Accredited Standards Committee*

X3, Information Processing Systems

Doc. No. X3T10/94-066R0 **Date:** March 15, 1994

Project: Ref. Doc.:

Reply to: S. Finch

To: Membership of X3T10

From: Lamers/Finch

Subject: Minutes of X3T9.2 Disk Drive Working Group March 14, 1994

<u>Agenda</u>

1.	Opening Remarks	2
2.	Attendance and Membership, Introductions	2
3.	Approval of Agenda	2
4.	Document Distribution	3
5.	Old Business	3
	5.1 ATA DMA Issues (Landis)	3
	5.2 Power Management Issues (Landis)	3
	5.3 Electrical Definitions (Masiewicz)	3
	5.4 16 MB/s Issues (Hanan)	3
6.	New Business	3
	6.1 ATA-3 Project Proposals	3
	6.2 Master Slave Hardware Issues	4
7.	Meeting Schedule	4
8.	Adjournment	4

Results of Meeting

1. Opening Remarks

Steve Finch convened the meeting at 2:00 PM. Steve thanked Skip Jones of Qlogic for hosting the meeting.

As is customary, the people attending introduced themselves. A copy of the attendance list was circulated for attendance and corrections.

It was stated that the meeting had been authorized by X3T10 and would be conducted under the X3 rules. Ad hoc meetings take no final actions, but prepare recommendations for approval by the X3T10 task group. The voting rules for the meeting are those of the parent committee, X3T10. These rules are: one vote per company; and any participating company member may vote.

The minutes of this meeting will be posted to the SCSI BBS and the SCSI Reflector and will be included in the next committee mailing.

2. Attendance and Membership, Introductions

Attendance at working group meetings does not count toward minimum attendance requirements for X3T10 membership. Working group meetings are open to any person or company to attend and to express their opinion on the subjects being discussed.

The following people attended the meeting.

Richard Kalish Adaptec rkalish@rahul.net
Lawrence J. Lamers Adaptec ljlamers@adaptec.com
Carlos Orosco AST carlos.orosco@ast.com
John Geldman Cirrus Logic johng@cirrus.com
Joseph Chen Cirrus Logic chen@cirrus.com

Lane Lee Conner lane.lee+adevelopment+acolorado%

conner@mci.well 250-752@mcimail.com

Dal Allan ENDL 250-752@mcim

Robert Liu Fujitsu Computer Products

Jeff Epstein Future Domain jeffe@fdc.mhs.compuserve.com

Nancy Cheng Hitachi Computer Products n.chen@hitachi.com
George Penokie IBM gop@rchvmp3.vnet.ibm.com
Dan Colegrove IBM colegrove@vnet.ibm.com
Dean Wallace Infinity

Ron Roberts Maxtor ron_roberts@maxtor.com

David Isenberg NCR david.isenberg@fcollinsco.ncr.com

Peter Brown Oak Technology brown@oaktech.com
Mike Carpenter Qlogic m_carpenter@qlc.com

John Masiewicz

Hale Landis

Seagate Technology

Hale Landis

Seagate Technology

Stephen Finch

Devon Worrell

Tom Hanan

Seagate Technology

Western Digital

Western Digital

Tom Hanan

Western Digital

Hasiewicz@notes.seagate.com

Indis@notes.seagate.com

S723283@mcimail.com

Western Digital

Western Digital

Western Digital

Western Digital

Tom Hanan

Western Digital

Tom Hanan

3. Approval of Agenda

The agenda was approved as proposed.

4. Document Distribution

Copies of the project proposals for ATA-3 were distributed.

5. Old Business

5.1 16.6 Mb/s [94-045] (Hanan)

Tom Hanan presented the current proposal for 16.6 Mb/sec transfers. There was some debate on the format of the timing. There is an implication that tE and tG have a common point, when they in fact do not. The tE timing can be removed since tG has been applied to reads as well as writes. Steve Finch noted that in the older modes the tG value was not the same for reads and writes. The timing will be split to have a tGr and a tGw.

The IORDY timing has questions. IORDY is driven inactive, normally true. The timing showing the "thinking" transition will be incorporated since this is likely to be the normal case with higher transfer rates.

Steve Finch plans to show the proposal to the X3T10 plenary and request a vote on it at the next meeting.

5.2 ATA DMA Issues [94-063] (Landis)

Hale Landis presented the proposed changes regarding DMA transfers. These proposed changes are incorporated in the latest revision of 94-051.

The consensus of the working group is to incorporate these changes into the ATA-2 working draft.

5.3 Power Management [94-064] (Landis)

Hale Landis presented the latest proposal on the command description format, illustrated with the power management.

5.4 Electrical Definitions [94-051] (Masiewicz)

Steve Finch stated a need for a definition of full amplitude signal. John Geldman accepted the task of coming up with one.

Another debate over the meaning of word 66. The wording was changed to indicate that it does not indicate that flow control will not be used.

5.5 Reset Width [94-053] (Landis)

This will be dealt with at the next working group.

6. New Business

6.1 Project Proposals [94-019,94-020,94-021,94-022] (Finch)

Steve Finch stated that the project proposals had previously been distributed and that the copies being distributed today contained only slight changes to put them in the current style for project proposals. Steve also stated that he expects the project proposals will be discussed and voted on in the X3T10 Plenary meeting later in the week. There was no further discussion.

6.2 Master/Slave Handshaking [94-065] (Landis)

Hale Landis presented a proposal for dealing with master/slave handshaking and when a drive is ready. This constitutes an update to annex A. What is a non-media access command?

Hale showed the three methods used to deal with BSY and DRDY...

7. Meeting Schedule

March 30, 1994 at Adaptec in Milpitas, CA. April 27, 1994, at the Crown Sterling Suites, Milpitas, CA, hosted by Cirrus Logic Mary 19, 1994 at Sheraton Inn in Harrisburg, PA. June 1, 1994 at Adaptec in Milpitas, CA.

8. Adjournment

The meeting adjourned at approximately 5:00 PM.