

Minutes of T11.1 Ad Hoc meeting on HIPPI-6400 Optics  
June 9, 1998  
St. Petersburg Beach, FL

## **1. Opening remarks and introductions**

The Chairman, Don Tolmie of Los Alamos National Laboratory, opened this meeting at 6 PM and thanked Chuck Brill and AMP for hosting this meeting. Don lead a round of introductions. The list of attendees is at the end of these minutes.

## **2. Selection of secretary**

Don Tolmie thanked Greg Chesson and Roger Ronald for taking the meeting notes for the April meeting, and solicited a volunteer to take the meeting notes for this meeting. Roger Ronald volunteered. Don Tolmie will produce the final HIPPI-6400 Optical minutes separate from the other HIPPI minutes.

## **3. Review / modify the draft agenda**

Draft agendas were distributed via e-mail before the meeting and hard copies were distributed at the meeting. Dan Brown requested presentation time under items 8 and 9. These minutes represent the approved agenda.

## **4. Document distribution**

Don described the HIPPI web page at <http://www.cic-5.lanl.gov/~det/>, stated that the appropriate documents would be placed there, and encouraged people to pick up the documents before the meeting as extra documents would not be available at the meeting.

## **5. Review minutes of previous meeting**

The minutes of the April 21, 1998, meeting in Palm Springs were reviewed. Schelto van Doorn moved, and Roger Ronald seconded, to approve the April 21 minutes as written. Motion passed unanimously.

## **6. Review of old action items**

The action items from the April meeting were reviewed:

1. Robert Clarkson to provide Don Tolmie with an electronic copy of the Raytheon E-Systems October presentation for posting on the HIPPI web site. (Cancelled)
2. Don Tolmie to update the February meeting minutes and make corrected copies available on the web pages. (Done)
3. Greg Chesson, Steve Joiner, and Dan Brown to resolve the jitter budget and specification line items. (In process)
4. Dan Brown to facilitate an interim teleconference to work on the jitter resolution. (Done)
5. John Keesee to provide a cleaner connector drawing with the alignment pins in the adapter. (Done)
6. Dan Brown to address the open issues concerning the eye mask in 7.1. (Carryover)
7. Chris Karaguleff to provide his April presentation material to Don Tolmie for posting on the web pages. (Done)
8. Chris Karaguleff to provide material for Annex B describing optical cable channel-to-channel skew testing. (Done)
9. Chris Keller to provide his April presentation material to Don Tolmie for posting on the web pages. (Done)
10. Chris Keller to provide material for Annex B describing optical module channel-to-channel skew testing. (Carryover)
11. Dan Brown to recalculate the Table 4 values based on an eye opening of 0.4 UI and 400 MHz\*km cable, and send to Don Tolmie for inclusion in the next document revision. (Done, but not in time for inclusion in the document)
12. Dan Brown to send a paragraph describing mode selective loss to Don Tolmie for inclusion in 7.2 of the document. (Done, but not in time for inclusion in the document)

13. Don Tolmie to update HIPPI-6400-OPT Rev 0.4a with the changes agreed to at the April meeting. (Done)

**7. Presentations**

No special presentations were made. Dan Brown presented some material that is reported under other agenda items.

**8. Jitter discussion**

Dan Brown presented the spread sheet (at the bottom of this page) showing the achievable distance as a function of eye-opening and fiber quality. The higher-bandwidth cable shows promise, albeit at higher cost (estimated between 115% to 250% over the cost of FDDI grade 160 MHz\*km fiber).

Dan reported that an interim teleconference had occurred, discussing the jitter problem. Preliminary agreements have been reached and a rough draft defining terms for the jitter budget is being written by Mark Donhowe. Mark agreed to provide the draft to Don Tolmie for posting on the web page.

Dan Brown agreed to facilitate another interim teleconference on jitter. Desired participants included Mark Donhowe, Schelto van Doorn, Dave Hyer, Dan Brown, Steve Joiner, and Greg Chesson.

**9. Review HIPPI-6400-OPT Rev 0.5**

Rev 0.5 contained the changes from the April meeting in Palm Springs. All of the new and revised text was accepted as drafted, with exceptions listed below.

Dan Brown presented some draft text for the next to last paragraph of 7.2. This text was edited some. The 0.75 dB connector loss value in Dan's text was questioned, and it was noted that the MTP specifies 1.0 dB loss. John Keesee said that the 1.0 dB loss was for non-contact fibers. Steve Joiner agreed to run the values through the ATM modal noise power penalty model. Dan will review the ATM wording and try to make the HIPPI-6400-OPT document's wording similar.

It was noted that the values in Table 4 referencing note 6 are still under study, and won't be firm until the jitter question is put to bed.

Don Tolmie asked about the nomenclature "Connector pin" in Table 6. It was agreed that this would be changed to "Fiber number". It was further agreed to add a callout to figure 4 showing where fiber number 1 is located. John Keesee had provided a new version of the connector drawing to Don, but Don ran out of time to include it in the document. Don distributed a sheet showing both the old and new drawings. The new drawing was crisp and clear and will be included in the next revision.

Dan Brown agreed to draft new text for step e of B.1, and provide the example connector loss calculation.

B.2 was reviewed. Don noted that he had queried Chris Keller about it, but did not receive a response. After some initial reading, we skipped to B.3 with the intention of using the B.3 style for B.2 (i.e., calculation of delta skew, using a reference component, etc.). It was also noted that we needed to modify Figure B.3 (a) with a "Trigger" from the Data Generator to the Oscilloscope.

B.3 was reviewed and a few editorial changes were made.

**Link distance as a function of eye opening and fiber bandwidth**

		Eye Opening (U.I.)				
		0.50	0.45	0.40	0.35	0.30
<b>Fiber</b>	160	170 m	200 m	210 m	230 m	240 m
<b>Bandwidth</b>	200	200 m	230 m	250 m	270 m	280 m
<b>(MHz*km)</b>	400	290 m	340 m	380 m	420 m	440 m
	500	310 m	370 m	420 m	460 m	490 m

## **10. Call for patents**

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Don issued a call for disclosure of the existence of patents required to implement any and all HIPPI standards. It is necessary for the patent holders to agree to license those patents in conformance with the ANSI patent policy if the project on which they apply is to proceed. T11 and its Task Groups are not involved in this process at all other than to issue the call and forward paperwork.

The contact at ANSI is the General Counsel, Ms. Amy Marasco - (212) 642-4954 or [amarasco@ansi.org](mailto:amarasco@ansi.org). A patent policy description is at [www.ansi.org/proctbl.html](http://www.ansi.org/proctbl.html), section 1.2.11.

No new patent claims were made at this meeting.

## **11. Planning for future work**

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It was agreed to hold an interim teleconference to work on the jitter issues. Dan Brown took the action item to facilitate the teleconference.

## **12. Future meeting schedule**

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The HIPPI Optical group will continue to meet only during plenary weeks for the foreseeable future.

The next meeting will be on Tuesday, August 11, from 6 PM to 9 PM. The location is the Forte Posthouse, Pembroke Road, Portsmouth, Hampshire, UK P01 2TA, phone 01705 827651, Fax 01705 756715. Paul Levin and Xyratex are the hosts. The group name for reservations is "American National Standards Institute", and the group room rate is 95£ (Sterling) single or double occupancy. The reservation cutoff date is June 30. (See the meeting announcement on the web page at <http://www.cic-5.lanl.gov/~det/> for further details.)

It was noted that there may not be many HIPPI representatives at the meeting, but the optical people indicated that they would be completely represented.

The agenda will be essentially the same as the agenda for this meeting.

## **14. Review action items**

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1. Greg Chesson, Steve Joiner, Mark Donhowe, and Dan Brown to resolve the jitter budget and specification line items.
2. Dan Brown to facilitate an interim teleconference to work on the jitter resolution.
3. Mark Donhowe to send the jitter write-up to Tolmie for posting on the web page.
4. Don Tolmie to announce over the e-mail reflector when the jitter write-up is available.
5. Dan Brown to review the ATM Forum wording for model noise and suggest wording for our document.
6. Chris Karaguleff to send the title of FOTP-54 to Tolmie for inclusion in the next revision.
7. John Keesee to add a fiber number callout to the connector drawing.
8. Dan Brown to address the open issues concerning the eye mask in 7.1.
9. Chris Keller to provide material for Annex B describing optical module channel-to-channel skew testing.
10. Steve Joiner to run the ATM model noise power penalty model with connection loss numbers of 0.75 dB to 1.25 dB.
11. Dan Brown to provide example connector loss calculations.
12. Don Tolmie to update HIPPI-6400-OPT Rev 0.5 with the changes agreed to at the April meeting.

## **13. Adjournment**

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The meeting adjourned at 8:40 PM.

**Attendance**

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