

To: Membership of X3T9.2

From: Lamers/Finch

Subject: Minutes of X3T9.2 Disk Drive Working Group September 13, 1993

Agenda

1. Opening Remarks
2. Attendance and Membership
3. Approval of Agenda
4. Report on joint SFF Local Bus and X3T9.2 ATA Working Group
5. Review of ATA-2
 - 5.1 Is ATA a Bus standard or a Device standard? (X3T9.2/93-133) [Finch]
 - 5.2 Power Connectors (X3T9.2/93-124) [Finch]
 - 5.3 Bus Connectors (X3T9.2/93-135) [Finch]
 - 5.4 Bus Definitions (X3T9.2/93-136) [Finch]
 - 5.5 Detailed Review (Finch)
6. General Working Group Items
 - 6.1 ATA DMA Issues (X3T9.2/93-119) [Landis]
 - 6.2 Format Track Logical Block (X3T9.2/92-185) [Lamers]
7. Meeting Schedule
8. Adjournment

Results of Meeting

1. Opening Remarks

Steve Finch, the Chair, called the meeting to order at 2:00 p.m., Monday, September 13, 1993. He thanked Bob Dugan of IBM 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 X3T9.2 and would be conducted under the X3 rules. Ad hoc meetings take no final actions, but prepare recommendations for approval by the X3T9.2 task group. The voting rules for the meeting are those of the parent committee, X3T9.2. 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

Attendance at working group meetings does not count toward minimum attendance requirements for X3T9.2 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:

Meeting Attendees

Name	S	Organization	Electronic Mail Address
Mr. Rick Heidick	A	3M Company	
Mr. James Pilney	O	3M Company	
Mr. David Skinner	P	Advanced Micro Devices	dave.skinner@amd.com
Mr. Bob Wheeler	O	Advanced Micro Devices	
Mr. John Geldman	A	Cirrus Logic Inc.	johng@cirrus.com
Mr. Nicos Syrimis	A	Cirrus Logic Inc.	
Mr. Lane Lee	O	Conner Peripherals	
Mr. J. Schaffner	O	Qlogic	
Mr. Yoshihiko Yano	S	Hitachi Computer	
Mr. George Penokie	P	IBM Corp.	gop@rchvmp3.vnet.ibm.com
Mr. Lawrence J. Lamers	P	Maxtor Corp.	larry_lamers@maxtor.com
Mr. Robbie Shergill	P	National Semiconductor	
Mr. John Lohmeyer	P	NCR Corp.	john.lohmeyer@ftcollinsco.ncr.com
Mr. Gene Milligan	A	Seagate Technology	Gene_Milligan@notes.seagate.com
Mr. Stephen G. Finch	P	Silicon Systems, Inc.	5723283@mcimail.com
Mr. Tom Hanan	O	Western Digital	

Status Key: P - Principal
 A - Alternate
 O - Observer
 L - Liaison
 S,V - Visitor

3. Approval of Agenda

The proposed agenda was approved.

4. Report on joint SFF Local Bus and X3T9.2 ATA Working Group

Two sets of minutes of joint meetings were distributed on the reflector. There are no reference documents since the chair of those meetings, Tom Hanan, did not request them. Contact Tom Hanan for copies of those minutes.

5. Review of ATA-2 (X3T9.2/948Dr0) [Finch]

5.1 Is ATA a Bus standard or a Device standard? (X3T9.2/93-133) [Finch]

Steve Finch brought in the question of how to document ATA. He questioned whether it should be viewed as a bus or a device interface.

Dal Allan and Gene Milligan asked specifically what this would change in the ATA extensions document. They would like to see a specific proposal.

Larry Lamers pointed out that X3T9.2 is not chartered to develop bus standards. The charter is for interface standards. The cables used to connect the device interface to the host can be part of the interface standard.

John Geldman stated that termination should be included in the charter along with the cables. There are timing issues associated with the expanded scope.

Steve talked about separating the physical and logical (i.e commands) parts within the document. It was suggested that two separate documents be considered. This suggestion was rejected as being inappropriate at this time.

Steve will develop a proposed document with issues identified and a first attempt at stratification of electrical, physical, protocol, and commands.

5.2 Power Connectors (X3T9.2/93-124) [Finch]

The general consensus was that the power connector information should be retained.

5.3 Bus Connectors (X3T9.2/93-135) [Finch]

Steve Finch pointed out that there are connectors defined in ATA that do not have cable definitions. Steve wants to integrate the appendix information into the body of the document. The group felt this was acceptable.

5.4 Bus Definitions (X3T9.2/93-136) [Finch]

How should compatibility between old and new ATA be handled? Some type of class or type needs to be developed to describe this.

Should the word "drive" be changed to "device" or "peripheral"? Some sentiment for using the word peripheral?

5.5 Detailed Review (X3T9.2/948Dr0) [Finch]

Document review -

- 1) add noun for signal, command, to be specific about what is being described.
- 2) Gene Milligan objected to DOWNLOAD MICROCODE having the complexity of multiple versions support. Jim McGrath stated that he would be willing to remove this, but felt it was a needed feature and would want to have an SFF specification to cover this feature if it is not in ATA extensions. The use of the cylinder register for versions will be eliminated and the cylinder register shall be set to zero. The values retained for the set features register is download and execute, and download, save, make default this microcode. The value of zero will generate an error.
- 3) The power modes were discussed with reference to solid state devices. It was reported that some of these devices use a configuration register in PCMCIA to control power modes rather than an ATA command. A value of 253 is a value of 8 to 12 hours.
- 4) Gene Milligan has an issue with 'non-TTL' in 5.2.4 regarding DASP. This needs to be addressed as part of the electrical specification. The negation of DASP by drive 1 was questioned. This needs further investigation. The value of tS in Figure 9 should be 30.55 not 31.

Steve Finch agreed to incorporate the above changes, except item 4, which did not have a resolution at this time into X3T9.2/948Dr1. In addition, he will develop a revision which will include an attempt at stratification by electrical, physical, protocol and commands.

6. General Working Group Items

6.1 ATA DMA Issues (X3T9.2/93-119) [Landis]

Hal Landis was not present.

6.2 Format Track Logical Block (X3T9.2/92-185) [Lamers]

Larry Lamers again delayed discussion of this topic. He indicated that the information to address the issues raised had been gathered, but not yet synthesized into a document.

7. Meeting Schedule

The next working group meeting will be November 8, 1993 at the Red Lion Hotel (719-576-8900) in Colorado Springs, CO hosted by NCR Corporation - Microelectronics Products Division. The room rates are \$74.00 plus tax. The reservation deadline for these rates is October 8, 1993. The group name is X3T9. The host contact is John Lohmeyer at TEL: 719-573-3362, FAX: 719-597-8225, (john.lohmeyer@ftcollinsco.ncr.com).

Future planned meeting dates are:

- October 27, 1993 - Milpitas, CA
- November 8, 1993 - Colo Spgs, CO
- January 10, 1994 - San Diego, CA
- January 26, 1994 - Milpitas, CA

8. Adjournment

The meeting was adjourned at 6:00 p.m. on Monday September 13, 1993.