

**IEEE 802.11
Wireless Access Method and Physical Specification**

Title: **Minutes to IEEE P802.11 PHY Sub-Group**
Montreal, Canada
Dates: November 1995

DRAFT MINUTES OF THE IEEE 802.11 PHY SUB-GROUP MEETING

MONTREAL, CANADA, NOVEMBER 6/7/8/9, 1995

Monday, November 6, 1995

The Chairman of the group, Dean Kawaguchi, opened the meeting at 0835 EST.

Peter Chadwick volunteered to act as Secretary for the meeting.

An attendance sheet was circulated.

The Chair formally thanked Jim McDonald for his efforts during his period of office as Chairman.

The Chair reminded the meeting that in order to meet the timescales for D3.0, it would be necessary to have comments resolved by one week after the meeting.

Some comments are applicable at the full PHY level group.

The Agenda proposed was:-

1) FH PHY Chair election.

2) Submissions.

3) PHY level NO vote resolution

4) Comment resolution on the MIB and PHY primitives. This latter item if time permits.

1) FH PHY Chair election

A call for the nominations for the Chair of the FH group led to the nomination of Dean Kawaguchi by Jim McDonald, seconded by Stuart Kerry. **Dean was elected by acclamation.**

2) Submissions

There were no PHY group submissions: there were 2 DS and 3 FH submissions for discussion. The PICS pro forma exists for the DS and FH PHY's, but not for the IR group. The IR group will be approached for a PICS pro-forma.

ACTION: Dean Kawaguchi

3) PHY level NO vote resolution

The only applicable comment requiring resolution was that from Dave Bagby regarding multiple PHY's in the same frequency band. Ed Geiger pointed out that it was necessary to produce a sound rebuttal to this comment: Peter Chadwick pointed out that rejection of one of the PHYs would lead to non compliant PHYs probably causing compliant PHYs to provide inferior performance. Wayne Moyers volunteered to produce a submission for the wording of a rebuttal. Jim Renfro and Jan Boer volunteered to assist Wayne. The **formation of this ad hoc group was ACCEPTED** by the meeting. Ed Geiger pointed out that other standards support multiple PHYs e.g. Ethernet.

Ed Geiger moved **to table the matter until the response of the ad hoc group was ready.** Peter Chadwick seconded. Motion passed 16 - 0 - 3.

Meeting adjourned until Thursday 10.00 EST.

Thursday, November 9, 1995

Meeting resumed at 1035 EST Thursday.

Agenda Proposed

2.1 PHY Reports

2.1.1 - DS

2.1.2 - IR

2.1.3 - FH

2.2 response to two PHY Comments (removal of one PHY, temperature ranges)

2.3 Duration Change

2.4 Section 9/10 Review

2.5 PICS Proforma

2.6 Agenda for Jan 96 mtg.

Agenda accepted by acclamation.

2.1.1 - DS GROUP REPORT

Jan Boer presented the DS report.

All comments processed. Only major technical change is to keep CCA busy at carrier loss but length field not expired. Various changes were made to reflect this.

Various Editorial changes were made to clarify CCA operation, RX/TX operation and the addition of missing MIB parameters and various primitives.

The addition of the duration field presents no major problem, but is not yet fully available. Text

is available on disc for the processed comments and the new chapter 12.

Moved by Jan Boer **to accept the DS Group changes**, sec Wayne Moyers,
Motion passed 12 - 0 - 0

2.1.3 - FH GROUP REPORT

Dean Kawaguchi presented the FH report.

A new **Co-Editor, Jim Renfro was appointed.**

The main Issue resolved was the FH patterns (paper 95/245 and 95/2545R1).

All technical issues except the inclusion of a duration field and the temperature range were resolved; these are referred to the PHY meeting.

Delay for timestamp calculated. Ed Geiger is producing the associated MIB changes.

Text for all accepted/modified comments has been produced, but is not edited into the standard. The Comments Resolution file contains the text required.

Dean Kawaguchi **moves acceptance of the changes to Section 11 of the draft contained in Resolution File(95/227-11 R1).** Seconded Stuart Kerry. Motion passed with 14 - 0 - 0.

2.1.2 - IR GROUP REPORT

Tom Baumgartner presented the IR Group report.

All comments have been dealt with. A technical change was the addition of another transmit mask, and text is available. The Duration Field was not discussed.

Tom Baumgartner moved, Manuel Betancour seconded, **acceptance of the new Section 13 text and comments resolution file (95/227-13 R1)**. Motion passed with 14 - 0 - 1.

2.2 Response to PHY comment from Dave Bagby regarding the multiplicity of PHYs.

We need to have the text of the motion here as it is not available anywhere else

Wayne Moyers reported on behalf of the ahg: proposed text was available for the response.

Response to section 11 & 12 Global comments from "BD" (page 1 of d2.6-...)

Recommendation for disposition re: taking action to reduce the IEEE 802.11 to specify and support one RF PHY.

Action: Comment should be dismissed on the following basis;

Counter to the effort and intents demonstrated within the establishment of IEEE 802.11 as a emerging standard to be used for Wireless LAN's implementation.

Counter to the approaches within IEEE 802 at large.

The FCC rulemakings provide definitions and technical specification for the use of both DS and FH PHY's.

DS and FH systems have been deployed, and are planned to be deployed within the industry. Failing to produce a standard which provides the market with a consistent basis of quality, dampens any value IEEE 802.11 would have within the market place.

DS and FH PHY's provide different operating characteristics. Some of these, but not limited to, are;

Throughput Efficiency

Absolute Throughput

Operation in the presence of certain types of interference

System scalability (one might view the differences of token ring and ethernet as an analogy)

Moved Wayne Moyers, sec Stuart Kerry to **accept this response**. In discussion, Tom Baumgartner queried the point made regarding mutual interference. Nathan Silberman pointed out that the ISM band was shared, and so interference from many other services was present. Nathan Silberman **moved to amend such that it was stated that elimination of one or the other would make no appreciable difference to the interference aspect**. Draft text was produced. Seconded Peter Chadwick. Question called Wayne Moyers; question called by unanimous voice vote. Motion to amend failed 1 - 5 - 7.

Question called on main motion by Wayne Moyers; question called by unanimous voice vote.
Motion passed with 12 - 0 - 3.

2.3 Duration Field.

Moved Stuart Kerry, sec Jim Renfro **to table further discussion of the matter to the full 802.11 meeting.** Motion passed , 10 - 5 - 3.

The Chair will report to the 802.11 meeting that there is a motion in the FH PHY group to dismiss the matter because of lack of text, which was tabled to the full PHY group. The full PHY group tabled the whole matter to 802.11.

Temperature Requirements.

Jim Renfro said that he withdrew his comments. Peter Chadwick **moved that all references to temperature range were removed from all PHY's.** Sec Jim Renfro. After discussion, Mike Rothenburg moved to amend such that a manufacturers declaration of operating temperature range and conditions is mandatory. Sec Wayne Moyers. On the amendment 8 - 5 - 2, amendment passes. After discussion, Peter Chadwick calls the question, sec Jim Renfro. Motin fails with 5 - 8 - 0.

2.5 PICS Proforma.

Proposed by the Chair that the PICS Proformas produced by the DS and FH Groups be accepted by the PHY Group. Ed Geiger moved **that the FH document (95/232) be accepted as is and reviewed in the letter ballot.** Seconded by Mike Rothenburg.

Ron Mahany **moved to amend such that the FH document be described as unreviewed.** Sec Wayne Moyers. Amendment question called Tom Baumgartner, sec Ron Mahany by voice vote. Amendment passes with 9 - 2 - 1. Moved to add DS by Mike Trompower, sec Ron Mahany, question called Wayne Moyers by voice vote, seconded Jan Boer. Amendment 2 passes with 9 - 0 - 2.

Motion now becomes: **that the unreviewed FH PICS Proforma (95/232), and the DS PICS Proforma (95/200) be added to the Draft D3.0.** Proposed Ed Geiger, sec Mike Rothenburg. Calls question, sec Tom Baumgartner. Motion passes with 12 - 0 - 0.

2.6 Agenda for Jan 96.

Mike Rothenburg said that he wished to present a 3 Mbit/s paper. Ron Mahany and Peter Chadwick said that it would normally be a tutorial. It was accepted as an agenda item.

2.4 Section 9/10 Review

Ed Geiger said that a paper presented in July but not accepted at the full Plenary at that time dealt with a number of the problems that were apparent in Sections 9 and 10. He described some of the various changes required in these sections. The textual changes relating to TX_START.confirm and TX_END.confirm were intended to be included in the next draft.

Jan Boer stated that he had made comments on DS PHY specific MIB parameters.

Proposed by Ed Geiger that these sections be an Agenda item for the January meeting, to be dealt with as a matter of priority.

This was AGREED by acclamation.

Meeting adjourned

