

Tentative Minutes of the IEEE P802.11 Working Group

Plenary meeting
University of Twente, Enschede, Netherlands
July 8-12, 1996

Monday, July 8th, 1996, 4:35 PM

The meeting was called to order at 4:35 PM Vic Hayes, chairman IEEE P802.11¹⁾, in the chair. Bob O'Hara taking notes while the chair keeping motions on the PPT file used on the screen. Stuart Kerry managing document originals and copying and Jon Rosdahl managing distribution and pigeon hole organization. Chris Zegelin handling the attendance list. The agenda document for this meeting is 802.11-96/100.

Objectives for this meeting, all groups

- Process D4 letter ballot result
- Conformance testing
- Japanese call sign
- Reply comments on NPRM 96-8

1. Opening

Agenda available in pigeonholes

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

1.1 Roll Call: People in the room were invited to introduce themselves.

^{1)T} The officers of the Working Group are:

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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:

- 69 - Voting members
- 12 - Aspiring voting members
- 25 - Nearly voting members

1.3 Attendance list, Registration: The attendance list was distributed - 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 Other announcements

1.5.1 General information available on diskette, see Jon

1.5.2 IAPP meeting tonight 8-10 PM

1.5.3 Request for information on patented material and for a license statement

1.5.4 General information from meeting organization

1.5.1 Two diskettes with general information of 802.11 and the available files since last meeting are available for copying, Jon Rosdahl keeping the diskettes.

1.5.2 An Inter Access point Protocol presentation will be held tonight from 20:00 - 22:00 PM on invitation of some companies.

1.5.3 The chair asked for information on patented material known to members and a related license conforming the rules of IEEE if possible.

1.5.4 The chair gave some general information items regarding the meeting place and the hotels.

2. Approval of the minutes of the previous meeting

2.1 La Jolla meeting 11-96/53

Motion #1: To approve the minutes of the La Jolla meeting

Moved by: Michael Fischer
Seconded by: Wim Diepstarten

Motion Discussion: none

Vote: 21-0-0 **Motion #1 passes**

2.2 Waltham meeting 11-96/82

Motion #2: To approve the minutes of the Waltham meeting

Moved by: Michael Fischer
Seconded by: Wim Diepstarten

Motion Discussion: none

Vote: 17-0-3 **Motion #2 passes**

2.3 Matters arising from the minutes: none

2.4 Financial Report Waltham:

WALTHAM Interim 802.11 May 6-9 1996 Expenses

Organized by Raytheon

	<u>6MAY96</u>	<u>7MAY96</u>	<u>8MAY96</u>	<u>9MAY96</u>	<u>TOTAL</u>
Food & Drink	844.07	925.85	635.30	831.68	
Audio & Visual	1573.43	476.70	350.70	473.55	
Totals	2417.50	1402.55	986.00	1305.23	6111.28

49 Attendees @ \$100.00 paid each 4900.00

Carry forward excess from last interim meeting 214.20

Raytheon Subsidy 997.08

Motion #3: *To approve the financial report of the Waltham meeting*

Moved by: Jon Rosdahl
 Seconded by: Chris Zegelin

Motion Discussion: none

Vote: Voice vote without dissent

Motion #3 passes

3. Reports

3.1 The Executive Committee, by Vic Hayes

Document 90/105, proposed ISO liaison statement containing comparison between 802.11 and HIPERLAN standard presented and found to be a good starting point. Left for comments from 802.11.

In addition to the neutral comparison, 802.11 was requested to prepare a contribution to ISO from the USA member body to propose 802.11 as the only International standard for wireless LANs.

Jim Carlo is the new Chairperson for IEEE 802, LMSC.

Appointments of non-WG officers

- Vice-chair Paul Nicolich
- Executive Secretary Buzz Rigsbee
- Recording secretary Kelly McClellan
- Treasurer Kirk Preiss
- Other interested for Vice-chair possible till Tuesday 6 PM

New publication: information report

Many of the good tutorials given in 802 are worth to be published, a new way is being sought, for instance: applications of standards technology. 802.11 showed no objection to pass this to an ad-hoc of 802.

Looking for response to the meeting place being remote from guestroom accommodations.

3.2 The Editors:

Future versions of the draft will be distributed in both WfW V6 and PDF format

3.3 The letter ballot on draft D4.0 results 11/106

Concern was expressed regarding Eran Shpak's voting status and Tom T's late No vote. (Note from the chair: at the My meeting the chair had ruled that votes from Nearly voting members would be counted and be valid)

Motion #4: *To disallow late letter ballots from Tom T and Ron Mahany*

Moved by: Bob O'hara
Seconded by: Stuart Kerry

Motion Discussion: none

Vote: 19-0-3 **Motion #4 passes**

Motion #5: *To disallow the ballot by John Biddick as not meeting the minimum requirements for a "NO" vote*

Moved by: Bob O'hara
Seconded by: Michael Fischer

Motion Discussion: none

Vote: 15-2-5 **Motion #5 passes**

4. Review of contributions: Several new contributions. Not listed here.

5. Adoption of agenda: The agenda was modified to contain destiny of draft and destiny of Regulatory Commission as Unfinished business and Press Release, Iso contribution and Supernet as new business. This was adopted by unanimous consent.

6. Unfinished Business:

6.1 Destiny of the draft standard

The following options were listed:

1. send draft 4.0, as is
2. send draft 4.0+ with only editorial changes
3. send draft 4.1, that addresses only comments on NO votes
4. send draft 4.1+ that addresses NO comments and time-limited other comments
5. send draft 4.1++ that addresses all comments

Motion #6: *to work toward sending the draft out for sponsor ballot without requiring a confirmation ballot*

Moved by: Chris Zegelin
Seconded by: Jon Rosdahl

Motion Discussion: none

Vote: 5-16-1

Motion #6 fails

Motion #7: *to process as many comments as possible, so that text is ready at the end of the week to conduct a confirmation ballot, to present any contentious issues to the full working group prior to incorporating changes, and to flag all technical changes that would require a confirmation ballot.*

Moved by: Keith Amundsen
Seconded by: Dean Kawaguchi

Motion Discussion: none

Vote: 19-1-2

Motion #7 passes

6.2 Destiny of Regulatory Committee

Motion #8: *to adjourn for subgroups.*

Moved by: Dean Kawaguchi
Seconded by: Nathan Silberman

Motion Discussion: none

Vote: voice vote without dissent

Motion #8 passes

8. Adjourn to subgroups: 12:00 Noon

Monday PM, 6 May, 1996
MAC & PHY subgroups

Tuesday AM & PM, 7 May, 1996
MAC & PHY subgroups

Wednesday AM, 8 May, 1996
MAC & PHY subgroups

Wednesday PM, 9 May, 1996 Full Working Group

The meeting was reconvened at 1:15 PM, by chairman Vic Hayes, Chris Zegelin secretary.

9. Opening

9.1 Roll Call: People in the room were invited to introduce themselves.

9.2 Document list update:

interim result files are on diskette, make sure that headers and footers are correct on submissions. Diskette with 802.11 general information is available.

9.3 Agenda adjustments: for this afternoon

proposal from the chair to include business from Monday, destiny of Regulatory Commission as Unfinished business and Press Release, Iso contribution and Supernet as new business, right after the opening agenda items. Request for moving cross-group issues up before the Monday business. This was approved.

9.4 Announcements:

9.4.1 **Comments on meeting place.** Some new findings were added to the list

9.4.2 **Compuserve number given earlier was wrong.** Please do not use.

9.4.3 **Who does not have a badge by now?** Nobody.

9.4.4 **Logistics of output material.** Submissions and reports of meeting are collected by Stuart. Resolutions of comments will be named revision 1 of the comments set of files, collected by Stuart.

Updated text for the standard: without headers and footers, without document numbers! Will be collected by Stuart. Convergence to single file will be handled by: clauses 1-4: Bob O'Hara, Clauses 5-6: Chris Zegelin, clause 7 and 9: Simon, clause 8, 10 and 11: Michael Fischer, Clause 12, 13, 15 and 16: Mike Trompower, Clause 14: Dean Kawaguchi.

Convergence to single resolutions files will be handled by: part 2: Bob O'Hara, part 3: Simon Black, part 4: Michael Fischer, part 5: Dean Kawaguchi, Part 6: Michael Fischer and all annexes: Bob O'Hara.

Howard Hall will formulate a position regarding the continued existence of clauses 11, 13 and annex D as they overlap.

9.4.5 A long discussion ensued regarding the numbering of drafts ending into the conclusion that we would stick to motion #7.

10. Cross group Issues

<i>Motion #9:</i>	<i>to decline comment #111 of doc.:106 part 3, in clause 9 with: "While in principle this is an improvement, in the interests of minimizing changes and maximizing the chances of a successful confirmation ballot."</i>
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Moved by: Wim Diepstraten
Seconded by: Chris Zegelin

Motion Discussion: none

Vote: 10-6-5 **Motion #9 failss**

Motion #10: *to accept comment #111 of doc.: 106 part 5 in clause 9 with: Replace the word "static" with "fixed" when referring to CWmin in 9.2.4; define aCWmin and aCWmax in each PHY MIB, aCWmin: FH=15, DS=31, IR=63; aCWmax: FH=DS=IR=1023; make new PHY MIB objects Get-only to reflect the fact that they have been moved from the MAC (where they needed to be set by the AC according to the PHY type) to the PHY (where they are fixed).*

Moved by: Simon Black
Seconded by: Michael Fischer

Motion Discussion: a long discussion ensued until Bob called for the question, second by Dean. Qustion called with 13-1-10

Vote: 13-1-10 **Motion #10 passes**

Comment #132 from doc.: 106 part 3 will be resolved from the PHY perspective.

Regarding comment 14 of doc.: 106 part 5:

Motion #11: *that the MAC group generate a PHY_CCARST.request when the NAV becomes zero, as previously contained in the MAC state machine.*

Moved by: Dean Kawaguchi
second by: Michael Fischer

Motion Discussion: none

Vote: 20-0-0 **Motion #11 passes**

Regarding comment 16 of doc.: 106 part 5:

Motion #12: *that the second paragraph in clause 14.3.3.3.2 with: If any error was detected during the reception of the PLCP_PDU, the PLCP may send a PHY_RXEND.indicate(RXERROR) and terminate the receive procedure before the last bit arrives.*

Moved by: Dean Kawaguchi
second by: Simon Black

Motion Discussion: none

Vote: by voice vote without dissent **Motion #12 passes**

Regarding comment 25 of doc.: 106 part 5:

Motion #13: *to accept resolution of Simon's comment such that: delete tolerance from clauses 14.8.2 and 14.8.2.1.11 and change clause A.4.5 line 14.65 column 1: "Is the PHY MIB aSIFSTime attribute 28us and is the PHY capable of meeting this performance within the +/-5 us tolerance specified in clause 9.2.3.1?"*

Moved by: Dean Kawaguchi
second by: Naftali Chayat

Motion Discussion: none

Vote: by voice vote without dissent **Motion #13 passes**

PICS Proforma

Motion #14: *that all material in the PICS follow the same format as given in the MAC.*

Moved by: Bob O'Hara
second by: Chris Zegelin

Motion Discussion: none

Vote: 19-0-1 **Motion #14 passes**

6.2 Destiny of Regulatory Committee

At the May meeting a recommendation, moved by Dave Bagby and seconded by Johnny Zweig: "to disband the regulatory committee as soon as it finishes the processing of the business of the previous motion" passed with 7-2-5.

Motion #15: *that the recommendation of the May interim meeting to disband the Regulatory subcommittee be accepted*

Moved by: Dean kawaguchi
second by: Stuart Kerry

Motion Discussion: none

Vote: 8-6-7 **Motion #15 passes**

Naftali volunteered to come up with a proposal for new rules.

7. New Business:

7.1 Press release

Motion #16: *to approve the issuance of a press release, the text of which is in 96/117.*

Moved by: Bob O'Hara
second by: Stuart Kerry

Motion Discussion: none

Vote: 17-0-3 **Motion #16 passes**

7.2 Liaison statement to ISO

Motion #17: *to approve documents 96/105 and 96/119 to be forwarded to ExCom for submission to ISO.*

Moved by: Bob O'Hara
second by: Michael Fischer

Motion Discussion: none

Motion #18, to amend to include bracketed terms as definitions of 802.11 terminology

Moved by: Wim Diepstarten
second by: Chris Zegelin

Motion Discussion: none

Vote: unanimous consent

Motion #18 to amend # 17 passes

Vote: 16-0-1

Motion #17 as amended by # 18 passes

7.3 Supernet Postponed till Thursday.

11. PHY resolutions: Not yet available

12. MAC resolutions:

Motion #13: to accept resolution of Simon's comment such that: delete tolerance from clauses 14.8.2 and 14.8.2.1.11 and change clause A.4.5 line 14.65 column 1: "Is the PHY MIB aSIFSTime attribute 28us and is the PHY capable of meeting this performance within the +/-5 us tolerance specified in clause 9.2.3.1?"

Moved by: Dean Kawaguchi
second by: Naftali Chayat

Motion Discussion: none

Vote: by voice vote without dissent

Motion #13 passes

13. Conformance Testing:

Nothing on conformance testing.

14. Evening meeting @ 8 in main room

15. Adjourn: 5:40 PM

**Thursday AM, 9 May, 1996
MAC & PHY subgroups**

**Thursday PM, 9 May, 1996
Full Working Group**

The meeting was reconvened at 1:20 PM, by chairman Vic Hayes, Chris Zegelin secretary.

15. Opening

15.1 Announcements

15.1.1 Vic showed the Holland power connector, asked for power strips. Also need phone jacks.

15.1.2 Mystery payments, need to resolve payments.

15.1.3 Doc 96/96 Proposed names.... S/B 96/97

15.2 Document list update: updated the list.

15.3 Agenda adjustments: none

16. Reports

16.1 MAC Group, by Dave Bagby

Goals

We had one goal - Process rest of D3 LB comments and forward D4 for sponsor ballot. We made it. (all but one)

The MAC report is paper 96/93.

Clause 1 Status

- **Completed - in Plenary Mar/96**

Clause 2 Status

- **Completed - in Plenary Mar/96**

Clause 3 Status

- **Completed - in Plenary Mar/96**

Clause 4 Status

- **Completed - in Plenary Mar/96**

Clause 5 Status

- **Completed - in Plenary Mar/96**

Clause 6 Status

- **Completed - in Plenary Mar/96**

Clause 7 Status

- **Most comments Adopted in Mar/96 Plenary**
- **Rest handled this week.**
- **Details to follow in report.**

C7: C#101:

Motion #19: contradiction fixed re CF ack vs null data frame
• The MAC group, 2nd Michael

Plenary Vote: 19, 0, 1 **Motion #19: passes**

C9-C# 150

Motion #20: clarify sentence re PCF issuing of some fame types
• The MAC group, 2nd Michael

Plenary Vote: 19, 0, 0 **Motion #20: passes**

C9-C# 155

Motion #21: adding word to 9.2.5.2 re when use back-off detail
• The MAC group, 2nd Johnny

Plenary Vote: 16, 0, 0 **Motion #21: passes**

C9 - C#105

• frame exchg sequences doc 96/76

Motion #22: adopt 96/76 as amended by MF and discussion - revised paper provided by JZ to for edit into clause 9 text.
• The MAC group, 2nd Johnny

Plenary Vote: 18, 0, 0 **Motion #22: passes**

C9: C142

Motion #23: re resetting NAV condition.
• The MAC group, 2nd Michael

Plenary Vote: 18, 0, 1 **Motion #23: passes**

C9, C#: 126, 137

• clarifies PCF operation re getting on medium - requires sensing before.

Motion #24: MIB change for DTIM default value. from 5 to 1.
• The MAC group, 2nd Wim

Plenary Vote: 19, 0, 1 **Motion #24: passes**

C9: c#: 133, 134, 135, 130, 113 Back off and Retry

• clause 9.2.5.3

Motion #25: error recov responsibility of initiating sta of fame sequence
Docs error cases
clarifies retry limits and counts
• The MAC group, 2nd Johnny

Plenary Vote: 19, 0, 1 Motion #25: passes

Clause 9: 139, 138

- **Time Out Stuff**

Motion #26: ACK and CTS subclauses added para to deal how time out is detected, distinguishes different cases. mostly wording improvement.

- The MAC group, 2nd Johnny

Plenary Vote: 20, 0, 1 Motion #26: passes

C9 - C#154 -

- **frags in order (not MSDUs in order)**

Motion #27: accept.

- The MAC group, 2nd Michael

Plenary Vote: 20, 0, 1 Motion #27: passes

Clause 10 Status

- **Completed - in Mar/96 plenary.**

Clause 11 Status

- **Most handled in Mar 96 Plenary**
- **remainder processed this week.**
- **details to follow:**

Clause 11: C#43, 42

Motion #28: re clarification of PSP - must get, vs can get data from AP reopened in Mar plenary - swapped 42/43 so that 42 is rec changes clause 11.2.1.4f

- The MAC group, 2nd Simon

Plenary Vote: 19, 0, 0 Motion #28: passes

Clause 11 C#17:

- **re randomization of beacons at TBTT**

Motion #29: change 11.1.2.2

- The MAC group, 2nd Simon

Plenary Vote: 19, 0, 0 Motion #29: passes

Cross Clause Subjects

BC/MC reliability

- Clause 9: C#21: multi-cast reliability from Jan (multiple comments)
- bcast reliability Clause 11 C# 14,44,59

Motion #30: to adopt 96/15 and 96/16

- The MAC group, 2nd Johnny

Plenary Vote: 4, 7, 10 **Motion #30: fails**

- Comments still open - not closed.

Multi-rate

- Clause 7: C#72,74
- Clause 9: C#9
- Clause 11: c#67,91,92,100,102
- General c#124

Motion #31: Move to accept 96/79R1 + change to encoding of supported rates, and incorporate into draft, and close related LB comments accordingly.

Plenary Actions: Amended to be as above “except for the portion of 96/79R1 which pertains to clause 14 and 15.

- The MAC group, 2nd Johnny

Plenary vote on amended motion: 16, 0, 1 **Motion #31: passes**

General and Annex Comments

- most handled in Mar 96 Plenary
- Remainder processed this week
- Details to follow

general C#1:

- explicit that CF frames not used outside Cf period

Motion #32: accepted D3.1 statement added to 9.3.3.5

- The MAC group, 2nd Tom

Plenary Vote: 11, 0, 2 **Motion #32: passes**

general C#121 -

- unable to process - refers to previous letter ballot comment with out any specific reference
- fails comment instructions.

Motion #33: closed - we looked, no action requested -

- The MAC group, 2nd Johnny

Plenary Vote: unan **Motion #33: passes**

general C#122 -

- minimally conforment network statement per PAR requested.
- rec add def to clause 3 and ref in PICs.

Motion #34: to add in clause 3 (defs) the following:

A minimally conforment IEEE P802.11 network is one in which there are at least two Stations in a single BSA which are conforment with P802.11.

- The MAC group, 2nd Tom

Plenary Vote: 15, 0, 1 Motion #34: passes

general C#123 -

- connection, connectionless, voice service (VH) no action requested in comment

Motion #35: accepted without action and closed.

- Action requested (none) accepted
- The MAC group, 2nd Michael

Plenary Vote: 12, 0, 4 Motion #35: passes

General: Editorial comments

- 107 thru 111, 114, 115, 120, 125, 126, 128 editorial
- Editors will process for D4.0

General: Notation

Motion #36: General C#127 k vs. K - Fixed in D3.1 -

- The MAC group, 2nd Michael

Plenary Vote: 13, 0, 2 Motion #36: passes

General: Patents

- general c#2: dissatisfaction with Patent due diligence / procedure following.

Motion #37: refer to Vic to answer re procedure part and for contact to Apple.

Plenary motion: to close w/o taking action (mover says intent is to not take action writ to draft text) on basis that comment is not technical in nature.

- Bob, 2nd Keith

plenary vote: 15, 1, 1 Motion #37: passes

MAC Work note:

From here on in report the comment tables (rev 7) have not yet been updated at time of report to reflect thurs morn actions - this needs to result in rev 8 of tables for mailing.

Annex: State machine

- general c#113 - state machines

Motion #38: to close with "we have a volunteer to update the annex" - comment author accepts resolution.

- The MAC group, 2nd Chris

Plenary Vote: 15, 1, 1 Motion #38: passes

State machines update 96/2

Motion #39: that we adopt what MF has today for informative annex update and completed updates to be made avail to editors before D4.0 is published.

- The MAC group, 2nd Michael

Plenary Vote: 12, 1, 3

Motion #39: passes

PICS Update

- general c#s: 3 thru 9, 104, 105, 106, 112 - PICs issues.
 - 3, 4 are editorial.
 - recs:
 - » 3 accepted, 4 ed - ed's get, 5 fixed in text, 6 fixed in text
 - » 7- done, 8 same as 7, 9 accepted. text rewritten.
 - » 104 missing refs to clause 5 & 6 - accepted - text done
 - » 105 accepted by mar 96 motion 8, 106 accept
 - » 112 accept - text not drafted yet. needs sec 9.

Motion #40: to accept recs for PICs comments, PICs text done so far, and remainder of PICs text will be given to editors in time for D4.0 creation.

- The MAC group, 2nd Simon

Plenary Vote: 13, 0, 1

Motion #40: passes

ASN doc for MIB

- 96/89

Motion #41: to accept 96/89 as ASN MIB code and insert into a normative annex, any discrepancy between ASN code and this week's work is considered editorial and editors will make the new annex consistent, also a statement will be added to annex that Annex takes precedence over other clauses in case of conflict.

- The MAC group, 2nd: Tom

Plenary Vote: 10, 1, 3

Motion #41: passes

C7 C#34 TBTT and Next Dwell

Motion #42: to decline comment on basis that comment is new functionality and does not have complete proposed text

- The MAC group, 2nd: Johnny

Plenary Vote: 11, 2, 3

Motion #42: passes

C7 # 35 when can change MIB?

Motion #43: decline comment and close comment with "you may change any MIB attribute whenever the std allows it - the operational wisdom of such action should be considered before doing so."

- The MAC group, 2nd: Chris

Plenary Vote: 15, 0, 2 Motion #43: passes

Multiple MSDUs 96/91R1

Motion #44: to adopt text in 96/91R1 except for the 2nd to last paragraph of the submission beginning with the word ‘the station shall insure that there is no group-addressed...’

- The MAC group, 2nd: Johnny

Plenary Vote: 17, 1, 1 Motion #44: passes

SIFS tolerance

- Clause 7: C#6

Motion #45: that we insert into 9.2.3.1 “an 802.11 implementation shall not cause SIFS to vary from the nominal value by more than +/- 10% of aSlotTime for the PHY in use.

- The MAC group, 2nd: Michael

Plenary Vote: 16, 0, 1 Motion #45: passes

96/90 MSDU order

- 2 Service classes, one ordered strictly, the other not.

96/92 MSDU order

- maintain order at service interface instead of actual media order.

Discussion (re)ordering...

Motion #46: adopt 96/90.
• The MAC group, 2nd: Michael
• Plenary Vote: 12, 3, 4

the last motion...

Motion #47: that we incorporate the 2nd to last paragraph of 96/91r1 into draft 4.0 with the addition of the words “of strictly ordered service class” after “outstanding MSDU or MMPDU”.

- The MAC group, 2nd: Michael

Plenary Vote: 13, 1, 2 Motion #47: passes

The chair ruled that discussion and vote on the frame re-ordering paper 96/90 was out of order because it was not consistent with the charter for the interim.

Appeal #2: Michael,

Vote 7/10/3 to support the chair Chair’s ruling overruled

Goals for July 96

16.3 Press release

Nothing available

17. Unfinished Business

Naftali mentioned that Dean would present his paper 96/98

Motion to add period to address completion of letter ballot comments.

17.0 Completion

Motion #51: to close letter ballot comments with resolution to decline C9 #21 80 89 114 120 125 163, C11 #14 44 59 with the technical justification "there is sufficient functionality in the draft to accomplished what is requested."

Moved by: Bob O'Hara: Johnny seconds.

Vote: 7:5:2 **Motion #51 fails**

Chair ruled that it is not necessary to address all comments before proceeding to a new letter ballot.

17.1 Recap of Output Documents

17.2 Recap of document distribution

Two documents sent later. Also FH PHY minutes.

17.3 Next Meeting in Netherlands

17.4 **Future Meetings:** see chart. Hoping to not have to have interim meeting after July when the standard goes to sponsor ballot.

17.5 **Other Intermediate Meetings:** none

18. New Business:

Document 96/98: Proposal for 802.11 reply to FCC NPRM 96-8 presented by Dean Kawaguchi

doc 96/39,

Motion #52 : "direct the regulatory committee to use doc 96/98 as the basis for its response to the NPRM 96-8"

Moved by Dean on behalf of Naftali. Chris 2nd

Chair rules motion #52 out of order.

Appeal #3 by Dean, second by Stuart.

Vote: 1:7:3 **Chair overruled.**

Question called, by voice vote

Vote 8:1:4

Motion #52 passes as recommendation.

Motion #53 : "To disband the regulatory committee as soon as it finishes processing the business of the previous motion"

Moved by Dave Bagby, second by Johnny

Vote 7, 2, 5

Motion #53 passes as recommendation.

19. Closure: meeting adjourned at 5:05 PM.

Tentative Meeting Schedule

Date	Month	Year	Place	Type	Location	Host
8-12	July	1996	Netherlands	Plenary	University of Twente	
26-30	Aug	1996	Harrisburg	Inter	AMP	AMP
11-15	Nov	1996	Vancouver, BC	Plenary	Hotel Vancouver	
11-15	March	1997	Irvine, CA	Plenary	Irvine Marriot	
7-11	July	1997	Lahaina, HI	Plenary	Hyatt Regency Maui	
10-14	Nov	1997	Vancouver, BC	Plenary	Hotel Vancouver	
9-13	Mar	1998	Austin, TX	Plenary	Hyatt Regency	
6-10	Jul	1998	La Jolla, CA	Plenary	Hyatt Regency y	
9-13	Nov	1998	Albuquerque, NM	Plenary	Hyatt Regency	

Appendix 1

Attendance list

Title and first name	Last name	status	Company	communications
Mr. Keith B.	Amundsen		Raytheon Company 4483 keith_b_amundsen@raytheon.com	+1 508 470
Mr. Carl F.	Andren		HARRIS Corporation M/S 62A-028 724 7535 candren@harris.com	+1 407
Mr. David	Bagby	voter	Advanced Micro Devices 5425 david.bagby@amd.com	+1 408 749
Mr. Steven	Bass		Genreal Scanning Inc. 1300 X246 sbass@world.std.com	+1 617 275
Mr. John	Biddick		Intermec Corporation 2600 X6647 jbiddick@intermec.com	+1 206 348
Mr. Simon	Black	voter	Symbionics Networks Ltd 421025 sab@symbionics.co.uk	+44 1223
Mr. Jan	Boer	voter	Lucent Technologies WCND 97483 jan.boer@att.com	+31 3060
Mr. Pablo	Brenner	voter	BreezeCom 6459127 pablo@breezecom.com	+972 3
Mr. Naftali	Chayat	voter	BreezeCom 8423 naftali@madge.com	+972 3 645
Mr. Albert	Claessen		NCR +1 404 623 7017 albert.claessen@atlantaGA.attgis.com	
Mr. Ken	Clements		Innovation on Demand 5027 Ken@InnovationOnDmnd.com	+1 408 353
Mr. David C.	Davies		Digital Equipment Corp. 5866 davies@wanton.lkg.dec.com	+1 508 486
Mr. Wim	Diepstraten	voter	Lucent Technologies WCND 97482 wim.diepstraten@att.com	+31 3060
Mr. Robert J.	Egan	voter	The Gartner Group 3828 bobe@ids.net	+1 401 769
Mr. Darwin	Engwer	voter	XIRCOM 2500 dengwer@xircom.com	+1 415 691
Mr. Greg	Ennis	voter	+1 408 358 5544 gennis@netcom.com	

Mr. John	Fakatselis	voter	HARRIS Corporation M/S 62A-028 729 4733 jfakat01@ccmail.mis.semi.harris.com	+1 407
Mr. Matthew	Fischer	voter	Advanced Micro Devices 5403 ablmatt@brahms.amd.com	+1 408 749
Mr. Michael	Fischer	voter	Digital Ocean Inc. 4096 mfischer@child.com	+1 210 614
Mr. George	Fishel	voter	AMP Inc. 6161 grfishel@amp.com	+1 717 592

Appendix 1

Attendance list (continuation)

Title and first name	Last name	status	Company	communications
Mr. Perry	Froggie		HARRIS Corporation M/S 62A-028 729 5642	+1 407
Mr. Ian	Gifford	voter	M/A-COM Inc. 4650 giffordi@corp.macom.com	+1 508 442
Mr. Howard J.	Hall	voter	WINDATA 0170 X345 howardh@wireless.windata.com	+1 508 952
Mr. Victor	Hayes	voter	Lucent Technologies WCND 97528 vic.hayes@att.com	+31 3060
Mr. Ted	Hupper		Digital Equipment Corp. 5235 t_hupper@irocz.enet.dec.com	+1 508 486
Mr. Kevin	Karcz		University of New Hampshire 1008 kjk@iol.unh.edu	+1 603 862
Mr. Dean M.	Kawaguchi	voter	Symbol Technologies Inc. 2629 deank@psd.symbol.com	+1 408 369
Mr. Stuart J.	Kerry	voter	Symbol Technologies Inc. 2634 stuart@psd.symbol.com	+1 408 369
Mr. Brian	Khabbaz		M/A-COM Inc. 2910 khabbazb@corp.macom.com	+1 508 656
Mr. Joseph J.	Kubler	voter	Norand Corporation 1850 kublerj@norand.com	+1 303 442
Mr. Arthur	Lashbrook	voter	XIRCOM 2500 alashbro@xircom.com	+1 415 691
Mr. Ravi P.	Nalamati	voter	Digital Equipment Corp. 5189 nalamati@irocz.enet.dec.com	+1 508 486
Mr. Bob	O'Hara	voter	Advanced Micro Devices 4952 bob.ohara@amd.com	+1 408 749
Mr. Al	Petrick	voter	HARRIS Semiconductor MS 58-96 729 4944 apetrick@ccmail.mis.semi.harris.com	+1 407
Ms. Vickie	Prescott	voter	Digital Equipment Corp. 7086 prescott@lkg.mts.dec.com	+1 508 486

Mr. James A.	Renfro	voter	Raytheon Company 1934 james_a_renfro@ccmail.ed.ray.com	+1 508 490
Mr. William	Roberts	voter	American Microsystems Inc. 4690 x6514 wroberts@poci.amis.com	+1 208 233
Mr. Jeff	Schwarz		Digital Equipment Corp. 7575 schwartz@lkg.dec.com	+1 508 486
Mr. Roy	Sebring		Intermec Corporation 1740 rsebring@intermec.com	+1 206 356
Mr. Thomas	Siep	voter	Texas Instruments 6479 siep@ti.com	+1 214 997

Appendix 1

Attendance list (continuation)

Title and first name	Last name	status	Company	communications
Mr. Joel	Silberman		Raytheon 9946 joel_silberman@ccmail.ray.com	+1 508 470
Mr. Dave	Strohschein		University of New Hampshire 1529 das@iol.unh.edu	+1 603 862
Mr. Bert	Sullam		Seattle Silicon Corp 4422 x101 bert@seasil.wa.com	+1 206 957
Mr. Mack	Sullivan	voter	Proxim Inc. 1630 mack@proxim.com	+1 415 960
Mr. Mike	Trompower	voter	Aironet Wireless Comms. Inc. 7920 mtrom@aironet.com	+1 330 665
Mr. Tom	Tsoulogiannis	voter	+1 416 299 1954 tomt@interlog.com	
Ms. Donna A.	Woznicki	voter	Digital Equipment Corp. 5085 woznicki@lkg.mts.dec.com	+1 508 486
Mr. Chris	Zegelin	voter	Symbol Technologies Inc. 2667 chrisz@psd.symbol.com	M.S. 160 +1 408 369
Mr. Johnny	Zweig	voter	XIRCOM 2500 grshnrk@aol.com	+1 415 691