

Accredited Standards Committee*
X3, Information Processing Systems

Doc. No. X3T10/94-
141R0
Date: July 1, 1994
Project:
Ref. Doc.:
Reply to: S. Finch

To: Membership of X3T10

From: Lamers/Finch

Subject: Minutes of X3T10 ATA Working Group June 29, 1994

Agenda

1. Opening Remarks	2
2. Attendance and Membership, Introductions	2
3. Approval of Agenda	2
4. Document Distribution	2
5. Old Business ³	
5.1 ATA-2 Scope:	3
5.2 Project Proposals Comment Resolution [94-019,94-020,94-021,94-022] (Finch)	3
5.3 ATA-2 Editing	4
6. New Business	5
7. Action Items ⁵	
8. Meeting Schedule	5
9. Adjournment ⁵	

*Operating under the procedures of The American National Standards Institute.

X3 Secretariat, Computer and Business Equipment Manufacturers Association (CBEMA)

1250 Eye Street NW, Suite 200, Washington, DC 20005-3922

Telephone: 202-737-8888 (Press 1 twice) FAX: 202-638-4922 or 202-628-2829

Results of Meeting

1. Opening Remarks

Steve Finch convened the meeting at 9:00 am. Steve thanked Tom Hanan of Western Digital 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 X3T10 BBS and the ATA Reflector and will be included in the next X3T10 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.

Name	Company	Email Address
Richard Kalish	Adaptec	rkalish@aol.comt
Lawrence J. Lamers	Adaptec	ljlammers@aol.com
Carlos Orosco	AST	carlos.orosco@ast.com
Joseph Chen	Cirrus Logic	chen@cirrus.com
Steve Anderson	Conner Peripherals	steve.anderson@conner.com
Dan Colegrove	IBM	colegrove@vnet.ibm.com
Tony Goodfellow	GSI	
Ray Heineman	Maxtor	ray_heineman@maxtor.com
Robbie Shergill	National Semiconductor	rs@berlioz.nsi.com
Mike Carpenter	Qlogic	M.carpenter@qlc.com
Hank Davenport	Samsung	
John Masiewicz	Seagate Technology	masiewicz@notes.seagate.com
Hale Landis	Seagate Technology	landis@notes.seagate.com
Gene Milligan	Seagate Technology	Gene_Milligan@notes.seagate.com
Stephen Finch	Silicon Systems	5723283@mcimail.com
Tom Hanan	Western Digital	t_hanan@dt.wdc.com

3. Approval of Agenda

The agenda was approved as proposed.

4. Document Distribution

Minutes of previous meeting
 New Table for Drivers and Termination (Hanan)
 ATA-2 Rev 2d with and without change-bars

5. Old Business

5.1 ATA-2 Scope:

John M says last meeting went beyond the agreed upon scope for ata-2 with many of the changes. Particularly capacitance and spindle-sync. Tom also got some feedback from his people back home.

Steve agreed in that the last mtg was advertised as an editorial review.

Termination should be left for ATA-3, mas said. maxtor said why not define it cause mode 4 seems to need it. john said because we discussed it before and agreed that you can do mode 4 without it. tom agreed. tom asked that it be added to the agenda for the july mtg. this was done, but as an ata-3 item.

5.2 Project Proposals Comment Resolution [94-019,94-020,94-021,94-022] (Finch)

hale restated what he said at the last meeting. this is his personal opinion. ata3 should be the next extension of ata - should not include atapi. host adapter rqmts are different for ata2 than atapi.

tom took floor - having talked to a lot of people, he too has heard that the two are very different. but they do co-exist on the same cable so it'd be nice for them to agree. so tom wants two different documents but a lot of coop. wants people to work under dadl for anything else.

joe didnt like hale's position. atapi has to share the cable so we need close communications and cooperation tween the two developments. at the logical level the ata side doesn't ned to care what atapi does.

longfellow agreed.

steve f, not as chair, wants to maintain low-level conformance tween atapi and ata3.

hale said that a cdrom on the same cable may cause problems for the high-perf disk drive.

larry - hearing si, drive and system views. as a si guy he understands the desire for commin silicon. also understands the system guy's need for s/w commonality. but the drive guy is under svere cost pressure and this doent work with the other two guys' desire for a universal interface. they rather have an interface optimized for the disk drive and another for all other device types. doesn't think other devices will co-exist with the drive on the same cable.

kalish - why cant atapi refer to the ata3 doc at the phy level. coord the two so they stay consistant.

larry - why do they have to agree? drive's needs may be divergent.

colegrove - people are going to demand being able to hang cdroms and tapes on the same cable. one plug should be able to support both.

goodfellow:

chen: speed mismach exists even between ata and ata2 disk drives. some hbas detect drv bit and use different timing for each.

hale: cant do mode 3 timing on a cable with an old device.

finch - yes, but cdroms can become mode 3.

hale - doesn't have a problem with two different docs proposed today by tom, except that ata-3 will probably pick up an optional cable/conn that will be different for higher perf and cdroms will not want to share this connection.

carlos - atapi must exist on the ide cable else it'll die.

steve and the group worked out a proposed scope for the plenary. basically used tom's proposal but made the ata scope more general and added that ata3 will reserve cmd codes for atapi.

two issues outstanding at this point (when time ran out): how to handle redefinition of some register bits when the two projects want to use them differently with their different protocols. and where will the ATAPI cmds will go.

5.3 ATA-2 Editing

3.1.4 Data Block: changed to use the term "sector"

Added the definition for "sector"

Editor will change the term ECC throughout to reflect the fact that this is really vendor unique.

3.2.5 Byte Ordering: This section will be kept after corrections as worked out in this group.

4.1 say "other" device instead of "second" drive.

4.5 made the cable length spec a maximum spec.

4.6 The group decided to remove note 1 from Table 3 because its addition during last meeting was deemed to be more than editorial.

moved Cin and Cout specs to the AC Table.

changed the editor's note to a proper note.

5.2.4 DASP-: the paragraph added at the last meeting was struck because it was deemed to be more than editorial. It will be reconsidered at the next month's meeting as a technical item.

5.2.10 INTRQ: Chen wanted the ATA note put back in. This was taken out a long time ago. Putting it back in now was considered to be a technical change. Chen was asked to explain the meaning of that note and the group will consider adding it.

5.2.15.1 SPSYNC: Left the change intact. Hale will explain.

10.4.1 PIO Data Transfers: In first para, change "...compatible with ATA" to "... compatible with Modes 0, 1, or 2".

Figure 5 - remove note 3 from t5, note 4 change t5 and t7 to t7 and t8

10.4.3 tE needs to be added to timing diagram (tD-tGR). tFmax note 1 should be note 2

Annex F - swap interface number of 2 and 3.

6.1.1 par 5 & 6 - revised wording to clarify LBA and CHS sector addressing. Title changed to Addressing Modes.

6.2.6 - Add phrase 'bits 7-4 are not defined by this standard and are recommended to be written as zero. A future standard may reserve these bits'.

6.2.9 Hale Landis suggested that the removable media bits 5 & 3 be removed. He also suggested that the commands in section 8 be made vendor specific.

6.2.13 Joe Chen suggested changing the CORR bit to vendor specific.

7.1 Change to 'BSY shall be set within 400 nsec of the the negation of...' Hale to proposa revised wording. He requested that 2 minutes be checked as the maximum time to drive ready.

7.2 This section is poorly defined. Hale requested a better definition.

7.3.2 Ray Heineman stated that there is a problem with Check Power Mode which actually only checks standby mode. Added power states should be included other than standby.

Hale's re-written power management descriptions have not been incorporated.

7.3.6 delete 'idle timer expiration' in path 1 description.

7.4 changed to 7.3.7

7.5 Hale is back to his old ways - he wants to eliminate table 8 and have the error information reflected in the command descriptions.

8. Hale wants to add a column to define what type of protocol is used for the command: PIO read or write or DMA read or write or non-data.

6. New Business

None.

7. Action Items

Larry Lamers to revise project proposals for ATA-3.
Hale Landis to post document comments to reflector.
Ray Heineman to make proposal for power management reporting.
Steve Finch to incorporate changes into ATA-2.

8. Meeting Schedule

July 21, 1994 at Sheraton in Manchester, NH.
August 31 - September 1, 1994 in Silicon Valley, CA
July 21 Manchester, NH
Sept 15 Houston, TX, (Plenary)
Sept 28 OKC, Seagate
Oct 19 Longmont, Maxtor
Nov 30 Irvine, WD

9. Adjournment

The meeting adjourned at approximately 4:30 PM.