Tentative Minutes of the IEEE P802.11 Working Group

Plenary meeting
Orlando, Florida
July 11-15, 1994

Monday, July 11, 1994, PM

It was stated that Vic Hayes was unable to attend the start of the meeting because of death of his father. John McKown as Vice Chairman of 802.11[1], took the chair of the meeting. Peter Chadwick volunteered to be secretary for this meeting. John McKown stated that he wanted to follow the agenda published by Vic Hayes. Document distribution handled by Jon Rosdahl, attendance record by Leon Scaldeferri and copying by Stuart Kerry.

Notes taken by Peter Chadwick, Monday and Wednesday edited by John McKown with final formatting by Vic Hayes

Objectives for this meeting

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[1] The officers of the Working Group are:

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OBJECTIVES MAC Group

1) Cross check work plan and eliminate MAC features to make November Letter ballot deadline as previously committed by 802.11 plenary session.
2) Revisit recommendations from May meeting, not ratified by 802.11 plenary
3) Review the efforts of those working to create text to resolve the draft text consistently with the closed issues. Recommend adoption of additional text provided.
4) Finalize decision on "wired equivalent" security algorithm as an 802.11 requirement.
5) Close all remaining open issues - this is necessary to determine what features will make the November Letter Ballot and which will not.
6) Review and hopefully adopt a MAC Management functionality proposal.
7) Decide on a detailed fragmentation proposal. This is needed to complete the recommendation from May to add fragmentation functionality.

OBJECTIVES PHY Group

* Close all open issues
* Complete the MAC/PHY interface
* Edit text for draft standard

1. Opening

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

1.2 Voting rights: 1.3 Attendance list, Registration, 1.4 Logistics: John explained the rules on voting rights, registration, the attendance list, document copying etc.

1.5 Other announcements: None

2. Approval of the minutes of the previous meeting

2.1 Vancouver meeting, 2.2 Oshawa meeting:

| *Motion # 1:* | *to approve minutes of the 802.11 plenary sessions at Vancouver and Oshawa* |

Moved by: Barry Dobyns
Seconded by: Dave Bagby

Motion Discussion: claimed that the minutes of the Vancouver meetings did not reflect the decision that the High Speed FH group made regarding the use of 4 GFSK for the 2Mb/s mode, and the use of 2 and 4 DBPSK for the DSSS mode at 1 and 2 Mbit/s respectively.

Motion # 1.1: *To table motion #1*

Moved by: Paul Eastman
Seconded by: Jon Rosdahl

Motion Discussion: none

Approved: 40 Opposed: 0 Abstain: 3 *Motion # 1.1 to table # 1 passes*

Motion # 2: *to take the approval of the Oshawa minutes from the table*

Moved by: Paul Eastman
Seconded by: Dave Bagby

Motion Discussion: none

Approved: by acclamation *Motion # 2 passes*

Motion # 3: *to accept the Oshawa minutes*

Moved by:	Paul Eastman
Seconded by:	Phil Bellanger

Motion Discussion: none

Approved: by acclamation   *Motion # 3 passes*

3. Reports

3.1 Report from the Executive Committee, John McKown requested Paul Eastman to report on the Executive Committee meeting. Matters of distinct interest to 802.11:

* Changes have been under consideration for the quorum issue at interim meetings. Dave Bagby asked for clarification that the interim meetings could still remain inquorate. However, the Executive Committee do not wish to institute any change at this time.

* Electronic distribution of draft standard documents is specifically prohibited until further notice.

* Proposed comments regarding the NTIA proposal to reallocate 2400 - 2417 MHz. Some editorial comments have been received: final decision will be made Thursday, 14 July 1994.

3.2   from editors Bob O'Hara reported that a new copy of the draft 20b1 would be distributed Tuesday 12 July. This document includes all text relating to the decisions made prior to the March meeting. Some reorganisation has taken place to improve the modularity of the draft to ease the inclusion of multiple PHYs. Change bars are incorporated, and deleted text struck through.

**3.3   from simulators   } **
**3.4 from MAC/PHY interface ad-hoc   } ** Dave Bagby informed the meeting that Kerry Lynn had, at the last minute, been unable to attend the meeting because of the exigencies of the service. Thus the MAC/PHY Interface group report and the simulation report are not available, although they may arrive by e-mail during the week

3.5   financial report San Jose meeting by Wayne Moyers (carried from Oshawa meeting)

collected via room charge: 46 @ $ 45.00	2,070.00
collected at registration by WiSE 59 @ $ 45,00, less petty cash expense)	2,763.32
Total receipts	4,833.32
Paid to hotel	4,725.00

Excess funds ($ 108.32) carried over to next meeting.

Motion # 4:   *to accept the financial report of the San Jose meeting*

Moved by:	Larry Van der Jagt
Seconded by:	Bob O'Hara

Motion Discussion: none

Approved: unanimously by acclamation   *Motion # 4 passes*

3.5   financial report Oshawa meeting by Vic Hayes for Orest Storoshchuk

Motion # 5:   *that the consideration of the financial report for the Oshawa meeting be postponed until Thursday.*

Moved by:	Dave Bagby
Seconded by:	Michael Fischer

Motion Discussion: none

Approved: by consensus   *Motion # 5 passes*

Paul Eastman stated that a lot of discussion had occurred regarding the quorum position. The interim meetings were just as vital, and the work done just as valid as that done in the full meetings. He pointed out that the decisions made at an interim meeting can be subsequently approved en bloc at a full 802 meeting. He stated that only a technical decision needs a 75% majority: non technical decisions require a simple majority. The definition of a quorum by the Executive Committee was questioned, and how this could be reconciled with voting rights.

It was suggested that the current practice be maintained, and that all decisions be confirmed at a full meeting if necessary. Dave Bagby asked if the Executive Committee had considered the other side that although 75% of those present voted, if the meeting was inquorate, the attendance at interim meetings would fall. It was stated that the work of small groups was encouraged, and that if a suitable majority of the people within a group wished to work, their decisions could be ratified.

4.   Registration of contributions John McKown stated that he was not totally sure of what was intended here. The MAC group chair knows the papers tabled for his group: other papers for the various groups were listed, and numbers starting at 200 allocated for new papers. The list of documents is provided in cocument 94/198 R1.

5.   Adoption of the Agenda

Motion # 6:   *to approve the agenda*

Moved by: Bob O'Hara
Seconded by: Phil Bellanger

Motion Discussion:
Motion # 6.1:   *to call the question*

Moved by: Bob O'Hara
Seconded by: Arthur Coleman

Motion Discussion: none

Approved: by consensus   **Question called on *Motion # 6.1***

Approved: by consensus   *Motion # 6 passes*

6.   Unfinished Business

6.1   **Approval of recommendations from the Oshawa meeting** The list with recommendations is provided in document 94/199.

Motion # 7:   *to approve the motions of the MAC group made at the Oshawa meeting as recorded in document 94/141*

Moved by: Dave Bagby
Seconded by: Michael Fischer

Motion Discussion:
Motion # 7.1:   *to call the question*

Moved by: Peter Chadwick
Seconded by: Bob O'Hara

Approved: by consensus   *Motion # 7.1 passes Question called*

Approved: 42   Opposed: 6   Abstain: 5   *Motion # 7 passes*

Motion # 8:   *to approve the following recommendations made at the Oshawa meeting: (1) That the IR PHY Subcommittee produce two PHY definitions, one for baseband operation from DC to 5 MHz, and one for carrier modulated operation from 15 MHz to 30 MHz, subject to the provability of the mutual non-interference of the two PHY definitions, and reserving a coexistence band from 5 MHz to 15 MHz.*

Moved by: Roger Samdahl
Seconded by: Barry Dobyns

Motion Discussion: none

Approved: 21   Opposed: 0   Abstain: 12   *Motion # 8 passes*

Motion # 9:   *to approve the following recommendations made at the Oshawa meeting: (2) that the IR PHY Subcommittee adopt as its baseband encoding technique, 16-PPM for the 1 Mbit/s bitrate, and 4-PPM for the 2 Mbit/s bitrate, with all conforming receivers required to operate at both bitrates, and all confirming transmitters required to operate at the 1 Mbit/s bitrate.*

Moved by: Roger Samdahl
Seconded by: Paul Eastman

Motion Discussion: none

Approved: 37   Opposed: 0   Abstain: 15   *Motion # 9 passes*

Motion # 10:   *to approve the following recommendations made at the Oshawa meeting: (3) Moved that the IR PHY adopt FQPSK as the modulation format for carrier modulated IR communications.*

Moved by: Roger Samdahl
Seconded by: Peter Blomeyer

Motion Discussion: After some discussion:

Motion # 10.1:   *to place motion 13 on the table until after the IEEE tutorial*

Moved by: Dave Bagby
Seconded by: Paul Eastman

Motion Discussion: none

Approved: 24   Opposed: 15   Abstain: 9   *Motion # 10 laid on the table.*

Motion # 11:   *to approve the following recommendations made at the Oshawa meeting: (4) Moved that the IR carrier modulated system will be capable to operate at 4 Mbit/s and 10 Mbit/s.*

Moved by: Roger Samdahl
Seconded by: Barry Dobyns

Motion Discussion: none

Approved: 31   Opposed: 3   Abstain: 13   *Motion # 11 passes*

@

6.2   Comment on NTIA report

6.3   New operating procedures

6.4   Liaison,

@The IEEE made a presentation on anti-trust and IP matters. A lot of discussion followed. During this presentation, it was pointed out that inclusion of a patent in an IEEE standard was covered by the IEEE IPR Policy, and that acceptance of a patented technology was only acceptable if no other equivalent technology was usable. Copies of the slides were made available.@

Motion # 12:	*to take motion 10 from the table and reconsidered*

Moved by:	Roger Samdahl
Seconded by:	Bill Huhn

Approved: by acclamation   *Motion # 12 passes: Motion #10 taken from the table*

Motion # 10:	*to approve the following recommendations made at the Oshawa meeting: (3) Moved that the IR PHY adopt FQPSK as the modulation format for carrier modulated IR communications.*

Motion Discussion: a lengthy discussion started. Salient points:

Is the form of FQPSK recommended a specific variety covered by IPR? Yes.

Is the form of FQPSK recommended better than the alternatives?

Motion # 10.1:	*to call the question on motion # 10*

Moved by:	Arthur Coleman
Seconded by:	Jim Renfro

Approved: by acclamation   *Question called*

Approved: 7	Opposed: 27	Abstain: 11	*Motion # 10 fails*

Motion # 13:	*to instruct the IR subgroup to investigate this particular modulation scheme further, and to report back in sufficient detail for the 802.11 plenary meeting to decide if the scheme is that actually desired.*

Moved by:	Paul Eastman
Seconded by:	Larry van der Jagt

Motion Discussion: The chair stated that the motion was procedural.

Friendly amendment to the motion from Bill Huhn to strike all after "report back": this was accepted.

Motion # 13 now reads:	*to instruct the IR subgroup to investigate this particular modulation scheme further, and to report back.*
Motion # 13.1:	*to call the question*

Moved by:	Jon Rosdahl
Seconded by:	Bill Huhn

Approved: by consensus   *Question called on Motion # 13*

Approved: 29	Opposed: 6	Abstain: 7	*Motion # 13 passes*

Motion # 14:	*to adjourn*

Moved by:	Barry Dobyns
Seconded by:	Bill Huhn

Approved: by consensus. Meeting adjourned at 19:10 h.

Wednesday PM July 13, 1994

9.   **Opening** John McKown opened the meeting, and brought the attention of the meeting to the draft IEEE policy on electronic distribution of draft standards.

9.1 Announcements

Various standard housekeeping notices were made.

10. MAC/PHY (interface) Issues

The meeting was turned over to Dave Bagby, who stated that the major item of discussion from the MAC group was priority pulses.

Larry van der Jagt presented the PHY issues - CCA, rate changing and Bit ordering. MAC-PHY Service Interface Primitives were raised as another topic. It was agreed to end the meeting at 1730.

Dave Bagby introduced the requirements for Distributed Time Bounded Services, especially with regard to Priority Pulse (PAS) requirements, and relinquished the floor to Wim Diepstraten for a detailed presentation.

There was some discussion on the provision of a suitable primitive for PAS control, but it was generally accepted that several possible approaches were possible.

It was suggested that rather than use the PAS, the highest priority stations should just start transmitting, and contentions between them resolved at a later stage.

The stage was reached where insufficient time remained for further discussion. It was stated that the matter would be raised at the Plenary. Rick White stated that he had a few slides relevant to CCA with the priority pulse: it was suggested that these slides should be presented under this heading.

Larry van der Jagt introduced PHY group CCA considerations. The use of only one antenna for CCA evaluation in the FH group was announced, as was the CCA method, while the DS approach, with flow diagram, was introduced. The IR base band PHY was stated as having a CCA response time of 12 µs.

Discussion followed on acceptable False Alarm Rates, and further explanations made of the various approaches.

Rick White made his presentation regarding the problems of PAS detection. This led to a lively discussion. At this point, Dean Kawaguchi called for the Orders of the Day, and the status of rate switching was introduced.

Larry van der Jagt introduced briefly the status of the various PHY Groups. These are:-

FH Group 1 Mbit/s mandatory, 2 Mbit/s optional

HS Group 1 and 2 Mbit/s both mandatory.

DS Group 1 and 2 Mbit/s both mandatory

IR Group (Baseband)	1 Mbit/s on tx mandatory, 2 Mbit/s on tx optional
	1 Mbit/s on rx mandatory, 2 Mbit/s on rx mandatory
(carrier)	4 and 8 Mbit/s mandatory.

PHY Groups need fields in PLCP Headers for rate indication and capability, LME hooks, and MAC-PHY Service primitives.

Dave Bagby reported that the MAC group were having major problems in determining how to produce a MAC which can support the multiple rates.

Jim McDonald asked if the MAC Group would support multiple rates, or not? Dave Bagby replied that by dividing multiple rates into sub categories, he did not currently see a way to support this. Jim responded that the PHY groups were relying on this being sorted out. Wayne Moyers stated that the choice of the Foundation MAC had been chosen as it had been stated that it could handle multiple rate PHYs.

In response to a request from Dean Kawaguchi, it was suggested that the MAC group would consider the lowest level at which multiple rates could be supported possibly the BSS fields. It was stated that rate fields need to be provided for future expansion. It was asked if there would be time available at the next meeting for discussion and submissions on the method of supporting multiple rates at the next meeting. It was stated that submissions would be accepted if they would address the problem. In reply to a question as whether any of the other original MAC candidates would have been any better, it was said that it was possible, but the amount of work done on the foundation MAC made it difficult to ascertain without vast amounts of work.

10.1 Report from the ad-hoc group --

> *Motion # 15:*   *Adopt the text in 94/203 as replacement for the current PHY layer service primitives.*

> Moved by: Ed Geiger
> Seconded by: Dean Kawaguchi

> **Motion Discussion:** This had been referred to this meeting by the Joint MAC-PHY group.
> Ed Geiger provided a short introduction. After discussion, the question was called by Dean Kawaguchi, seconded by Barry Dobyns, and accepted by acclamation. In favour: 15. Opposed: 13. Abstentions: 11

> Approved: 15   Opposed: 13   Abstain: 11   *Motion # 15 fails*

11.   **PHY issues** see agenda item 10.

12.   **MAC issues** see agenda item 10.

13.   **Adjourn meeting** adjourned 5:31 PM

Thursday afternoon July 14, 1994

14.   **Opening Chair, Vic Hayes, opened the meeting at 13:10**

14.1   **Announcements**

14.1.1 Recordings made at the meeting Vic Hayes announced that part of the proceeding may be recorded.

> *Motion # 16:*   *that the use of tape recorders be judged out of order.*

> Moved by: Peter Chadwick
> Seconded by: Stuart Kerry

> Friendly amendment that this applies to all 802.11 meetings including sub group meetings. Friendly amendment to include all audio visual devices.
> *Motion # 16 now reads:*   *that the use of audio and/or visual recorders in all 802.11 meetings be prohibited.*
> **Motion Discussion:**

Motion # 16.1:	*to call the question*	

Moved by:	Mike Fischer
Seconded by:	Stuart Kerry

Approved: by voice vote   *Motion # 16.1passes, question called*

Approved: 44	Opposed: 0	Abstain: 5	*Motion # 16 passes*

13.1.2 Electronic distribution of draft standards Vic reported on the distribution of standards in electronic form. Vic said that he will distribute documents by diskette, and will make representations about the ftp server.

13.1.3 The committee thanked the Chair for his efforts in attending the meeting, and expressed their condolences with him on his recent bereavement.

14.2 Document list update Stuart mentioned the status. Refer to document 94/198 R1.

14.3 Agenda adjustments the agenda was adopted by consensus.

15. Reports

15.1 MAC/PHY interface ad-hoc group

Motion # 17:	*that the MAC/PHY interface ad hoc group adopt as their direction to add definition to the data parameters that exist in doc. 60 (draft standard) so that these primitives are used.*

Moved by:	Bob O'Hara
Seconded by:	None

Motion 17 not before the assembly.

Reported that ad hoc chairman appointed in the absence of chair and vice chair. Mike Fisher acted as secretary. From the meeting:

Motion # 18:	*that responsibility for the production of the PHY layer Service Access Point definition rests exclusively with the MAC/PHY interface group and that PHY layer principle of Operation definition rests exclusively with the PHY sub committees.*

Moved by:	Bob O'Hara (on behalf of MAC/PHY Interface group)
Seconded by:	Dave Bagby

Motion Discussion: none

Approved: 43	Opposed: 0	Abstain: 6	*Motion # 18 passes*

Proposed changes to support Multiple Rates failed in the MAC/PHY interface meetings. Other changes proposed were dealt with during the Wednesday PM Joint MAC/PHY meeting

15.2   MAC group Report by Dave Bagby, refer to document 94/197A for the presentation.

Bagby reported that the MAC group had approved minutes with amendments.Noted that the approved minutes be
distributed.
                                                                                ACTION: Vic Hayes/ Dave Bagby

MAC Group will provide a multi rate concerns discussion document. Vic Hayes requested that where discussion takes place
on the reflector requiring formal retention, someone act as moderator and so do. The MAC group desire that the IEEE
inform the group about the possibilities of the inclusion of colour printing in the final published standard.
                                                                                ACTION: Vic Hayes

Vic Hayes stated that the mailings will be 22nd July, second mailing 29th July.

Fragmentation.Paper 94/147. resolved by the MAC group: the mechanism described in 94/147 be accepted for incorporation
in the standard.

Motion # 19:	*to accept that the mechanism described in 94/147 be accepted for incorporation in the standard.*

Moved by:	Dave Bagby
Seconded by:	Simon Black

Motion Discussion: none

Approved: 49	Opposed: 0	Abstain: 2	*Motion # 19 passes*
Motion # 20:	*that the active max MPDU size shall be a managed object per station rather than per BSS as previously decided.*		

Moved by:	Dave Bagby
Seconded by:	Mike Fischer

Motion Discussion: none

Approved: 51	Opposed: 0	Abstain: 2	*Motion # 20 passes*

Reported that the work on windowing considered complete.

Motion # 21:	*that text for a more complete description of the operation of the to/from AP bits be derived from 94/120 and included in the next revision of the draft.*

Moved by:	Dave Bagby
Seconded by:	Simon Black

Motion Discussion: none

Approved: 54	Opposed: 1	Abstain: 1	*Motion # 21 passes*
Motion # 22:	*that the definition of the MAC and SMT portions of the MIB as described in 94/98a be adopted and placed in the draft standard and supersede the recommendation made in the closing plenary in May to use 94/98 as a work in progress for the framework for the MIB definition*		

Moved by:	Dave Bagby
Seconded by:	Barry Dobyns

Motion Discussion: none

Approved: 51	Opposed: 1	Abstain: 1	*Motion # 22 passes*

Motion # 23:	*to accept the MAC group recommended actions to close issues:--5.9 finding AP's-5.6 Association direction-5.7, 5.8 reassociation-5.3b infra structure services required.For full details*

Moved by: Dave Bagby
Seconded by: Barry Dobyns

Motion Discussion: none

Approved: 51   Opposed: 0   Abstain: 3   *Motion # 23 passes*

Motion # 24:   *Moved that at the M/P interface all information shall be in canonical bit order.*

Moved by: Dave Bagby
Seconded by: Jon Rosdahl

Motion Discussion:
Motion # 24.1:   *to limit the debate to 1 minute per speaker*

Moved by: John McKown
Seconded by: Mike Rothenburg

Motion Discussion: none

Approved: by acclamation   *Motion # 24.1 passes*

After a lengthy discussion:
Motion # 24.2 to amend: that "canonical" be replaced by "in the bit order specified in 802.3"

Moved by: Mike Rothenburg
Seconded by: Bob Crowder

Motion Discussion:
Motion # 24.3:   *to amend 802.3 to 802.2*

Moved by: Jon Rosdahl
Seconded by: Dave Bagby

Motion Discussion: none

Approved: by acclamation   *Motion # 24.3passes*

Question called on motion 24.2 by Bob Buaas, second by Barry Dobyns. Question called by voice vote.

Approved: by voice vote   *Motion # 24.2 passes*

Motion # 24.4:   *that it reads "at the MAC/PHY interface or on the media*

Moved by: Bob Crowder
Seconded by: none   motion is not before the assembly

Question called by Jon Rosdahl, second Barry Dobyns. Question called on voice vote.

Approved: 45   Opposed: 4   Abstain: 12   *Motion # 24 passes*

Motion # 25:   *that the final frame formats adopted by 802.11 shall be an integral number of octets.*

Moved by: Dave Bagby
Seconded by: Barry Dobyns

Motion Discussion: Clarification; is the frame referred to an MPDU? Answer is indeterminate.

Motion # 25.1:	*to call the question.*		

| Moved by: | Bob O'Hara |
| Seconded by: | Barry Dobyns |

Approved: 33	Opposed: 6	Abstain: 6	Motion # 25.1 passes, *Question is called*
Approved: 44	Opposed: 2	Abstain: 10	*Motion # 25 passes*

Motion # 26:	*that the changes within 94/155 sect. 2.1 be incorporated in the 802.11 be incorporated draft and octets are transmitted in ascending order.*

| Moved by: | Dave Bagby |
| Seconded by: | Barry Dobyns |

Motion Discussion: carried by acclamation.call for a division.

Approved: 51	Opposed: 2	Abstain: 6	*Motion # 26 passes*

Distributed Time Bounded Services

Motion # 27:	*that 802.11 adopt a priority based DCF proposal as documented in 94/150.*

| Moved by: | Dave Bagby |
| Seconded by: | Wim Diepstraten |

Motion Discussion: question called Larry Zuckerman second Paul Eastman.

Approved: 14	Opposed: 20	Abstain: 23	*Motion # 27 fails*

MAC fixed the programme, and believes that the MAC will be complete for the November letter ballot. A straw Poll in the MAC to leave synchronous services, which was rejected by about 2 to 1. Goals for September meeting fixed.

There were some questions about editing and dates.

That was the end of the MAC report. The Chair granted Kamilo Feher a one minute slot for presentation of a IPR statement. This statement will be circulated (in document 94/186), and will be included in these minutes by reference. The time was extended to allow completion of the presentation.

Kamilo Feher requested that the motion from the PHY group be addressed before any break. As there were objections raised, the chair called for the break to reconvene at 1530.

Break, meeting called to order at 15:30 hours

15.3   PHY group   report -- L. van der Jagt

At some time between the disposal of motion 24 and the PHY repoert the Chair proposed to limit the time in debate from that time on to two minutes per person. Some people objected and proposed to limit debate to one minute. The chair than asked whether there was any objection to limit the time in debate from that time on to two minutes per person. No objections were made and the ***Chair stated that further in this meeting, the time in debate from that time on to two minutes per person.***

The majority of effort has been made in the sub groups, rather than as a complete group.

From the PHY meeting for consideration by plenary:Motion 1:

Motion # 28:	*that the IR PHY sub committee as currently constituted be split into two sub committees one to complete the definition of the Baseband IR PHY and one to complete the definition of the Carrier based IR PHY.*

Moved by:	Larry van der Jagt
Seconded by:	Roger Samdahl

Motion Discussion: Question called by Jim McDonald second by Barry Dobyns. Question called by acclamation.

Approved: 29	Opposed: 6	Abstain: 19	*Motion # 28 passes*

Motion 2:

Motion # 29:   *that the text content of document 94/152 Physical Layer Draft Specification for Baseband Infrared Media sect 3 sect 4 and Appendix A shall be incorporated into the draft standard IEEE P802.11-93/20b1 Wireless LAN Medium Access Control and Physical Layer Specifications by the editors in its next revision replacing section 11 which is currently empty of content.*

Moved by:	Larry van der Jagt
Seconded by:	?@

Motion Discussion: Question called by acclamation.

Approved: 40	Opposed: 0	Abstain: 16	*Motion # 29 passes*

Motion # 30:   *Resolved: after reviewing FQPSK as requested by the Plenary, the IR sub committee recommends the adoption of this patented modulation for use in IR carrier-based IR standard*

Moved by:	Larry van der Jagt
Seconded by:	Paul Eastman

Motion Discussion: After lengthy discussion, proposed that the motion be amended to:

Motion # 30.1:   *adopt FQPSK or compatible techniques for IR modulated carrier based PHY*

Moved by:	Kamilo Feher
Seconded by:	Paul Eastman

Motion Discussion: question called by Barry Dobyns sec Peter Blomeyer.

Approved: 20	Opposed: 9	Abstain: 21	*Motion # 30.1 passes*

Motion 30 further discussion: after discussion:

Motion # 30.2:   *to lay motion # 30 on the table*

Moved by:	Jon Rosdahl

After reference to Robert's Rules of Order, the chair ruled motion 30.2 out of order.

Motion 30 further discussion: question called by Jon Rosdahl seconded Barry Dobyns

Approved: 11	Opposed: 24	Abstain: 16	*Motion # 30 fails*

15.4   Editor's report

Draft 20b2 requires inputs from the authors by Friday 22nd July. Minor errors, typos etc. can be e-mailed to the editors.

Motion # 31:   *that Procedure 102R "having exact text available at the vote" be relaxed into "Chairman and editors will decide*

Moved by:	Dave Bagby
Seconded by:	Barry Dobyns

Motion Discussion: Question called Dave Bagby, sec Brian Dobyns. Question called.

Approved: 25   Opposed: 2   Abstain: 6   *Motion # 31 passes*

16.   Unfinished business

16.0   Tabled motions and approval left over Oshawa motions

Oshawa tabled motions be kept active for the next meeting.

Motion # 32:   *to remove from the table of the minutes of the Vancouver meeting.*

Moved by: Bob O'Hara
Seconded by: Roger Samdahl

Motion Discussion: after discussion:
Motion # 32.1:   *to postpone the approval to the next meeting*

Moved by: John McKown
Seconded by: Arthur Coleman

Motion Discussion: none

Approved: accepted unanimously   *Motion # 32.1 passes*

                                      Motion # 32 postponed till the next meeting

Motion # 33:   *that Vic Hayes send the liaison letter to ETSI.*

Moved by: Larry van der Jagt
Seconded by: ?

Motion Discussion: none

Approved: by consensus   *Motion # 33 passes*
                                      ACTION Vic Hayes

Reported that Oshawa financial report held to next meeting.   ACTION Vic Hayes

16.1   Recap of output documents

Liaison statement

16.2   Recap of document distribution

16.3   Next Meeting

   * **Objectives for next meeting** to be taken from the reports and sent in by the subchairs.

   * **Mailing Dates: July 22 and July 29**

16.5   Future Meetings

Chair shows schedule for future plenary and intermediate meetings

16.4   Other Intermediate Meetings required? none

17   New business

18.   Closure The meeting was closed at 17:20 hours

Tentative Meeting Schedule

Date	Month	Year	Place	Type	Location	Host
29/8-1 Sep		1994	San Antonio, TX	Inter	Marriott Rivercenter	Digital Ocean
7-11	Nov	1994	Incline Village, NV	Plenary	Hyatt Regency, Lake Tahoe	
9-12	Jan	1995	San Jose	Inter	LeBaron	WiSE & Tetherless
6-10	Mar	1995	West Palm Bch, FL	Plenary	Ramada	
8-11	May	1995	Salt Lake City, UT	Inter	Open	Novell
10-14	July	1995	Maui, HI	Plenary	Hyatt Regency	
TBD	Sept	1995	TBD	Inter	Open	
6-10	Nov	1995	Montreal, PQ	Plenary	Queen Elizabeth Hotel	
11-15	March	1996	La Jolla, CA	Plenary	Hyatt Regency	
8-12	July	1996	Netherlands	Plenary	?	
11-15	Nov	1996	Vancouver BC	Plenary	Hotel Vancouver	

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Attendance list

First name	Last name	Status	Company	communications
Mr. ROBERT	ACHATZ	voter	US Dept of Commerce	+1 303 497 3498 rachatz@ntia.its.bldrdoc.gov
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First name	Last name	Status	Company	communications
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Mr. STUART	NORMAN		Aironet Canada	+1 905 475 7171
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First name	Last name	Status	Company	communications
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