

## Minutes of T11.1 HIPPI Ad Hoc Working Group

June 6-7, 2000

Boise, Idaho

### 1.0 Opening remarks and introductions

The T11.1 Chairman, Roger Ronald of Power Micro Research, opened this meeting at 1 PM and thanked Robert Mejia and Hewlett-Packard for hosting this meeting.

This group is constituted as both the HIPPI Working Group under T11.1, and the High Performance Networking Forum (HNF) - Technical Committee (TC).

Roger lead a round of introductions. The list of attendees is at the end of these minutes. Roger volunteered to produce these minutes.

### 2.0 Review / modify the draft agenda

Draft agendas were distributed via the [www.hippi.org](http://www.hippi.org) web site before the meeting.

There were no changes.

These minutes reflect the approved agenda.

### 3.0 Document Distribution

Roger described the HIPPI web page at [www.hippi.org](http://www.hippi.org). Meeting documents are placed there and people are encouraged to pick up the documents before the meeting as extra documents are generally not available at the meeting.

### 4.0 Review minutes of previous meeting

The minutes of the April 4-5, 2000, HIPPI Working Meeting in San Diego, CA were reviewed.

Bob Willard moved and Craig Davidson seconded, to approve the April, 2000 working meeting minutes as written.

The motion passed without objection.

### 5.0 Review old action items

The action items from the April 4-5, 2000 meeting were reviewed.

1. Jean-Michel Pittet to provide the IETF RFC number for "ARP and IP broadcast over HIPPI-800 (GSN)" to Don Tolmie and Roger Ronald. (**done**-HIPPI-800 is RFC 2834 and HIPPI-6400 is RFC 2835)
2. Jean-Michael Pittet to continue to provide information to the T11.1 group about the IETF RFCs and the communications with the IETF. (**done**)
3. Christopher Lindahl to collect information for an "ST FAQ" html document. (**reassigned** to Aman Singla)
4. FCI to test current and proposed connectors for relative shielding effectiveness. (**overcome by events**)
5. FCI to send Don Tolmie information and drawings on the new SGI cable configuration. (**carryover**)
6. Christopher Lindahl to research crosstalk issues and report back on why SGI is using a tighter spec (5%) than the standard allows. (**carryover**)
7. Don Tolmie to update the HIPPI-6400-PH amendment to include the new SGI cable configuration. (**carryover**, dependent on #5)
8. Roger Ronald to update the ST Reliable Transfer Profile document. (**done**)
9. Brad Allen to update the version of the HIPPI-800 to Ethernet bridging RFC. (**done**)
10. Don Woelz to update the SST document. (**done**)
11. Don Woelz to get an IANA well known port number for SCSI over ST. (**done**)
12. Roger Ronald to post the error codes for SCSI over ST on the web site. (**done**)

13. Aman Singla to send an updated ST-API to Roger Ronald for posting on the web site. **(done)**
14. Aman Singla to determine if resource clean-up should be implied by a higher level close (i.e., does closing a connection clean up mapping or does un-mapping close (deallocate) Mx's. **(done)**
15. Jeff Young to provide an updated HIPPI-6400 HARP draft before the June, 2000 meeting. **(done)**
16. Jeff Young and Aman Singla to propose a different NACK scheme for HIPPI-6400 HARP. **(done, however there is no longer a HARP editor)**
17. Jeff Young and Aman Singla to consider the need for InvARP on HIPPI-6400. **(done, however there is no longer a HARP editor)**
18. Jeff Young to resolve HAF ARP usage.
19. The Chair (Roger Ronald) to produce the minutes for the April, 2000 meeting. **(done)**

## 6.0 HIPPI-6400-PH (ref: Rev 2.5)

### 6.1 EMI and Cable problems

At the April meeting, Jim Nadolny of FCI presented a schedule of work to resolve crosstalk and EMI concerns. The EMI results were supposed to be available by the June meeting.

Unfortunately, SGI's contact for this work (Val Mandrusov) has resigned and no one else has taken over this effort. FCI stated that their testing was on hold.

Chris Lindahl of SGI indicated that SGI is considering a release of their HIPPI-6400 adapter in its current state. They believe that it does pass EMI regulations and that no further work is needed.

There had also been an SGI concern over crosstalk. No further information was presented at this meeting on the subject.

### 6.2 PCI/Cables/Connectors

There has been an desire to support connectors (board side) and cable ends that will properly mate in a PCI form factor.

The current consensus is that existing connector variants have no chance to pass FCC test in a PCI

slot. SGI proposed that a new connector should be searched out and adopted.

The only new connector proposal came from FCI. They suggested the possibility of using the same connector that ultraSCSI is using for its highest performance/speed connections. This connector is shown on the FCI web site.

FCI initiated some testing on the ultraSCSI connector and is modeling to evaluate impedance and crosstalk.

Don Woelz and others expressed concern about the possibility of connector proliferation. Don also expressed willingness to consider doing some testing of the FCI proposed connector in a GSN configuration.

### 6.3 Draft Amendment

Don Tolmie is ready and willing to update the draft amendment. However, the results of this and previous meeting have pointed out that the connector problem is not solved and finishing up on the amendment can't be done until there is closure on the subject.

### 6.4 Draft Amendment Processing Plans

Since there has not been any closure on the connector situation, the HIPPI-6400-PH amendment will be held until further progress is made.

## 7.0 Scheduled Transfer (Rev 3.6)

### 7.1 Processing Status

Scheduled Transfer was forwarded by T11.1 to T11 at the December, 1999 meeting.

T11 initiated a letter ballot at that meeting and the ballot closed on 1/21/00. The document passed with no comments and it has been forwarded to NCITS for further processing and public review. The public review period closed on 6/5/00.

No comments have been posted on the NCITS web site.

## **8.0 HIPPI-LE (reference Rev 3.8)**

### **8.1 Processing Status**

HIPPI-LE, revision 3.8 was voted forward to T11 at the February 16th T11.1 plenary. T11 initiated a letter ballot which concluded on 4/1/00.

The document was approved without substantive comments and has been forwarded to NCITS for public review. The public review ends on 7/3/00.

## **9.0 SCSI on ST Mapping (revision 03)**

In addition to the items listed below, Don Woelz noted that he had received an IANA Port assignment for SCSI on ST.

### **9.1 Document Review**

The latest version of SCSI on ST (SST) from Don Woelz was reviewed. A few changes were noted, but there was not a lot of technical change.

### **9.2 Error Code Inclusion**

For the April meeting, Steph Bailey completed an action item to provide error codes that could be used in SST and as a basis for other protocols. Error codes specific to SCSI on ST needed to be included within the document and Don Woelz completed this addition with revision 03 of SST.

### **9.3 Tabular requirements matrix**

The group felt that a table of requirements, similar to the tables in ST-RTP would be a valuable addition to SST. Don Woelz agreed to add these, but the addition was not completed for this meeting.

## **10.0 SGI Low Level API Proposal (revision 06)**

### **10.1 Document Review**

At the April meeting Aman Singla accepted an action item to update the document.

Aman brought a new version of the document to the meeting and changes were reviewed. Most of the changes were related to resource clean-up and were accepted by the group.

A few additional changes were suggested and Aman accepted an action item to make these changes prior to the next meeting.

### **10.2 Document Editing Plans**

No plans were made to move the API into a "standards document" format. The group was willing to continue working on the material in its existing format.

Since editing this document into "standards" form appears to lack any strong proponents, this topic, about the document editing plans, will be removed from future agendas.

## **11.0 ST Reliable Transfer Profile (ST-RTP) (revision 0.5)**

### **11.1 Document Review**

Roger Ronald presented the fifth version of ST-RTP. ST-RTP is designed to limit implementations into working with a limited and well defined set of operations and parameter values.

Edits were reviewed and were all accepted. Roger also had an email from Tom Gilbert who reviewed RTP and presented a number of comments. Several comments were accepted.

Since there had been little change in the document, the group expressed a desire to forward it to T11 for further processing. Roger was able to prepare revision 0.6 of ST-RTP and the group subsequently reviewed and approved these changes. ST-RTP is now considered complete by the working group.

### **11.2 Forwarding Plans**

The task group expressed its desire that the T11.1 Plenary forward ST-RTP to T11 for further processing.

## **12.0 HARP**

### **12.1 ARP and IP Broadcast over HIPPI-800**

This document has been published as RFC 2834.

### **12.2 IP and ARP over HIPPI-6400 (GSN)**

The IETF has published the first version of our IP and ARP over HIPPI-6400 as RFC 2835.

Jeff Young had proposed changing HIPPI-6400 ARP to promote code efficiency during the February meeting. The group decided to give Jeff some leeway to make changes if he was willing to do what was needed in the documentation realm. Jeff agreed and provided a new version of the HIPPI-6400 ARP RFC for the April meeting.

Jeff had planned some fairly substantial format changes, but the group questioned any need to improve code efficiency and ease on applications that were already complete. The group also reiterated their desire to see a "stock" Ethernet ARP packet format on HIPPI-6400.

Jeff Young collected comments from the group in April and accepted several action items that resulted in a new draft of the RFC for the June meeting. However, the source of the funding for this work appears to have been terminated and Jeff was not able to attend this meeting.

The future of subsequent changes appears to depend on finding an organization with a sufficient stake in non-broadcast HIPPI-6400 environments that is willing to support a document editor.

### 12.3 Document review

Since there was no editor present and the document did not have change bars, no document review occurred.

## 13.0 Other HIPPI items

### 13.1 Bridging to HIPPI-800

Brad Allen presented a new version of the HIPPI to Ethernet Bridging document. This document has all changes flagged with red indicators and was easy to review.

Most of the proposed changes were accepted, but there still were a few minor corrections that were needed. Brad too an action item to update this document for the next meeting.

### 13.2 MIBS

The only MIB of general interest seemed to be a HIPPI-6400 switch MIB. In October, Roger Ronald accepted an action item to put PMR developers in touch with Essential/ODS and Genroco to see if any coordination could happen. Essential responded and will be moving forward in this area with PMR.

Nothing new at this meeting.

## 14.0 Future meeting schedule

### 14.1 Plenary week, August 7-11, Seattle, WA

The August Plenary week location is in Seattle, WA. The hotel information is available on the [www.hippi.org](http://www.hippi.org) web site. The tentative schedule is as follows. Note that the times for each session (optical, working, and plenary) are unchanged.

Tuesday 8/8	9 AM - 11 AM	HIPPI-6400-OPT
Tuesday 8/8	1 PM - 9 PM	HIPPI ad hoc
Wednesday 8/9	9 AM - 5 PM	HIPPI ad hoc
Wednesday 8/9	5 PM - 7 PM	T11.1 Plenary

We may change this basic schedule (meeting on Tuesdays and Wednesdays) for future plenary meeting weeks. A debate on a session time change will be discussed in Seattle. The primary idea is to consider moving optics and the T11.1 plenary to Thursday morning, dropping Tuesday from entirely from the schedule.

### 14.2 Future meeting dates and locations

The group continues to feel that interim meetings are not required.

#### 2000

Aug 7-11	Seattle, WA	Vixel
Oct 2-6	Manchester, NH	Hitachi
Dec 4-8	Austin, TX	Crossroads

#### 2001

Feb 5-9	Huntington Beach, CA	Qlogic
Apr 5-9	San Diego, CA	Brocade
Jun 4-8	Chicago, IL	Ancor
Aug 6-10	Honolulu, HI	Solution Tech
Oct 8-12	San Diego, CA	JNI
Dec 3-7	Austin, TX	Crossroads

## 15.0 Review action items

The following action items were carryovers or were added at this meeting.

1. Aman Singla to collect information for an "ST FAQ" html document.
2. Aman Singla to forward the current information for an "ST FAQ" html document to Roger Ronald for posting on the web site.
3. FCI to finalize characterization of the SCSI connector proposed for GSN use.
4. SGI to allow inclusion of their connector design in the HIPPI-6400-PH standard.
5. FCI to send Don Tolmie information and drawings on the new SGI cable configuration. (when allowed by the completion of action item #4)
6. Don Tolmie to update the HIPPI-6400-PH amendment to include the new SGI cable configuration (when possible after the completion of action item #5).
7. Christopher Lindahl to research crosstalk issues and report back on any status that might be pertinent to modification of HIPPI-6400-PH.
8. Brad Allen to update the version of the HIPPI-800 to Ethernet bridging RFC.
9. Don Woelz to update the SST document.
10. Aman Singla to send an updated ST-API to Roger Ronald for posting on the web site.
11. Everyone to consider the need for changes to HIPPI-6400 HARP and to determine who might be willing to edit the document.
12. Roger Ronald to post the last ST-API version on the web site.
13. Roger Ronald to post the last SCSI over ST version on the web site.
14. Roger Ronald to post the last HIPPI to Ethernet Bridging document on the web site.
15. The Chair (Roger Ronald) to produce the minutes for the June, 2000 meeting.

## 16.0 Adjournment

Brad Allen moved and Don Woelz seconded a motion to adjourn the meeting at 12:21 PM on the 7th of June. There were no objections.

## Attendance

Name	Status	Company	Phone	E_mail
Arie Van Praag	O	CERN	41-22-7675034	a.van.praag@cern.ch
Bob Willard	P	Compaq Computer Corp.	508-467-5875	bob.willard@compaq.com
Sean M Rieb	P	Cray, Inc	206-701-2164	srieb@cray.com
Brad Allen	P	Essential / ODS	505-344-0408	ballen@esscom.com
David Gaskill	O	Essential / ODS	505-344-0080 x340	dgaskill@esscom.com
Ed Cady	P	FCI-Berg	503-359-4556	edcady@aol.com
Donald Woelz	P	Genroco, Inc.	414-644-2505	don@genroco.com
Tan Truong	P	IBM	512-838-7813	truongtm@us.ibm.com
Roger Ronald	P	Power Micro Research	972-437-9461	rronald@pmr.com
Craig Davidson	A	Raytheon Systems Co.	972-205-4166	davidson@esy.com
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