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Reply to: john.lohmeyer@symbios.com

To: Membership of STA
From: John Lohmeyer
Subject: Minutes of SCSI Harbor Meeting
January 20, 1998 - Newport Beach, CA

Agenda

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Results of Meeting

1. Opening Remarks and Introductions

Louis Grantham opened the meeting at 1:07pm. He thanked Skip Jones of QLogic for hosting the meeting. As is customary, the people present introduced themselves. An attendance sheet was circulated.

The voting rules for participants in STA Tech meetings are contained in 97s109r0.

2. Approval of Agenda

The agenda was approved as written.

3. Attendance and Membership

The following people attended the meeting:

Name	Organization	Electronic Mail Address
Mr. Thomas W. Martin	Adaptec, Inc.	tmartin@corp.adaptec.com
Mr. Bob Atkinson	AMP Incorporated	rdatkins@amp.com
Mr. Scott Lindstrom	AMP Incorporated	slindstr@amp.com
Mr. Dennis Lang	Circuit Assembly Corp.	dennisl@ca-online.com
Mrs. Terza Ekholm	Digital Equipment Corp.	terza.ekholm@digital.com
Dr. William Ham	Digital Equipment Corp.	bill_ham@ix.netcom.com
Mr. I. Dal Allan	ENDL	dal_allan@mcimail.com
Mr. Mike Fitzpatrick	Fujitsu CPA	mfitzpatrick@fcpa.fujitsu.com
Mr. Dale Anderson	IBM	da@us.ibm.com
Mr. George Penokie	IBM Corp.	gop@us.ibm.com
Mr. Louis Grantham	Linfinit Micro	lgdatcom@ix.netcom.com
Mr. Bob Masterson	Methode Electronics Inc.	rwmast@methode.com
Mr. Jay Neer	Molex Inc.	jneer@molex.com
Mr. Skip Jones	QLogic Corp.	sk_jones@qlc.com
Mr. Richard Uber	Quantum	duber@tdh.qntm.com
Mr. Patrick McGarrah	Quantum Corp.	pmcgarra@tdh.qntm.com
Mr. Benjie Sun	Silicon Graphics	bsun@enr.sgi.com
Mr. Dennis Hahn	Symbios, Inc.	dennis.hahn@symbios.com
Mr. John Lohmeyer	Symbios, Inc.	john.lohmeyer@symbios.com
Mrs. Yang Jiao	TEAC	yjiao@teac.com
Mr. Arlan P. Stone	UNISYS Corporation	arlan.stone@unisys.com
Mr. Paul D. Aloisi	Unitrode Corporation	aloisi@unitrode.com
Mr. Stuart Morrey	Xyratex	smodie@aol.com

23 People Present

4. Approval of Minutes

The minutes of the last meeting (see 97s112r0) were approved as written.

5. Document Distribution

All SCSI Harbor documents are available at the ftp and web sites:

<ftp://ftp/scsita.org/pub/harbor>
<http://www.scsita.org/harbor>

Documents will be put on these sites in PDF format. Additionally, the meeting minutes will be distributed on the Harbor reflector (harbor@scsita.org). To be added to the Harbor Reflector, please send an email to info@scsita.org. In the email, please mention that you wish to be added to the Harbor reflector and include your full contact information (organization, address, phone, fax, and email).

6. Review of Old Action Items

- 1) Louis Grantham will request a patent policy from STA. *Complete.*
- 2) Bill Ham will publish a revised taxonomy proposal. *Complete.*

- 3) Dennis Hahn will ask Symbios management on whether they are willing to contribute the Symbios design as a starting point design. *Partially Complete. Dennis indicated that Symbios management had agreed to contribute the Symbios design pending approval from Hyundai (the parent company of Symbios) to contribute the related IP.*
- 4) Pat McGarrah will map criteria from interface to options in Bill's taxonomy. *Complete.*
- 5) John Lohmeyer will check on co-locating a Feb '98 SCSI Harbor meeting with T13 in Fort Collins. *Complete.*

7. Old Business

7.1 Show & Tell of Existing Solutions

No new designs were presented.

7.2 Selection of Document Editor

The need for a volunteer to edit the document was re-iterated. Anyone wishing to volunteer should please contact Pat McGarrah or Louis Grantham. Pat said that Quantum would take an action item to locate or provide an editor.

Jay Neer said he would be willing to help with editing figures.

8. New Business

8.1 Marketing Trend Data (97s103r0) [McGarrah]

Pat McGarrah re-presented the trend data (97s103r0) that he had originally presented at the October 15th meeting. This document is now available on the ftp/web site.

8.2 Revised Taxonomy proposal [Ham]

Bill Ham presented the SCSI Harbor Taxonomy and Architecture (97s113r0) document. He marked up his proposal with several improvements and agreed to prepare revision 1, which is now on the ftp/web site.

8.3 Criteria mapping from taxonomy [McGarrah]

This agenda item was covered under agenda item 8.5.

8.4 General design principles (97s110r0) [Anderson]

No new input.

8.5 Technical goodies (98s002r0) [McGarrah]

Pat McGarrah presented 98s002r0, which contains a summary of the goals and constraints agreed to in previous meetings. This stimulated discussion about how to specify several parameters.

Maximizing airflow and minimizing EMI leakage are somewhat in conflict. We may need to make the openings smaller to help with eventual migration to usage by higher-frequency devices.

The wrapper with a drive inside should be specified to meet FCC Class A requirements. Class B compliance is more difficult to achieve and must include dock and enclosure considerations.

Bill Ham summarized what he thought the group had agreed to during the discussion:

1. There should be one baseline design that includes EMI and PCB damage control.

2. The device packaged in the wrapper should meet FCC Class A requirements.
3. The baseline for testing and specification is an integrated wrapper and device.
4. One hole will be placed in the wrapper to provide a lockout mechanism in case a future version is not compatible with the current version.

There was some discussion about adding optional bumpers on the wrapper to protect the wrapped device when not docked. The dock needs to accommodate these bumpers by providing clearance.

There was agreement that SCSI Harbor should not permit HVD devices because of the potential harm that HVD drivers can do to SE and LVD. Are there any vendors that find this policy objectionable?

When the retention mechanism is engaged, the wrapped device is considered to be fully 'inserted'.

Which way should the air flow? How should we specify the cooling mechanism? There was general agreement that channeling the airflow is a good idea. We will assume that the airflow direction is from the front to back (i.e., ambient air flowing toward the connector).

Pat discussed the issue of 1.0" devices vs. 1.6" devices. While 1.0" devices can fit in 1.6" wrappers, about 60% of the disk drives sold in the server market are 1.0" devices. He showed a possible solution that would accommodate both 1.0" devices and 1.6" devices. The solution however might cause additional problems with stub length, cooling, and bus capacitance. Conclusion: We will design two wrappers, 1.0" and 1.6". We will investigate using some sort of 'bolt on' extension so that the 1.0" wrapper could be used for both form factors.

8.6 Design performance verification strategy [Ham]

This item will be carried over to the next meeting.

9. Review of Action Items

- 1) Bill Ham will publish a further revised taxonomy proposal.
- 2) Dennis Hahn and John Lohmeyer will push for a quick decision from Hyundai regarding the Symbios wrapper contribution.
- 3) Dennis Hahn will bring the Symbios dock to the March meeting.
- 4) Dale Anderson will bring a wrapper with bumpers to the March meeting.
- 5) Pat McGarrah will bring a disk drive with bumpers to the March meeting.
- 6) Louis Grantham will present the proposed STA patent policy at the March meeting.
- 7) Pat McGarrah will locate or provide a technical editor.

10. Meeting Schedule

The next meeting is planned for:

Thursday, March 19, 1998 in San Diego, CA following T10 meeting (but not before 2:00 p.m.).

11. Adjournment

The meeting adjourned at 5:40 p.m.