

Minutes of T11.1 HIPPI Ad Hoc Working Group

October 5-6, 1999

Ft. Lauderdale, FL

1.0 Opening remarks and introductions

The T11.1 Chairman, Roger Ronald of Power Micro Research, opened this meeting at 12:30 PM and thanked Norm Harris of SanCastle 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 web site before the meeting. There were no changes.

These minutes reflect the approved agenda.

3.0 Review minutes of previous meeting

The minutes of the August 3-4, 1999, HIPPI Working Meeting in Rochester, MN were reviewed.

Horst Truedstedt's company affiliation was corrected.

The SCSI on ST section was changed to note that version 1.2 was reviewed versus version 1.1.

The starting time for the meetings listed in 12.2 was incorrect.

Bob Willard moved and Don Woelz seconded, to approve the August 3-4, 1999 working meeting minutes as amended.

The motion passed without objection.

4.0 Review old action items

The action items from the August 3-4, 1999 meeting were reviewed.

1. John Gibbon to consider development and documentation of HIPPI-6400 MIBs. (**Overcome by events. Roger Ronald will put PMR MIB people in touch with Essential and Genroco**).
2. Jean-Michel Pittet to provide the IETF RFC number for "ARP and IP broadcast over HIPPI-800 (GSN)" to Don Tolmie and Roger Ronald. (**carryover**)
3. Greg Chesson to draft an IEEE tutorial on HIPPI-6400 ULA usage and the ULAs special to HIPPI-6400. (**carryover**)
4. Greg Chesson to collect information for an "ST FAQ" html document. (**carryover**)
5. Greg Chesson to draft a top-level structure for the ST-API document. (**carryover**)
6. Don Tolmie to make the edits to the Scheduled Transfer document (rev 3.3) agreed to at the August, 1999 meeting. (**done**)
7. Eric Salo to update the level 0 ST API text with the changes agreed to at the May 1999 meeting. (**carryover**)
8. Eric Salo to update the level 0 ST API text with the changes agreed to at the July 1999 meeting. (**carryover**)
9. Eric Salo to specify field sizes in the ST API in accordance with the approach selected at the May, 1999 meeting. (**carryover**)
10. Ed Cady or John Ellis to continue to provide the committee with information on progress towards a PCI version of the FCI-Berg Micro-pax connector. (**done, but the group still wants continuing data, so it will still be carried over**)
11. John Ellis to provide the preferred listing of the FCI company name along with cable/connector drawings to Don Tolmie for inclusion in the HIPPI-6400-PH amendment. (**done**)

12. Bob Newhall to provide information on the changes needed in HIPPI-6400-PH to allow passing EMI testing requirements. **(done)**
13. Nicolas Droux to update the HIPPI-800 bridging document with the changes agreed to at the July, 1999 meeting. **(done)**
14. Roger Ronald to contact Bob Snively for "lessons learned" about Fiber Channel profile documents. **(done** - allow no options was the primary lesson learned)
15. Roger Ronald to prepare a SD-3 for a bulk transfer ST profile document. **(done)**
16. Roger Ronald to start work on a bulk transfer ST profile document. **(done)**
17. The Chair (Roger Ronald) to produce the minutes for the August, 1999 meeting. **(done)**

5.0 HIPPI-6400-PH (ref: Rev 2.4)

5.1 EMI and Cable problems

Bob Newhall (via Jim Pinkerton) had previously reported that SGI has succeeded in passing formal EMI tests.

This impediment to moving the HIPPI-6400-PH document forward will now be removed as soon as we can complete documentation of changes that are needed to match the standard with the completed test configuration.

5.2 PCI/Cables/Connectors

At the August, 1999 meeting John Ellis accepted an action item to provide Don Tolmie with the name his company prefers to have in the standard and drawings/information on the cable and connector. This exchange was completed before and during the meeting.

5.3 NuMAC Proposal

Roger Ronald presented some ideas about creation of a new physical layer at the July meeting. The charts presented during the meeting were posted to the web page.

At this meeting, representatives from Genum talked about their capability to build components that might be suitable for a follow-on to HIPPI-6400. The Genum technology used coaxial cables to achieve high data rates where distance was a factor of the coax cable size.

The group expressed interest in the Genum technology. However, the presentation was not a specific proposal.

Bharat Tailor of Genum accepted an action item to provide their slides for posting on the web site. It appears that the next step is working through the possibilities to see if a specific proposal makes sense.

Ed Cady of FCI also made a presentation about a new connector type that was being pitched as a System I/O solution. This part looked interesting. Ed agreed to provide his charts for posting on the reflector.

5.4 Draft Amendment Processing Plans

Since the cable issue is now largely resolved, we are closer to moving forward on processing the draft amendment.

The current goal is to get everything documented so that we can forward the amendment at the December meeting.

A call to ask for any further input on the project proposal calling for an amendment to change HIPPI-6400-PH was made. No new changes were proposed.

6.0 HIPPI-6400-SC (ref: Rev 2.5)

6.1 Processing status

HIPPI-6400-SC Rev 2.5 has been approved as an ANSI standard

The ANSI editor has contacted Roger Ronald (the document technical editor) and the document editing is complete. However, due to a change in NCITS/ANSI policy, the editing is supposed to occur prior to balloting. Since this did not happen NCITS is insisting that the final version should incur another expedited round of balloting.

The management of T11 determined that a T11.1 ballot was not required and moved directly to a T11 letter ballot which occurred during the period between the August and October meetings. The ballot closed on 9/19/99 and passed with a vote of 71 yes, 0 no, and 4 not voting.

7.0 Scheduled Transfer (ref. Rev 3.4)

7.1 Review general document changes

Changes were reviewed and generally accepted.

There was a significant discussion about the use of the B_win parameter and the group realized (after some navigation off track) that the descriptive material needed to be much more clear for easy understanding. Don Tolmie collected and worked out some much improved text that he will incorporate into the next document version.

7.2 Other Changes

Tom Gilbert sent several e-mails to the reflector over the last month. Several of his comments were right on target and were included in the changes that will be in revision 3.5 of the document.

In particular, Tom disliked mandating non-silent STUs at the end of each Block, feeling that this was exactly the behavior that a profile should address. His opinion prevailed.

7.3 Processing plans

With Don in attendance and making changes during the meeting, much progress was made.

However, there was universal agreement that a few too many changes were made and that no one would be comfortable forwarding without a period of time to digest everything that had been modified.

8.0 HIPPI-LE (reference Rev 3.7)

8.1 Processing Status

The main gating item before forwarding HIPPI-LE is inclusion of the RFC number for the "ARP and IP Broadcast over HIPPI-800" RFC in clauses 4, 6.1.1 twice, and Annex B. According to Jean-Michel Pitet, the IETF RFC number should have been provided by this meeting, but it was not. Therefore, there was no progress made.

8.2 Other Proposed Changes

A call was made for anyone with requirements to change HIPPI-LE to come forward. No change proposals were made.

9.0 SCSI on ST Mapping (ref: Rev 1.3)

9.1 Project Proposal

Roger Ronald had noted during the June meeting that there would be a vote in the plenary session to forward the Project Proposal to T11 for further processing. This vote failed in the plenary due to lack of sufficient members voting.

Roger again presented the Project Proposal for SCSI on ST (SST) in August. Jeff Young moved and Bob Willard seconded a motion to forward the proposal to T11 for further processing.

The motion passed with a vote of 8 For, 0 Opposed, 4 Not Present.

This project proposal for SCSI on ST was presented to T11 and failed to meet the 2/3rds rule. There were several members voting against the proposal (4) and abstaining (6).

There were two reasons for the lack of sufficient votes (we failed to meet the 2/3rd's rule by 4 votes). First, the proposal was not in the new SD-3 format. Second, there were several members who felt that this should be a T10 project. The suggestion was made that this proposal should be updated to the new format and submitted to T10.

Don Woelz coordinated this work and presented the proposal to T10 which accepted it during their September meeting in Huntington beach. This group will continue to work on this project, but it will now be work for T10 rather than T11.

9.2 Document Review (ref: revision 1.3)

The latest version of SCSI on ST from Don Woelz was reviewed.

This review went very well and although a number of changes were made, they were mostly of the wordsmithing variety. About three hours was spent on this document and the general consensus is that it is in good condition to be completed fairly quickly.

Don also noted that the T10 group had recommended incorporation of some new versions of SCSI standards. There was some concern that larger formats called for in these specifications might not fit into the transport mechanisms that SCSI on ST currently defined. Don planned to meet with Steph Bailey to resolve these concerns.

10.0 SGI Low Level API Proposal.

10.1 Document Review

There was no new version of the document to review. Consequently, no progress was made towards any document completion.

Eric Salo was present and did speak about an alternative, minimized API that only supported a *create*, a *read*, and a *write* call. There was some agreement that this would be useful, but that the existing API with its more extensive list of calls was the right level for most applications to use.

Ian Philp agreed to document a minimum list of what can be supported via direct TX/RX calls.

10.2 Document Editing Plans

It's not clear if anyone is willing to do what is needed to make the Level 0 ST API into a standard. No work was done in this area.

Both Jim Pinkerton and Greg Chesson have a boilerplate document in Framemaker format.

Greg Chesson accepted an action item to update the current ST API material, but not necessarily in an ANSI type format.

11.0 ST Reliable Transfer Profile

11.1 Project Proposal

A Project Proposal (SD-3) had been prepared for this meeting by Roger Ronald. This proposal was reviewed during the meeting.

Except for a line alignment error in a couple of spots, the only change made was a correction to the title.

Roger noted that there would be a vote to forward this proposal to T11 for further processing during the plenary session. He further noted that the forwarding to T11 would take place in December since the project proposal had not been posted to the T11 web site and could not meet the two-week rule. Although it was possible that no one would invoke the rule, it was agreed that there was no reason to rush since the project would take several sessions to complete. Roger took an action item to post the proposal with the agreed edits to the T11 and the hippo web sites.

11.2 Document Review (ref: revision 0.1)

Roger Ronald presented a ST Reliable Transport Profile designed to limit implementations into working with a limited and well defined set of operations and parameter values.

Roger noted that the document was very preliminary.

Numerous changes were made to the document format and wording. The meat of the document, the table containing the parameters was reviewed and many suggestions were made for adding other items.

Roger accepted an action item to incorporate the changes agreed to at this October, 1999 meeting.

12.0 Other HIPPI items

12.1 Bridging to HIPPI-800

A new version of the bridging document was provided at this meeting. However, Nicolas Droux was not in attendance at this meeting, so there was no progress on this subject.

12.2 ARP and IP Broadcast over HIPPI-800

Jean-Michel forwarded this document to the IETF in December and again in February. We are waiting to get an RFC number for this RFC, so that it can be added to the HIPPI-LE document as a reference. Although an RFC number was expected by this time, it has not been received. Nothing further at this meeting.

12.3 IP and ARP over HIPPI-6400 (GSN)

An electronic copy of this document is still needed for posting on the web site.

During the April, 1999 meeting, Jean-Michel was present to defend his current HARP approach and successfully defended keeping the documents unchanged; at least until they moved forward in the IETF process. He noted that the offending "extra" packet formats disliked by some (requiring HIPPI-6400 hosts to know HIPPI-800 formats) could easily be removed per IETF rules at a later date, but that adding the format back would be difficult if it were really needed.

Nothing further at this meeting.

12.4 MIBS

Since John Gibbon had been holding a MIB action item and has now left Essential/ODS, there was a brief discussion on MIBs. In the HIPPI-800 area, it seemed that only Essential/ODS was making products where MIBs would be provided and that a standard was not really needed.

With HIPPI-6400, there was general agreement that no one felt any reason to go forward with an endpoint MIB. There was some interest in a HIPPI-6400 switch MIB from PMR, Genroco, and Essential/ODS. Roger Ronald accepted an action to put PMR developers in touch with Essential/ODS and Genroco to see if any coordination could happen.

The chair will remove all other MIB topics from further agendas, leaving only HIPPI-6400-PH as there are no champions for any of the other areas.

12.5 Tutorial for HIPPI-6400 ULA use

Greg Chesson has obtained the format material from Bob Snively of Sun. Drafting of the actual text is pending. Greg verified that this item is not holding up forwarding ST.

13.0 Future meeting schedule

13.1 Plenary week, December 6-10, Reno, NV

The December Plenary week location is in Reno, Nevada. The hotel information is available on the www.hippi.org web site. The tentative schedule is as follows. Note that the optical session is still on Tuesday morning.

Tuesday 12/5	9 AM - 11 AM	HIPPI-6400-OPT
Tuesday 12/5	12:30 PM - 9 PM	HIPPI ad hoc
Wednesday 12/6	9 AM - 6 PM	HIPPI ad hoc
Wednesday 12/6	6 PM - 9 PM	T11.1 Plenary

We expect to continue following this basic schedule (meeting on Tuesdays and Wednesdays) for future plenary meeting weeks.

13.2 Future meeting dates and locations

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

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	Seattle, WA	?
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

14.0 Review action items

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

1. Roger Ronald to have the PMR HIPPI-6400 MIB developer contact Essential/ODS and Genroco to see if coordination of MIB work is feasible.
2. Jean-Michel Pittet to provide the IETF RFC number for "ARP and IP broadcast over HIPPI-800 (GSN)" to Don Tolmie and Roger Ronald.
3. Greg Chesson to draft an IEEE tutorial on HIPPI-6400 ULA usage and the ULAs special to HIPPI-6400.
4. Greg Chesson to collect information for an "ST FAQ" html document.
5. Greg Chesson to draft a top-level structure for the ST-API document.
6. Greg Chesson to update the current SGI low level ST API document with agreed changes and provide it to Roger Ronald for posting on the web site.
7. Ian Philp to write down a minimum list of what can be supported via the direct TX/RX calls in the low level ST API.
8. Don Tolmie to make the edits to the Scheduled Transfer document (rev 3.4) agreed to at the October, 1999 meeting.
9. Eric Salo to update the level 0 ST API text with the changes agreed to at the May 1999 meeting.

10. Eric Salo to update the level 0 ST API text with the changes agreed to at the July 1999 meeting.
11. Eric Salo to specify field sizes in the ST API in accordance with the approach selected at the May, 1999 meeting.
12. Ed Cady or John Ellis to continue to provide the committee with information on progress towards a PCI version of the FCI-Berg Micro-pax connector.
13. Bharat Tailor to provide copies of his Gennum capabilities presentation for posting on the web site.
14. Ed Cady to provide copies of his connector presentation for posting on the web site.
15. Roger Ronald to post the final version of the SCSI on ST project proposal on the hippi web site.
16. Roger Ronald to post the project proposal for the Reliable Transfer Profile for ST with agreed edits to the T11 and to the hippi web sites.
17. Roger Ronald to update version 0.1 of the Reliable Transfer Profile for ST document.
18. The Chair (Roger Ronald) to produce the minutes for the August, 1999 meeting.

15.0 Adjournment

Don Tolmie moved and Jeff Young seconded a motion to adjourn the meeting at 4:50 on the 6th of October. There were no objections.

Attendance

Name	Status	Company	Phone	E_mail
Bill Lynn	P	Adaptec	303-684-4706	bill_lynn@corp.adaptec.com
David Hyer	A	Compaq Computer Corp.	508-467-4550	david.hyer@compaq.com
Bob Willard	P	Compaq Computer Corp.	508-467-5875	bob.willard@compaq.com
Tom Gilbert	O	Compass Software, Inc.	407-259-6997	tgilbert@digital.net
Brad Allen	O	Essential / ODS	505-344-0408	ballen@esscom.com
Michael McGowen	O	Essential / ODS	505-344-0080	mikemc@esscom.com
Eric Fankhauser	O	Gennum Corp	905-632-2996	eric_f@gennum.com
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Donald Woelz	P	Genroco, Inc.	414-644-2505	don@genroco.com
Tan Truong	P	IBM	512-838-7813	truongtm@us.ibm.com
Ian Philp	P	Los Alamos National Lab	505-667-4305	philp@lanl.gov
John Lohmeyer	O	LSI Logic	719-533-7560	lohmeier@t10.org
Edward Gardner	O	Ophidian Designs	719-593-8866	eag@ophidian.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
Greg Chesson	P	SGI	650-933-3496	greg@sgi.com
Bob Newhall	O	SGI	650-933-5424	newhall@enr.sgi.com
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Jeff Young	A	SGI/Cray Research	651-683-5536	jsy@cray.com
Don Tolmie	O	Tolmie Enterprises	505-662-7110	tolmie@concentric.net