

Minutes of T11.1 Plenary meeting #9
December 16, 1998
Tucson, AZ

1. Opening remarks and introductions

The T11.1 Chairman, Don Tolmie of Los Alamos, opened this meeting at 6:00 PM and thanked Gary Stephens, Bob Kembel, FSI Consulting, and Connectivity Solutions for hosting this meeting. Don lead a round of introductions. The list of attendees is at the end of these minutes.

These minutes are separate from the HIPPI working group, and HIPPI-6400 Optical working meeting, minutes. Don volunteered to take notes and to produce the minutes (for the last time).

2. Review / modify the draft agenda

Draft agendas were distributed via e-mail before the meeting. No changes or additions were made to the draft agenda.

3. Attendance and membership

The membership and voting rules were reviewed. See the web page at <http://www.x3.org/>, look under Standing Documents, then SD2, for our operating procedures including a detailed explanation of the membership rules.

No member companies were in jeopardy for failure to attend meetings.

Berg changed their organizational name to FCI-Berg, and changed the alternate from John Ellis to Lisa Huff. Ed Cady remains the principal member.

Hewlett-Packard resigned their membership.

Tensolite changed their alternate from Bill Kuypers to Lisa Stewart. Al Kelley remains the principal member.

PMR became a member company with Roger Ronald as the principal member and Bob Pearson as alternate.

Tera Computer became a member company with Sean Rieb as the principal member and Mark Howard as the alternate.

With these changes, T11.1 now has 12 member organizations. No organizations are in jeopardy of losing their membership if they are not present at the February T11.1 Plenary meeting.

4. Document distribution

Don described the HIPPI web page at www.lanl.gov/hippi/ stating 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. The web page will be moving to www.hippi.org shortly, when Roger Ronald takes it over from Don.

5. Review minutes of previous meeting

The minutes of the October 7, 1998, T11.1 Plenary in Ft. Lauderdale, FL, were reviewed. Jeff Young moved and Sean Rieb seconded, to approve the October 7, 1998, T11.1 minutes as written. Motion passed unanimously.

6. Review old action items

There were no action items from the October meeting.

7. Liaison reports

7.1 T11

Kumar Malavalli of Brocade Communications is the new T11 Chairman, replacing Roger Cummings. Ed Grivna continues as T11 Vice Chairman, Neil Wanamaker continues as Secretary, and Gene Milligan continues as International Representative. T11 currently has 77 member organizations.

7.2 HNF

Don Woelz reported that the HNF booth at SC98 very successful in promoting awareness to the fact that GSN is a real, high performance networking option with hardware and software implemented by multiple vendors.

- SGI demo with 2 x O2000 platforms transferring ST data streams over GSN at 450MB/s data rates.
- GENROCO demo transferring TCP/IP traffic between Sun and Compaq Alpha platforms over GSN.
- Essential/ODS Switch literature
- Press conferences with several leading computing publications

The HNF 1998 Annual Meeting was held at SC'98.

- held election to fill 4 board vacancies (end of term)
- resulting board seats held by Compaq, SGI, Essential/ODS, MaxStrat, GENROCO, CERN, PMR, HP, and Sun
- Chris Wood of MaxStrat appointed as HNF Financial Director

The Benjamin Group (PR firm) arranged an Analyst Tour that had participation by Essential/ODS, GENROCO, SGI, and the Benjamin Group. Meetings were held at Analyst sites and via concall.

7.3 ISO report

Don Tolmie reported that he has prepared ISO versions of HIPPI-ATM and HIPPI-Serial, with the hope that these documents can be used instead of the ANSI versions that will be forwarded by ANSI for ISO Fast Track processing.

Don also completed the ISO version of HIPPI-6400-PH in anticipation of its approval as an ANSI standard. He also made up an ISO version of the HIPPI-FP revision. We will need to have T11 forward these documents to ISO as the standards are approved and published by ANSI.

All of these documents have been forwarded to Gene Milligan, the T11 International Representative. Gene noted that while he had an action item to process HIPPI-6400-PH for Fast Track, he could not find a T11 vote recorded for the action, and planned to call for one at the December T11 Plenary.

Don Tolmie moved, and Roger Ronald seconded, that T11.1 request that T11 take the appropriate actions to process ANSI NCITS 210-1998 (HIPPI-FP Revised), ANSI NCITS 323-1998 (HIPPI-6400-PH), and ANSI NCITS 324-1999 (HIPPI-6400-SC), in the ISO Fast Track process for International Standards. A roll-call vote was recorded as:

Compaq Computer Corp....	Y
DPT.....	NP
Essential/ODS.....	Y
FCI-Berg.....	Y
Genroco	Y
IBM.....	Y
Los Alamos National Lab...	Y
PMR.....	Y
Raytheon E-Systems.....	Y
Silicon Graphics / Cray	Y
Tensolite.....	Y
Tera Computer	Y

The motion passed, 11 for, 0 opposed, and 1 not present. The Chairman took an action item to present this to T11 the following day. NOTE - Essential/ODS submitted a written vote before the meeting since they were not able to be present for the meeting.

7.4 Other liaison reports

Michael Griffin reported that he is now T11.2's liaison to T11.1.

8. Patent issues

8.1 Hewlett-Packard patent against Scheduled Transfer

Mike Andrewarth provided the following information:

HP has filed the ANSI "Statement of patent holder concerning the use of patented device or design in conjunction with an American National Standard" regarding the license of HP's Hamlyn Patent (U.S. 5,448,698) for implementations of the ST standard. The statement indicates that HP will make a license available to applicants under "reasonable terms and conditions that are demonstrably free of any unfair discrimination". A copy of a draft license agreement was also provided for information purposes. Copies were sent to ANSI, NCITS, Don Tolmie, and Roger Ronald.

Highlights of the draft license agreement terms and conditions include the following.

- A requirement that licensed implementations of the ST standard implement the required ST operations in section 4.7 of the ST standard AND at least one data movement operation as specified in section 6.1.
- A one-time license fee of \$10,000.
- No per-use royalties.
- A reciprocal license of patents held by the licensee that may be required to implement ST.

The HP contact for license issues is Mike Andrewartha, (972) 497-4745, mandrew@rsn.hp.com. Copies of the draft license agreement may be obtained through Mike. Detailed license negotiations will be handled by the HP Legal Department.

When asked, Greg said that he still felt that Hewlett-Packard's patent did not apply due to prior art, but that SGI felt that it was cheaper to pay the \$10K than to fight it.

8.2 Call for other patents

A call was issued for disclosure of the existence of patents required to implement the results of 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. A patent policy description is at www.ansi.org/proctbl.html, section 1.2.11.

No new patent claims were made at this meeting.

9. Review and act on projects in ANSI development phase

9.1 Scheduled Transfer Protocol

9.1.1 Working Group activity

Rev 2.5 was reviewed at the December meeting. Changes to correct and refine the document continue. Recent changes include the addition of passing ULP Port numbers during the Virtual Connection setup, replacing the "big-endian" indications with indication of received checksum checking, and the addition of a method to pass error information in optional ASCII strings. During review of the ST-API it was determined that it would probably be wise to include methods to set up multiple Virtual Connections for striping or API support. The other thing that is missing now is the FSM actions in response to duplicated operation. We had hoped to forward the document at the February Plenary, but with now that looks overly optimistic.

9.2 HIPPI-6400-OPT

9.2.1 T11.2 (Physical Variant) activity

Rev 0.8 was reviewed at the October HIPPI-6400 Optical working meeting. Most of the changes were accepted as written. A Siemens presentation said that there are problems with the MT connector - ferrule chipping occurs with repeated mating cycles. Klaus Schulz's analysis placed the blame on parts at the edge of their dimensional tolerance, creating high stress at the edges of the ferrule alignment holes. Other participants questioned the analysis, partly because the chipping seemed to be symmetrical rather than on a single side, and the dimensions of the parts tested were not known, i.e., were they at the edge of the tolerance or not.

Further investigation is planned. Changes were made to the 1300 nm specifications, and a request to further align the 1300 nm and 830 nm specifications was made, and the request will be relayed to Optobahn. The information about jitter measurement contributions generated by Mark Donhowe will be included in the next revision of the document.

9.3 HIPPI-LE

9.3.1 Working group activity

HIPPI-LE was updated to Rev 3.6 by removing the ARP text, Introduction, and Alphabetical Index. We are now waiting for the "ARP and IP Broadcast over HIPPI-800" to be assigned an RFC number so that we can reference it in HIPPI-LE. Once complete, HIPPI-LE should be ready to forward for public review and final processing. Rev 3.6 was reviewed at the November working meeting, and the changes accepted.

9.3.2 Final call for proposed changes

Since we are now waiting for the RFC, the deadline for proposed changes will be extended until we forward the document. No additional changes were proposed at this meeting.

9.4 ST-API

9.4.1 Working group activity

At the November meeting, presentations were made by Steph Bailey of Genroco, and Eric Salo of SGI. Neither were at the December meeting, but Greg presented some ad hoc comments about where he thought things were going. During the discussion it was determined that a key feature that was needed was the ability to set up multiple Virtual Connections. This may best be handled by changes to the ST document. Greg said that the initial ST-API text would be in raw ASCII text rather than the ANSI style of a finished document.

10. Review projects in approval phase

10.1 HIPPI-6400-PH processing status

HIPPI-6400-PH Rev 2.3 was approved as ANSI standard "ANSI NCITS 323-1998, Information Technology - High-Performance Parallel Interface - 6400 Mbit/s Physical Layer (HIPPI-6400-PH)" on November 20, 1998. It has been forwarded to ANSI for final editing and publication. Don received a call from Harvey Rosenfeld, the ANSI editor, indicating that he was almost complete with the final edits and would be passing it to Andrew Hubbard who would be responsible for publication.

At the September working meeting Greg Chesson reported that the pin assignments in HIPPI-6400-PH did not match the SuMAC implementation. At that meeting we agreed to change the document, but to continue processing the present document, albeit incorrect, as an American National Standard before making the changes. The changes to match the SuMAC were reviewed at the November ad hoc meeting and accepted.

A Project Proposal for an amendment to NCITS 323-1998 needs to be drafted, and a draft document produced. The pinout change is the reason for the amendment, but other proposed changes will be considered. Other changes suggested included Berg's company name change, the backshell capacitor if it changes, and the connector backshell dimensions for use with PCI systems. Anyone with proposed changes was given an action item to make formal proposals to the committee as soon as possible. Roger Ronald took an action item to draft a Project Proposal for the amendment. Don Tolmie took an action item to draft the document.

10.2 HIPPI-6400-SC Public Review status

HIPPI-6400-SC Rev 2.5 passed its second public review on November 24, 1998, with no comments. Unfortunately, it missed the NCITS meeting cycle and will have to wait for the March 30, 1999 NCITS meeting to complete its management review. Deborah Donovan of NCITS said that she would run the NCITS Letter Ballot with a closing date of early April 1999, making it concurrent with the NCITS meeting, for the shortest possible processing time. After the NCITS Letter Ballot it then goes for BSR review. Don't hold your breath, it is going to be a while before HIPPI-6400-SC is an approved

standard.

Roger Ronald is working with the ANSI editor to obtain the pre-edits so that a clean copy can be used for the NCITS Letter Ballot. Roger reported that the Harvey Rosenfeld, the ANSI editor, indicated that it was unlikely that they would be able to get to the document before the NCITS letter ballot. This isn't a problem, it just means that all of the edits will need to be made after it is an approved standard.

10.3 HIPPI-FP Revision

HIPPI-FP Revised (NCITS 210:1998) became an approved ANSI standard on June 9, 1998, and was published by ANSI in November 1998. Don has received a copy of the standard and used it as the basis for the Maintenance Draft Rev 4.8 on the ANSI Standards Activities web page.

11. Review other HIPPI-related items

11.1 ARP over HIPPI-800

Several revisions of the "ARP and IP Broadcast over HIPPI-800" document have been made recently, with final edits being completed at the December working meeting.

Greg Chesson moved, and Don Woelz seconded, to advance "ARP and IP Broadcast over HIPPI-800", as revised at the December meeting, as an RFC. Motion passed, 9 for, 0 opposed, and 3 not present. Motion passed. Jean-Michel was given an action item to take the appropriate actions with the IETF.

11.2 IP and ARP over HIPPI-6400 (GSN)

Likewise, several revisions of the "IP and ARP over HIPPI-6400 (GSN)" document have been made recently, with final edits being completed at the December working meeting.

Greg Chesson moved, and Henry Brandt seconded, to advance "IP and ARP over HIPPI-6400 (GSN)", as revised at the December meeting, as an RFC. Motion passed, 9 for, 0 opposed, and 3 not present. Motion passed. Jean-Michel was given an action item to take the appropriate actions with the IETF.

11.3 Others

There were no actions required by T11.1, or any action taken, on any of the following activities:

- HIPPI end-point MIB
- HIPPI switch MIB
- HIPPI-6400 MIB
- IEEE Tutorial for HIPPI-6400 ULA usage

It was noted that these are not without hope; Mark Doppke is working on the HIPPI Switch MIB. Essential has also expressed interest in HIPPI-6400 MIBs.

12. New business and new technical items

None.

13. Administrative matters

13.1 Call for T11.1 Chairman

Don Tolmie submitted his resignation as T11.1 Chairman effective December 31, 1998. The first call for volunteers to fill the position closed on November 15 with no volunteers. A second call has been issued, closing March 12, 1999. Roger Ronald noted that he had missed the first call by a few days, and has submitted his name for the second call. Since he is currently the Vice Chairman, Roger will effectively take over the T11.1 leadership on January 1, 1999. The call is on the T11.1, T11, and NCITS web pages if anyone else is interested in applying for the position.

13.2 Interim meeting authorizations

The T11.1 Chairman, Don Tolmie, authorized the following T11.1 interim working meetings. Roger Ronald will chair these meetings. Only the February dates include HIPPI-6400 Optical working meetings.

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|---------------|----------------------|
| January 12-13 | Albuquerque, NM |
| February 9-10 | Huntington Beach, CA |

14. Future meeting schedule

14.1 Interim meeting, January 12-13, Albuquerque

The next interim working meeting will be hosted by John Gibbon and Essential Communications/ODS in Albuquerque, NM. The location is the Radisson Inn (close to the Albuquerque airport), phone 505-247-0512, rate is \$73 per night, group name is Essential, reservation cutoff is December 29. See the meeting notice on the HIPPI Standards Activities web page at www.lanl.gov/hippi/ for details. **NOTE - The closing time on Wednesday changed from 9 PM to 5 PM.**

Tuesday - January 12 : 1 PM - 9 PM
 Wednesday - January 13 : 8 AM - 5 PM

14.2 Plenary week, February 9-10, Huntington Beach

The February Plenary week location is the Hilton Waterfront, 21100 Pacific Coast Highway, Huntington Beach, CA. The cutoff date for group reservations at the \$153 rate is January 11. See the meeting notice on the HIPPI Standards Activities web page for details. The HIPPI meetings during this week include:

Tuesday 2/9	9 AM - 6 PM	HIPPI ad hoc
Tuesday 2/9	6 PM - 9 PM	HIPPI-6400-OPT
Wednesday 2/10	9 PM - 6 PM	HIPPI ad hoc
Wednesday 2/10	6 PM - 8 PM	T11.1 Plenary

14.3 Future meeting dates and locations

The T11.1 (i.e., HIPPI), Plenary meeting will be on Wednesday evening of the T11 Plenary week, following the HIPPI working meetings. The HIPPI and T11.1 meeting days are not specified within the Plenary weeks.

New interim working meetings have been scheduled for May 13-14 (originally May 11-12) in Milwaukee, WI (with Genroco as the host) and July 13-14 in Seattle, WA (with Tera as the host). The May meeting has been confirmed, but the July meeting is still tentative.

John Gibbon questioned the date for the May Interim meeting, noting that it conflicted with the May 11-13 dates for Networkd+Interop. Don noted that May 11-12 gave us three empty weeks between

meetings. Moving the May meeting by one week in either direction would result in two empty weeks on one side, and four empty weeks on the other. After some discussion it was agreed to move the meeting to Thursday-Friday, May 13-14.

The location and host for the October Plenary week was changed by T11 from Ft. Lauderdale and Adaptec to Miami Beach and Jaycor. The 2000 locations and hosts have been firmed up; the August location and host is open for volunteers (Germany was withdrawn since this conflicted with "Holiday" time in Europe).

1999

Jan 12-13	Interim	Albuquerque	Essential
Feb 8-12	Plenary	Huntington Beach, CA	Qlogic
Mar 9-10	Interim	Richardson, Texas	PMR
Apr 12-16	Plenary	Palm Springs, CA	Brocade
May 13-14	Interim	Milwaukee, WI	Genroco
Jun 7-11	Plenary	Minneapolis, MN	Ancor
Jul 13-14	Interim	Seattle, WA	Tera
Aug 2-6	Plenary	Minneapolis, MN	ENDL
Oct 4-8	Plenary	<u>Miami Beach, FL</u>	<u>Jaycor</u>
Dec 6-10	Plenary	Reno, NV	Solution

2000

Feb 7-11	Plenary	Huntington Beach, CA	Qlogic
Apr 3-7	Plenary	Palm Springs, CA	Brocade
Jun 5-9	Plenary	Boise, ID	HP
Aug 7-11	Plenary	** open **	??
Oct 2-6	Plenary	Manchester, NH	Hitachi
Dec 4-8	Plenary	Austin, TX	Crossroads

2001

Feb 5-9	Plenary	So. California	Qlogic
Apr 9-13	Plenary	Palm Springs, CA	Brocade

15. Review action items

1. Chairman to request that T11 take the appropriate actions to process ANSI NCITS 210-1998 (HIPPI-FP Revised), ANSI NCITS 323-1998 (HIPPI-6400-PH), and ANSI NCITS 324-1999 (HIPPI-6400-SC) in the Fast Track process as International Standards.
2. Roger Ronald to draft a Project Proposal for an amendment to ANSI NCITS 323-1998 (HIPPI-6400-PH).
3. Don Tolmie to draft an amendment to HIPPI-6400-PH to include the pinout changes.

4. Anyone with a proposed change to HIPPI-6400-PH to present a written proposal to T11.1, or its working groups, by the April 14, 1998, T11.1 Plenary.
5. Jean-Michel Pittet to forward "ARP and IP Broadcast over HIPPI-800", as revised at the December meeting, for processing in the IETF as an RFC.
6. Jean-Michel Pittet to forward "IP and ARP over HIPPI-6400 (GSN)", as revised at the December meeting, for processing in the IETF as an RFC.

16. Adjournment

Jeff Young moved, and Don Woelz seconded, to adjourn. The meeting adjourned at 6:45 PM.

Notes from December T11 Plenary

The T11 Plenary met the next day, i.e., December 17. The definitive record is the T11 minutes.

By votes of 47 for 1 opposed, and 26 not voting, T11 approved the submission of HIPPI-6400-PH, HIPPI-6400-SC, and HIPPI-FP, to ISO for Fast Track processing as International Standards. They must each be approved and published by ANSI before they can be submitted, but at least this gets it on T11's books.

The location and host for the October Plenary week changed from Ft. Lauderdale and Adaptec, to Miami Beach and Jaycor. Siemens withdrew their offer to host in Germany in August, 2000, based on the fact that most of Europe is on holiday at this time and it is difficult to get reasonably priced accommodations then. Other meeting locations for the year 2000 were firmed up. A few year 2001 dates, hosts, and locations were added.

Attendance

Michael E. Griffin	O	3M Co.	612-733-6004	megriffin@msmail.mmmg.com
Kumar Malavalli	O	Brocade Communications	408-487-8156	kumar@brocade.com
David Hyer	A	Compaq Computer Corp.	978-493-6139	david.hyer@digital.com
Ed Cady	P	FCI-Berg	503-359-4556	edcady@aol.com
Donald Woelz	A	Genroco, Inc.	414-644-2505	don@genroco.com
Henry Brandt	A	IBM Poughkeepsie	914-433-7684	hrap@us.ibm.com
Don Tolmie	P	Los Alamos National Lab	505-667-5502	det@lanl.gov
Tony Whitlow	O	Molex, Fiber Optics, Inc.	630-512-8553	twhitlow@molex.com
Roger Ronald	P	Power Micro Research	972-437-9461	rronald@pmr.com
Walter R. Smith	P	Raytheon Systems Co.	972-205-5378	wrsmith@gar.esys.com
Jeff Young	A	SGI/Cray Research	651-683-5536	jsy@cray.com
Greg Chesson	P	Silicon Graphics	650-933-3496	greg@sgi.com
Albert F. Kelley	P	Tensolite Co.	904-829-5600 x281	akelley@tensolite.com
Sean M Rieb	P	Tera Computer Co.	206-701-2164	srieb@tera.com

P = Principal, A = Alternate, O = Observer