# Unconfirmed Minutes IEEE 802.3 Plenary Irvine, California March 10-14, 1997

Andy Luque, Open Communications

#### Monday, March 10, Administrative

Geoff Thompson convened the meeting at 15:30 as IEEE 802.3 chair. Andy Luque, IEEE 802.3 secretary, recorded the minutes. Participants introduced themselves. The attendance sign-up list was circulated. The attendance list for the March 10-14 Irvine plenary is included (Attachment A2).

The qualifications needed to become an IEEE 802.3 voter were reviewed. The IEEE sponsor ballot pool was also discussed.

Copies of IEEE 802.3z/d2, the Vancouver Minutes, and the Irvine Agenda were distributed. Copies of the final IEEE 802.3x/d3.2 Full Duplex specification were also available.

The Monday/Tuesday Irvine Agenda was considered (Attachment A1). No modifications were requested.

**MOTION:** Approve the Monday/Tuesday Irvine Agenda.

M:Andy Luque S:Paul Nikolich; Approved by acclamation.

**MOTION**: Consider the Vancouver Minutes Thursday.

M:David Law S:Paul Nikolich; Approved by acclamation.

# **Executive Committee Liaison - Geoff Thompson**

Geoff reported on the actions of the IEEE 802 Executive Committee. Two tutorials are scheduled for Irvine. 1000BASE-T Monday evening at 20:00 and POF Tuesday at 20:00.

Two standards are to be distributed this week, IEEE 802.9 and 802.3r 10BASE5 MAU.

The sites of next plenaries were announced. Later in the week, a survey will be conducted on future sites. A list of potential sites has been prepared. Copies of this list will be available tomorrow.

Several liaison reports were considered. The TR41.8 report will be provided Tuesday morning. There have been no SC25/WG3 meetings since the last plenary.

## IEEE 802.1 Liaison - Andy Luque

Andy reported on the status of IEEE 802.1. Work continues on the IEEE 802.1p and IEEE 802.1Q. There was a WG ballot on each of these documents. Frame sizes are still being discussed. The group is trying to determine what should go into 802.1p and what belongs in IEEE 802.1Q.

There was no liaison report on IEEE 802.9

## IEEE 802.12 Liaison - Pat Thaler

Pat provided an update on IEEE 802.12. IEEE 802.12d is done. IEEE 802.12e defines a MAC Bridge extension for IEEE 802.12. They are using 802.3z for the Gigabit PHY. There is a new draft of the Full Duplex specification.

Geoff Thompson, is IEEE 802.12 Gigabit going to do packet bursting? Pat, this has not been considered. It would go into the Full Duplex draft. Could use a bit exchanged during training.

No additional liaison reports today.

Howard Frazier indicated that IEEE 802.3z could use some extra time today. They are ready to start.

## Administrative - Geoff Thompson

The schedule for the week was briefly discussed. The IEEE 802.3 plenary will resume Tuesday at 8:30. The Gigabit Ethernet presentations have been divided into four tracks. The task force will meet after the IEEE 802.3 plenary ends today.

There will be a joint FDDI/IEEE 802.5 meeting Tuesday afternoon. This will be an official X3T12 meeting.

The IEEE 802 Treasurer's position is open. See Jim Carlo if interested.

The meeting adjured at 16:20.

## Tuesday, March 11, Administrative

The IEEE 802.3 plenary re-convened at about 8:34. Geoff Thompson chaired the meeting. Andy Luque, IEEE 802.3 secretary, recorded the minutes. The attendance list was circulated.

The IEEE 802.3 voters list was presented (Attachment A2). There are 155 voters. The at-risk voters list was presented. None were removed. The qualifications needed to become an IEEE 802.3 voter were reviewed (Attachment A3).

The potential voters list was presented (Attachment A2). Participants need to indicate if they want to become voters. New qualified voters were solicited. The following were added to the voters list: Alan Albrecht, Dave Brier, Benjamin Brown, David Cunningham, Thomas Dineen, Subrata Datta, Michael Elswick, Richard Froke, Mark Gerhold, Edward Grivna, Jacob Hsu, Todd Hudson, Paul Kolesar, Bruce LaVigne, Richard LaCerte, Chan-De Lin, Gordon Langlands, Fanny Mlinarsky, Vince Melendy, Robert Musk, Octavio Morales, Mark Nowell, Henry Hinrichs, Bill Sarles, Bharat Singh, Dalit Sagi, Margit Stearns, Walter Thirion, Robert Wu, John Wolcott, and Greg Wang.

There was a call for patents relevant to current projects (Attachment A4). The IEEE patent guidelines were presented. The IEEE requests that a letter be sent. IEEE encourages early notification. The WG does not determine if patents are relevant or not.

Howie Johnson, do we have to prove that it could not be done without patented material? Geoff, the requirements are as stated in the bylaws. The letter can be sent to Geoff or to the IEEE IP Administrator. It goes into the project file. IEEE requests early information. This letter is only used for the patent file.

Early information allows us to take advantage of the engineers that are participating. They have a general idea of the requirements, and are of the mind set to meet the IEEE terms. If we wait until the patent is grated, it is more difficult to get permission from corporate. Patents issued or patents under application are relevant. There is an example of the letter in the Standards Companion.

## IEEE 802.3 State of the Standard - David Law

David reported on the IEEE 802.3 State of the Standard (Attachment A5). There was one negative ballot on IEEE 802.3y, 100BASE-T2. The IEEE 802.3aa, 100BASE-T Maintenance, will go to a WG ballot after Irvine. The IEEE 802.3ab, 1000BASE-T, PAR was discussed Monday.

## **IEEE 802.3 Operating Rules - David Law**

David reported on the IEEE 802.3 Operating Rules (Attachment A6). Draft 3.1 was distributed. A total of 180 comments have been received. Several new clauses have been added. They deal with Study Groups, Maintenance, PARs, and the overall project process. Draft 3.2 is being produced. There will be a meeting Wednesday. A report will be provided Thursday.

#### **Interpretation Request - David Law**

An interpretation request was received from Mark Gerhold. (Attachment A7). It concerns an ad that appeared in the November issue of Data Comm magazine. Is the "accelerated backoff algorithm" in conformance or outside the standard? He wants an interpretation request to clarify this question. The ad has more detailed information.

Howie Johnson, avoid the commercial. All we need is a specific interpretation request. Not a request against the ad. Deal with the specific case. Interpretations are a technical issue.

Andy Luque, why not withdraw the request and resubmit it without references to the commercial ad?

It was triggered by the ad.

Geoff Thompson, would like a sense of the group. Is it appropriate to determine what is in the standard? Does not want to act as a policeman.

Ian Crayford, it is not practical to police ads. Are we going to sanitize it?

Geoff Thompson, it seems appropriate to look into this request.

The group will meet Wednesday to consider this request and develop a response. We need to make a decision Thursday on a WG ballot.

Andy Luque, should we notify the other party?

Geoff Thompson, the review period will be a long enough to allow input. We will deal with this issue in July.

Bill Quackenbush, does the ad claim conformance?

Geoff Thompson, the ad fudges.

Geoff Thompson, do a narrow review of this interpretation request. This line does. This line does not. If any member wishes to prolong the process, it is acceptable.

Normally request go to the IEEE and then come to IEEE 802.3. In this case, its the reverse. OK to do it in the other direction.

### SC6 - Gary Robinson

Geoff reported since Gary was not present. New Work Items at ISO for IEEE 802.3x and IEEE 802.3y. SC6 will meet in Stockholm in June. Need to appoint delegates. Geoff and Gary plan to go. Anyone else interested in participating should contact Geoff.

The 100BASE-T report was delayed.

# Liaison TR.41 - Chris Di Minico

Chris reported on the TR.41 (Attachment A8). Several cable parameters in 568B are being revised due to the Gigabit input. Contribution submitted on FEXT and Return Loss. A patch cord specification is being developed. The group will meet in Washington in mid April.

### SC25/WG3 - Alan Flatman

Alan reported on the status of SC25/WG3 (no Attachments). WG3 met in Barcelona in January. WG3 was informed that IEEE 802.3 had selected 4 pairs of Cat 5 for its Gigabit effort. There were no questions from WG3 participants.

Alan noted that there are several different premises wiring specifications, EIA/TIA 568, ISO11801, and European and Australian standard. They are quite similar but not identical. It is important to note the specific differences.

There are several major efforts underway. Amendment to ISO 11801. The second edition of ISO 11801. The TSB-67 copper link test up to 100 MHz. Channel harmonization with other standards.

The ATM Forum is driving for an extension to Cat 5 up to 155 Mb/s.

Alan gave SC25/WG3 a report on 1000BASE-T. It was noted that the PAR had been approved and that it specified 4 pairs of Cat 5. No questions. WG3 has undertaken no new actions with regard to Cat 6. No new concepts until they fix or complete the Cat 5 specification. There are no pending items on Cat 6. It has been tabled.

Several corrections were proposed to the current standard. WG3 rejected a proposal to reduce the model B multimode fiber from 200 MHz to 160 MHz. Accepted in principle a proposal from the Netherlands to use fiber for horizontal wiring. If the bandwidth is required, optical fiber should be recommended. The return loss specification might change. The figures are fluid. Some want a way to measure compliance.

Steve Swanson, expanded on the reasons for the rejection of 160 MHz. It failed on a 7/4 vote. Objections to 50 um fiber. Proponents claim many do not require 200 MHz, but the standard requires it. Alan, agrees with these comments. The proposal did not differentiate between 62.5 um and 50 um fiber.

The second edition of the ISO 11801 was considered. It will eliminate all for future study (ffs) qualifications. There are many fluid figures in the standard. Delete ffs and go for 100% firm figures. All values at 64 kHz are to be deleted. No opposition to this proposal. Smart patching hardware loss defined at 6 dB maximum at 150 MHz. In principle decided to limit channel delay skew to 50 ns maximum end-to-end. They read it as 45 + 5. 5 nsec for delay in the connector. Need to fix this. TIA will lead in this area. Short link phenomenon to be resolved. Class D channel definition to be added.

Several items will be adopted from TIA/EIA. They include the Open Office Cabling and Centralize Optical Architecture. There is a significant delta between the NEXT specification in ISO/IEC 11801 and EIA-568-A. The ACR calculations are different. There is a need to harmonize these differences. Possible resolution by June.

Bob Campbell, it is not a good idea to modify the noise spectrum. What applications? Why are we looking for their approval? Liaison note clarified the figure. Channel definition based on ISO link. This represents real links. No idea on how to harmonize. Difference in philosophy. The only difference with ISO 11801 relates to installed link performance. Hope that this can be resolved by June. More details in the 1000BASE-T report.

## 100BASE-T - Colin Mick

Colin reported on the status of 100BASE-T (Attachment B) The 100BASE-T MB#1, IEEE 802.3aa, revisions are ready for WG ballot. No other change requests are in the queue. One hour needed at Irvine. The results will be presented Thursday. Expect to request a 30 day letter ballot at that time.

### **Enhanced MAC Algorithm - Mart Molle**

Mart reported on the status of the Enhanced MAC task force (Attachment C). Going slowly to adopt changes introduced by other efforts. Working with IEEE 802.3z. It makes changes to carrier extension and burst mode. They are compatible with the Enhanced MAC. New draft 1.8 produced in February. It includes changes made by ISO 8802.3:1996, IEEE 802.3u, IEEE 802.3x, and IEEE 802.3z

Testing 10 prototype units since January. Another 90 units to be incorporated into the testbed. Video conferencing experiments show dramatic improvements.

The Gigabit changes have been incorporated into the simulation.

Plan to track the IEEE 802.3z work this week.

A limited number of drafts were distributed.

No meetings are planned for this week. Only 2 or 3 participants indicated an interest for a separate meeting at Irvine.

## Full Duplex - Rich Seifert

Rich reported on the status of the Full Duplex task force (Attachment D). Draft 3.1 underwent a Sponsor recirculation ballot. All of the ballot comments submitted have been resolved. The 4 negative votes have been resolved. Draft 3.2 includes several editorial changes due to this ballot. Copies of the draft were distributed. No meetings are scheduled for Irvine. A motion will be offered Thursday to forward the draft to the IEEE Standards Board.

## 100BASE-T2 - Colin Mick

Colin reported on the status of the 100BASE-T2 task force (Attachment E). Draft 7 underwent a Sponsor recirculation ballot. 5 negative votes received. Only one is still outstanding. Bill Bunch indicated that the text does not reflect the spirit of the compromise that was reached in the prior cycle.

Bill Bunch requested a change in the label of some register bits that are not yet allocated. In Table 28 B-1, A6 and A7 would change from "Reserve for future technology" to "additional half duplex copper (see Annex 28D)" and "additional full duplex copper (see Annex 28D)" respectively.

The change would affect all applications. It is not clause specific. It is not specific to 100BASE-T2. We can make the change to satisfy the negative ballot and recirculate or we can deny the request, prepare a response, and recirculate. The comment could also be withdrawn by Bill or be treated as an editorial comment.

Recirculation would be the most conservative path. The standard would be removed from next week Standards Board's agenda. It would go into the June agenda, unless IEEE 802.3 wants to see the results at the July plenary.

We could also entertain a motion a let IEEE 802.3 decide to either to:

-support the change

- or -

-classify it as a minor editorial issue that does not affect implementations.

A motion to that effect was presented. A vote will be made Thursday. Need to draft a letter to Bill. There is no need to discuss this further. No one requested a meeting at Irvine to pursue this issue.

A conflict was discovered in a bit assignment between IEEE 802.3x and IEEE 802.3y. The A5 and A6 bits specified by IEEE 802.3y/d6 were in conflict with the A5 bit specified by IEEE 802.3x/d3. The conflict was resolved by the IEEE 802.3 and IEEE 802.3y chairs. A5 remains as assigned by IEEE 802.3x. A6 and A7 are assigned by IEEE 802.3y. This change was discussed in the cover letter that accompanied the recirculation ballot.

## 1000BASE-T - George Eisler

George reported on the status of 1000BASE-T (Attachment F). There were two interim meetings. The December interim was attended by 33 participants. There were 4 technical presentations. The January interim was attended by 55 participants. There were 5 technical presentations.

A total of 5 proposals are under consideration: CAP12, Dual-Duplex, Enhanced TX/T2, Multi-level Partial Response, and QAM25. Expect to select a line code by July 97. A first draft is targeted for September 97.

The 1000BASE-T PAR is on the consent agenda for the IEEE 802 Executive Committee Thursday. Copies of the PAR and 5 Criteria were distributed.

## **Gigabit Ethernet - Howard Frazier**

Howard reported on the status of the Gigabit Ethernet task force (Attachment G). There was an interim meeting in January in San Diego. There was a call for relevant patents. Letters need to submitted to be the IEEE. During the interim, there was a line by line review of draft 1. The group was divided into 3 tracks at the interim.

The key decision made at the interim included:

- -Remove references to the Buffered Repeater.
- -1000BASE-X Link Configuration based on AutoNegotiation.
- -GMII extension of MII register set.

- -Established a Management task force. Consistent with clause 30, x, y.
- -Significant progress on PMD parameters.

Andy Luque, requested that a revision history be maintained.

Geoff Thompson, agreed and asked Howard to keep these records.

The WG plans to review the document during the next two months. The target is a WG ballot in the summer.

Geoff Thompson, we need to preview the document before Maui and vote it out at the plenary. Howard, yes this is agreed. Will start to track the comments. The infrastructure is being developed.

The connector discussion will be Wednesday. It is controversial and the presentations have been scheduled to allow for broad participation.

Room assignments were discussed.

Gigabit Ethernet will meet at 13:00

The meeting adjourned about 11:30.

## Thursday, March 13, Administrative

The IEEE 802.3 closing plenary convened at 8:40. Geoff Thompson presided over the meeting. Andy Luque, IEEE 802.3 secretary, recorded the minutes. The Thursday Agenda (Attachment A1) was presented. No changes were requested.

The voters list was presented. The potential voters list was presented (Attachment A2). Tom Grasmehr, Steve Swanson, R. Thatcher, and Iain Verigin were added as voters. There are a total of 190 voters. The at-risk voters list was presented. None were removed. The attendance sign-up list was circulated.

## **Administrative - Geoff Thompson**

The sites of future IEEE 802 plenaries were considered. A poll will be conducted to indicate preference for 1999 sites (Attachment A9). A strawpoll was conducted. Everyone is qualified to indicate a preference. Vote in favor or against each of the sites.

· ·	
YES	NO
43	5 3
44	3
10	23
1	16
30	9
5	29
8	26
5	21
YES	NO
12	10
30	
26	3 8 2
57	2
9	20
32	10
29	17
3	38
28	14
31	22
12	20
14	17
	43 44 10 1 30 5 8 5 YES 12 30 26 57 9 32 29 3 28 31 12

Approved

November 1999	YES	NO
Acapulco	52	2
Quebec city	41	12
Milwaukee	11	32
Lake Tahoe	22	15
Vancouver	30	6
Hilton Head	10	15
Vancouver	20	7
Tampa	24	5
O'Hara	6	37
New Orleans	40	4
Miami	12	15

The IEEE 802 Executive Committee is considering the acquisition of printers. Geoff indicated that he is against the purchase of a duplex laser printer and mildly negative about a color inkjet.

A motion to provide Internet access at IEEE 802 plenary meetings was considered(Attachment A10).

<u>MOTION</u>: IEEE 802.3 supports the SPA/Internet Access Proposal. As electronic documents become more pervasive, easy access from a central location to the IEEE-SPA and the Internet would be very useful at 802 plenaries. The following would be required

-Web Browser	\$0-\$49
-Adobe Acrobat Client-PDF	\$0
-Modem	\$200
-Internet Service Provider	\$240/year
with local # at meeting sites	·
-Portable PC to download	\$0-\$3K
and print files.	
M:Andy Luque S:Rich Seifert	Y:22 N:5 A:23;

Geoff noted that an electronic snapshot of all IEEE 802 documents in PDF format could be provided in CD-ROM for about \$3K. These could be distributed at the plenaries.

# ISO JTC1/SC6 Liaison - Gary Robinson

Gary reported on ISO JTC1/SC6 related issues (no Attachment). There is a proposal to have the IEEE administer the SC6 TAG held by IEEE 802. Volunteers were solicited for the June ISO meeting in Stockholm. Gary and Geoff are going.

## Maintenance - Gary Robinson

Gary reported on a new Maintenance request (no Attachment). Cabletron has requested a change to the 10 Mb/s specification. It is non-trivial. No specifics were provided. It will be reviewed and discussed at the next meeting in Maui.

### **Administrative - Geoff Thompson**

The availability of IEEE 802 standards in a CD-ROM was discussed (Attachment A11).

**MOTION:** IEEE 802.3 supports the production of CD-ROM of 802 standards for distribution at the 802 plenaries as part of the documents included in the registration fee.

M:Andy Luque S:Alan Flatman Y:56 N:1 A:1; Approved

## **IEEE 802.3 Operating Rules - David Law**

David reported on the status of the IEEE 802.3 Operating Rules (Attachment A12). There was a meeting Tuesday. Will produced draft 3.3 from the comments submitted. It will be circulated to the volunteer reviewers. Then, draft 3.4 will be mailed for comment by all IEEE 802.3 members in June. The draft 3.4 comments will be reviewed at the July plenary. The target is to gain approval at the Thursday session in Maui.

The reviewers list was presented. They include: Alan Flatman, Andy Luque, Bill Quackenbush, Rich Seifert, Geoff Thompson, and Doug Thomson. Other reviewers were solicited. Gary Robinson, Yongbum Kim, and Pat Thaler were added to the list.

# **Interpretation Request - David Law**

David reported on the Unisys interpretation request (Attachment A13). There were three questions. The proposed response was presented. Geoff Thompson solicited guidance. Do we need a motion now or a letter ballot?

Howie Johnson, adopt it here. No requests were made for a letter ballot.

**TECHNICAL MOTION**: IEEE 802.3 approves the interpretation request 1-03/97 ad hoc as an appropriate and correct response without a 30 day letter ballot.

M:Howie Johnson S:Rich Seifert;

Y:45, N:0, A:9;

Approved

## Maintenance 100BASE-T - Colin Mick

Colin reported on the status of 100BASE-T Maintenance (no Attachments). Will follow sequential # for Maintenance revisions. MB#5. A change bar will denote modifications to the approved standard. It's an editorial supplement.

It was reported that Gary Robinson had received a 10BASE-T Maintenance request. This issue had already been discussed. It will be handled by the 100BASE-T Maintenance group, but it will not be part of MB#5.

TECHNICAL MOTION: IEEE 802.3 forward MB#5 for WG ballot.

M:Colin Mick S:Gary Robinson;

Y:33, N:0, A:17;

Approved

The Mick/Robinson motion was debated.

Dave Fifield, it says replace the State Machines. This changes makes all equipment in the market non-compliant. Read it carefully. Vote no. It should be proposed as an option.

Geoff Thompson, all new designs add new State Machine.

Gary Robinson, 3 changes. Are we discussing all comments?

Geoff Thompson, Dave has a particular hot button.

## **Enhanced MAC - Rich Seifert**

Rich reported that there were no new activities at Irvine (no Attachments).

### Full Duplex - Rich Seifert

Rich reported on the status of the Full Duplex task force (no Attachment). No meetings or actions at Irvine. The draft is ready for the IEEE Standards Board.

**TECHNICAL MOTION**: IEEE 802.3 requests that the IEEE 802 Executive Committee forward IEEE 802.3x, Full Duplex, draft to IEEE Revcom.

M:Rich Seifert S:Shimon Muller;

Y:56, N:0, A:2;

Approved

### 100BASE-T2 - Geoff Thompson

Geoff reported on the status of the 100BASE-T2 task force (Attachment H). There is still one outstanding negative from the recirculation ballot.

It was noted that Bill Bunch was not in the room. Maybe we need to wait since this concerns his comments. Bill appeared and the discussion continued.

Colin Mick reported on the issue. It is strictly editorial. The change concerns the A6/A7 bits in Table 28B-1. The label of some register bits was changed from "reserved for future technology" to "additional half/full duplex copper". Bill Bunch objected to the change in draft 7.1. In his opinion, it did not reflect the compromise reached by the group. Solve the comment as editorial, and go to Revcom.

<u>TECHNICAL MOTION</u>: IEEE 802.3 inform Revcom that the Disapprove ballot by Mr. Bunch has been resolved in the following manner.

Back out the editorial changes that provide "additional guidance" for the future use of these bits and revert to the text as approved in draft 6 and perform such editorial work as required, to assure consistency with this action.

Further, in the judgment of IEEE 802.3 this is a "minor editorial change" in that the only purpose of the text in either case is with respect to future use of these bits which has not yet been specified by IEEE 802.3.

This has no effect on current implementations or implementations of IEEE 802.3y.

It is the opinion of IEEE 802.3 that this minor editorial change should not require an LMSC recirculation of P802.3y/D7.1 and that this change can be made during preparations for publication. M:Colin Mick S:Bill Bunch Y:28, N:0, A:6; Approved

The Mick/Bunch motion was debated.

Rich Seifert, suggested that "minor editorial change" be changed to just "editorial change". This was accepted as a friendly amendment.

**TECHNICAL MOTION**: IEEE 802.3 request the IEEE 802 Executive Committee forward IEEE 802.3y to SC6.

M:Colin Mick S:Bill Quackenbush Y:34, N:0, A:11; Approved

## 1000BASE-T - George Eisler

George reported on the status of the 1000BASE-T task force (Attachment J). A tutorial was presented at Irvine. There are four basic line code proposals under consideration.

**TECHNICAL MOTION**: IEEE 802.3 approves the PAR and 5 Criteria as submitted for 1000BASE-T and instructs its chairman to vote affirmatively at the IEEE Executive Committee meeting.

M:George Eisler S:C. Hochstedler Y:48, N:0, A:4; Approved

## **Administrative - Geoff Thompson**

The Vancouver Minutes were considered.

**MOTION**: Approve the IEEE 802.3 Vancouver minutes.

M:Andy Luque S:David Law;

Approved by acclamation

Three corrections were requested. In page 4, it should indicate that the 1802.3 AUI Conformance Test standard will be dropped. In page 11, it should indicate that the administration of the Xerox type field is in the process of being transferred to the IEEE. In page 1, a potential inconsistency was reported between the new voters listed in the minutes and the slide in Attachment A2. A review of the record indicates that the chronological listing of new voters in the minutes included all of those listed in the slide. It also shows that Kelly McClellan was incorrectly omitted from the slide.

The Minutes were approved by consensus.

## **Gigabit Ethernet - Howard Frazier**

Howard reported on the status of the Gigabit Ethernet (Attachment K). The groups worked on the draft 2 comments. The responses were reviewed. The organization of the draft looks good. The comments are detailed. Draft 2.1 will be mailed, as changed pages. In the meantime, people should continue to review draft 2. The updated draft will be mailed before the interim.

There was a long discussion on the connector. There will be a short haul cooper and a fiber optic connector. The group conducted a series of votes on the connectors. A short haul connector was selected without much debate. It will be included in clause 39.

The FO connector was more controversial. The group first voted on the need to discuss the connector issue. Then it focused on the specific selection. There was a one to one and half hours of discussion. The group could not reach agreement on a particular new connector. It concluded by deciding not to add any new FO connectors. A group vote prohibits future consideration of additional FO connectors in IEEE 802.3z.

The interim meeting will be in Ft. Lauderdale. 1000BASE-T will meet at the same location. A Monday morning meeting is anticipated for Maui. No Sunday sessions. The date for the September interim is tentative.

A request was made to include the subgroup summary slides in the IEEE 802.3z minutes. They will be included.

A question was raised about the need to ratify the FO connector decision. Howard, no, it is not needed. The vote would not change in IEEE 802.3. Reluctant to do it unless Geoff Thompson thinks it is necessary. Geoff did not indicate any such need.

The IEEE 802.3 plenary meeting adjourned at 11:09.

Respectfully submitted June 6, 1997.

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