Vic announced that George Fishel volunteered to become the secretary of 802.11.

Motion 4A *to appoint George Fishel as the secretey of 802.11*

Motion made by Dean Kawaguchi
Second by Stuart Kerry

No opposition

George Fishel appointed as new secretary by acclamation.

- 7.2 Preparation of Comment to LB on CD8802-11** This item was left for future resolution.
- 7.3 Future work** Vic H opens the floor for proposal for new work items.

Need for a 10 and 20 Mb/s PHY

3 Mb/s FH PHY

Motion # 5 *to establish a study group to draft a PAR for a higher speed PHY in the 2.4 GHz band and PHYs operating in other bands*

Moved by Jan Boer
Second by Johnny Zweig
Naftali Chayat volunteered to be chair .of the group.

Vote 26-2-3

Motion # 5 passes

Study group will meet from 8:00 to 10: 00 this evening.

Discussion on a rugged future PHY William Rodgers from ITT will make future presentation.

- 8. Meeting adjourned at 7:00 PM.**

Wednesday 13-11-96

Meeting reconvened at 3:30 PM on 11-13-96 and called to order by Vic Hayse.

- 9.1 Roll Call**
- 9.2 Document list update**
- 9.3 Agenda adjustments** No changes. Agenda was approved as is.

Motion #3 passes

 Draft of document could be available by November 20th. Comment period closes November 30th
 E-mail ballot December 10th only changes on D5.0

Great deal of debate on this topic followed!

Expert group to update formal description and give mandate to update the broken text

Chair determines if we need a second WG ballot before the Full LSMC Ballot

10. Cross group Issues**Motion #6** *to reject Comment on Clause 12.3.3 made by: KC.*

Motion made by: Wim Diepstraten
 Seconded By: Anil Sanwalka

Question called by Tom Siep and Second by Darwin Engwer No Nos question is called

Vote: 20-0-7

motion #6 passes.

 Comment on Clause 12.3.5.1.2 made by: TLP.

Motion #7: *Adopt XXh as format for hexadecimal numbers through this document.*

Moved by: Carl Andren
 Seconded By: Naftali Chayat

Vote: 14-3-13

Motion #7 passes.

 Comment on Clause 13 all by: TLP. To use SI units in all locations in this document

Motion #8 *to continue to use Kμs rather than ms*

Motion made by: Bob O'Hara
 Seconded By: Jonny Zweig

Vote:

Motion #8 passes with 1 opposing.

 Comment on Clause 13.1.2

Motion #9 *to delete Annex D*

Motion made by: Jonny Zweig
 Seconded By: Michael Fischer

Vote:

Motion #9 passes unanimously

 Comment on Clause 14.8.2.1.2 By TLP

Motion #10 *to change figure....*

Motion made by: Dean Kawaguchi
 Seconded By: Carl

Vote: 20-0-5

Motion #10 passes.

Comment on Clause 13.1.4.10 and 13.1.4.12

Motion #11 to change as noted.

Motion made by: Dean Kawaguchi
Seconded By: Jan Boer

Vote:

Motion #11 passes unanimously.

General Comment by Mike Trompower on 1 μ s propagation delay.

Motion #12 to decline changes.

Motion made by: Dave Bagby
Seconded By: Tim Zimmerman

Vote: 21-2-6

motion #12 passes.

- 11. **PHY resolutions:** nothing to add
- 12. **MAC resolutions:** nothing to add
- 13. **Conformance Testing:** nothing to add
- 14. **Adjourn Meeting adjourned at 6:00 PM.**

**Final Plenary of 802.11
Thursday 11-14-96 at 1:15 PM.**

Meeting called to order by Vic Hayes with about 25 members present

- 15. **Opening** 1:00 pm
 - 15.1 **Announcements**
 - 15.1.1 **Kamerman changed to yes**
 - 15.1.2 **Housley and Putnins got notice**
 - 15.1.3 **12 person room with speakerphone available for calling voters**
 - 15.2 **Document list update**
 - 15.3 **Agenda adjustments**

16. Reports

PHY group first to permit Dave to finalize his report

16.2 PHY group**Full PHY and FH group report by Dean Kawaguchi**

Comment Processing

Addressed all comments on clause 14, FH PHY portions of annex. All text changes completed except correcting primitive names in figures and FH PICS proforma changes. This will be done after the meeting has concluded.

| | Total | Accept | Reject | Withdrawn |
|----------------------|-------|--------|--------|-----------|
| NO-vote comments | 10 | | | |
| Technical | 6 | 4 | 1 | 1 |
| Editorial | 4 | 4 | 0 | 0 |
| non-NO-vote comments | 37 | | | |
| Technical | 14 | 12 | 0 | 2 |
| Editorial (1 open) | 23 | 22 | 0 | 0 |

FH Motion: accept REVSEC11 text changes from TLP with the modifications as recorded in the minutes and the comments resolution file.

FH: Nathan/Naftali 6-0-0

Motion #13: *Accept the changes to clause 14 and the FH portion of annex A of the D5 draft made by the FH PHY group at the November 96 meeting to resolve sponsor ballot comments.*

FH: Carl/Ron 5-0-0

PHY: FH/Naftali 11-0-0

Moved by Dean Kawaguchi (PHY)

Seconded by Jan Boer

Vote: 21-0-0

Motion #13 passes

Two NO votes:

Ron Mahany - Accepts the changes to the FH section as resolution to his comments.

Tom Phinney -

16.2 DS Report by Jan Boer

Agenda

secretary - mike

minutes of march meeting - approved

comment processing

technical comments all on DS channel allocation plan

2 technical NO comments

conformance testing - no activity

future work - deferred to PAR study group

DS MOTION#1

Move to accept document SEC12.DOC as distributed in the comments files as the baseline for starting DS phy edits for this meeting.
approved (6-0-0)

DS MOTION#2

Move to accept the changes in REVSEC12.DOC as distributed.
approved (6-0-0)

DS MOTION#3

Move to add all four additional channels to ETSI (and two for France) and all channels in each domain are mandatory to be supported.
approve (5-0-1)

discussion: a technical NO comment by AK would not be satisfied by this change. A phone call will be placed to him to explain the rationale and see if he would withdraw his comment. the tradeoffs of giving up the additional frequencies to gain a common product

DS MOTION#4

Move to approve the response to 2nd technical NO vote by AK which rejects the comment to make the first two ETSI channels optional.
approve (5-0-1)

DS MOTION#5

move to approve the response to 1s technical NO vote by AK which rejects the comment to reduce the number of channels
approve (6-0-0)

Jan Boer will contact AK to determine if he will withdraw his comment. Result: AK is convinced by our arguments and has changed his no vote into yes

DS MOTION#7

Move to approve the WD technical No comment in 7.2.3.9 response with only the text changes pertaining to the current BSS current channel number.

discussion: comment asks for DS Parameter Set information element within Beacon Frames and Probe response frames with elements to report current channel number and the list of channels used within a ESS. The list is regarded to be not essential to solve the problem and rejected.

approved (6-0-0)

WD has agreed that is sufficient to change his NO to a YES on this issue

PHY/Plenary motion

Motion #14 ***to accept to changes DS section as presented***

Motion to accept: Jan Boer
Second Mike Trompower

Vote: 26-1-3

Motion #14 passes

Made by David Bagby
Seconded by Johnny Zweig

Vote: 26-0-2 Motion #20 Passes

Clause 9

Motion #21 *to accept changes to Clause 9.*

Made by David Bagby
Seconded by Michael Fischer

Vote: 27-0-0 Motion #21 passes

Clause 10

Motion #22 *to accept changes to clause 11.*

Made by Dave Bagby
Seconded by Johnny Zweig

Vote: 22-0-5 Motion #22 passes

Clause 11

Motion #23 *to accept changes to Clause 11.*

Made by David Bagby
Seconded by Simon Black

Vote: 27-0-3 Motion #23 passes

Changes to Annex

Clause A

Clause 9 changes impacts A4.5 PHY group, appears comment was handled. Also text edit text in clause 9

Motion #24 *to accept changes as described*

Moved by David Bagby

Seconded by Johnny Zweig

Vote: 26-0-2 Motion #24 passes

Clause G

Motion #25 *to accept changes to Clause G*

Moved by David Bagby
Seconded by Tom Siep

Vote: 25-0-2 motion #25 passes

Vic says he has on his agenda a process for contacting members with NO comments

16.3 Study group by Naftali Chayat

Following the motion accepted on Monday to establish a study group to draft a PAR for a higher speed PHY in the 2.4 GHz band and PHYs operating in other bands and Naftali Chayat volunteered to be chair. of the group, the group conducted two meetings in the week.

Two PARs are being developed:

- extension to 802.11 with higher speeds at 2.4 GHz
- a second PAR for even higher speeds at 5 GHz band

Heavy discussion followed on this topic. Many member feel that the criteria for the PAR is not sufficiently defined to go to the ExCom. Vic encourages the Study Group to go out and develop additional criteria for this PAR.

Straw Poll by Naftali to take request for PAR to ExCom: Straw Poll result: 4-15-5

Motion #26 *Seek approval for higher speed PHY SG and assuming that is approved: that the people interested in higher speed PHYs continue to work as a study group and as soon as they think they have a par that will be accepted by the ExCom and as soon as they have a par that would be accepted by the ExCom*

Made by Dave Bagby
Seconded by Keith Amundsen

Vote: 21-0-3

----- **motion #26 passes.** -----

Straw Poll by Naftali "Who supports PR statement" A lot opposed to sending a PR statement.

16.4 Assignments for contacting NO voters.

| | |
|-----------------|---|
| Tom Phinney | Dean will do the PHY portion David will do the MAC portion |
| Housley | David |
| Putnins | Nein Wei |
| Seifert | Bob O'Hara |
| Wim Diepstraten | himself |
| Clemens | Johnny and Darwin |
| Giffioen | Wim |
| Kammerman | Changed already |
| Fischer | Simon |
| Mahany | Ron |
| Sanwalka | Anil |

Ask all NO voters send a letter sent to IEEE with the following text: I change my negative vote on the IEEE P802.11 D5.0 LMSC ballot into a positive vote

Name:

sign:

date:

16.5 Regulatory Committee rules

Vote: 18-0-4

Motion #31 passes.

If needed, however, Vic Hayes will call a comment resolution meeting in February

Comments to ISO

Motion #32 *To empower the chair of 802.11 to prepare comments on the ISO/IEC JTC1/SC6 NB for CD 8802-11 to keep the document in line with IEEE P802.11*

Motion made by: Tom Siep
Second by: Ravi Nalamati

Vote: 20-0-3

Motion #32 passes

17.3 Next Meeting

- * Objectives for next meeting
 - process comments
 - high rate extensions
 - conformance testing
 - complete .11
- * Mailing Dates: Nov 22

17.5 Future Meetings see list below

17.4 Other Intermediate Meetings required? There was no interim meeting required

It was agreed to hold the SDL tutorial after the closure of the plenary 802.11 meeting.

Motion to adjourn. Motion passes by general consent at time 4:30 PM

Note: After the meeting Keith Amundsen indicated to the chair that he would like to withdraw Steve Washakowsky's Raytheon submission 96/143 because of objections that TSE processing can already be done multiple ways with only one long division, because of objections that the submission contains PHY dependancies that should not be in the MAC, and because of objections hat the submission is too FH specific.

Meeting minutes respectfully submitted by

George R Fishel

and extensively edited by Vic hayes, Chair

After the adjournment, Michael Fischer provided a tutorial on the tools he has for SDL

18. New business

18.1 Tutorial on SDL

19. Closure

5:00 pm

Tentative Meeting Schedule

A special Sponsor Ballot Comment Resolution meeting have been scheduled for January 13-15, 1997, close to Melbourne, FL

| Date | Month | Year | Place | Type | Location | Host |
|-------------|--------------|-------------|-----------------|-------------|--------------------|-------------|
| 11-14 | March | 1997 | Irvine, CA | Plenary | Irvine Marriot | |
| 7-11 | July | 1997 | Lahaina, HI | Plenary | Hyatt Regency Maui | |
| 10-14 | Nov | 1997 | Montreal, PQ | Plenary | Queen Elizabeth | |
| 9-13 | Mar | 1998 | Irvine, CA | Plenary | Hyatt Regency | |
| 6-10 | Jul | 1998 | La Jolla, CA | Plenary | Hyatt Regency | |
| 9-13 | Nov | 1998 | Albuquerque, NM | Plenary | Hyatt Regency | |

Appendix 1

Attendance list (part 1)

| | | | | |
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| | | | | |
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Appendix 1

Attendance list (part 3)

| | | | | |
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