

Doc. No.: D98103R1
Date: 2/19/98
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Reply to: Gene Milligan

To: Membership of T13
From: Gene Milligan, Chair T13
Subject: Minutes of the T13 Plenary #9Revision 0
February 17-20, 1998 at the Marriott Hotel in Ft. Collins, CO, hosted by Symbios.

Start 0900

Agenda

1. Opening Remarks
2. Approval of Agenda
3. Attendance and Membership
 - 3.1 Members in Jeopardy
4. Document Distribution
5. Approval of prior plenary minutes (D97157R0)
6. Review of Old Action Items
7. NCITS 298-199x ATA-3 - Project 2008D Status
8. NCITS 317-199x ATA/ATAPI-4 - Project 1153D - Resolution of Public Review Comments (If Any)
9. NCITS/TR-21:199x -Enhanced BIOS Services For Disk Drives Technical Report Project D1228 -Status
10. NCITS 316-199x -1394 to AT Attachment - Tailgate- Project 1248D - Resolution of Public Review Comments (If Any)
11. Old Business
 - 11.1 Power-up in Standby [McLean] (D97150r1)
 - 11.2 T13 Reflector, ftp, and Web Site Setup [Hanan]
 - 11.3 Items from the Open Issues List [] ()
12. New Business
 - 12.1 Future Projects
 - 12.2 ATA/ATAPI State Diagams Introduction and Review [McLean] (D98xxxr0)
 - 12.3 Multimode [Evans]
13. Liaison Reports
 - 13.1 T10
 - 13.2 IEEE 1394 / IEC 61883

- 13.3 SFF
- 14. Call for Patents
- 15. Open Issues List Summary
- 16. Review of Action Items
- 17. Meeting Schedule
 - 17.1 Authorization of Working Group Meetings
 - 17.2 Long term meeting schedule
- 18. Adjournment

Results of Meeting

1. Opening Remarks

Gene Milligan, the T13 Chairman, called the plenary meeting to order at 9:00 a.m., Tuesday, February 17, 1998. He thanked Mike Winchell of Symbios for hosting the meeting. The T13 Secretary Larry Lamers was unable to attend this meeting due to a broken leg. The Chair requested that Paul Raikunen take the minutes for this meeting and thanked him for agreeing to the request.

The Chair briefly reviewed the meeting rules since all attendees were from Principal Member organizations. Discussion is open to all attendees. Principal Membership requires attendance at two out of three successive meetings. Votes are only allowed to Principal Membership organizations. Membership also requires payment of NCITS administration fees.

Current NCITS memberships fees for Observer, Principle, or additional Alternate are \$300 (the first alternate is free). A T13 subscription is available to Principal, Alternate, or Observer Members at a fee of \$350 with \$240 for each additional CD. On an experimental basis this year, a Corporate membership of \$2500 is being offered which allows one Principal and an unlimited number of Alternates and Observers, with two CD subscriptions, and also includes the International participation fee. However since T13 is not currently participating in International Standards work, there is no International participation fee and the Corporate membership is harder to justify than with T10 and T11.

Katrina Gray has left the NCITS secretariat. Persons with questions or requests regarding membership fees and/or subscriptions should contact Monica Vago at 202-626-5739, or fax her at 202-638-4922, or by Email at mvago@itic.nw.dc.us.

2. Approval of Agenda

Several new business items were added as reflected in these minutes and the modified agenda was approved without objection.

3. Attendance and Membership

3.1 Members in Jeopardy

Members in Jeopardy for failure to attend two out of three successive meetings were Cirrus, HP, O.R. Technology, Oak Technology, and Sanyo Electric. Cirrus, Oak Technology, and Sanyo Electric were terminated (changed from Principal Members to Observer Members) bringing the Principal Members from 28 to 25.

3.2 Attendance

Ron	Roberts	Apple Computer	A
Raymond	Liang	CMD Technology	A
Hale	Landis	Consultant	P
Paul	Raikunen	Digital	P
Jon	Firooz	Hewlett-Packard Co.	G
Linden	McClure	Hewlett-Packard Co.	G

Dan	Colegrove	IBM Corp.	P
Pete	McLean	Maxtor Corp.	P
Christopher	Mayne	O.R. Technology	A
Mike	Christensen	Phoenix Technologies	A
Greg	Elkins	QLogic Corp.	P
Mark	Evans	Quantum Corp.	P
Gene	Milligan	Seagate Technology	P
Marc	Noblitt	Seagate Technology	A
Mike	Winchell	Symbios Logic	P
Tom	Hanan	Western Digital Corp.	P

4. Document Distribution

The following documents were distributed:

D97150R0 Proposal for Power up in Standby	McLean
D98100R0 T13 Document Register	McLean
D98101R0 State diagram proposal	McLean
D98102R0 Proposal to Modify "Multiple" Commands	Evans
D98TBDR0 Proposal for a Master Password Revision Code	Colegrove

5. Approval of October 97 plenary minutes (D97157R0)

The minutes were approved without objection.

6. Review of Old Action Items

- 62) Tom Hanan to correct reflector, ftp and web sites issues. Some completed and some carryover.
- 63) Peter McLean to generate rev 17 of ATA/ATAPI-4. Completed.
- 64) John Hanmann to generate rev 5 of Tailgate. Completed.
- 65) Gene Milligan to forward ATA/ATAPI-4 to NCITS for public review. Completed.
- 66) Gene Milligan to forward Tailgate to NCITS for public review. Completed.
- 67) Gene Milligan to forward EDD to NCITS for public review. Completed but does not require public review.
- 68) Gene Milligan to advise NCITS that T13 wants a corporate membership option, and that they paper mailing option is no longer needed. Completed.

7. NCITS 298-1997 ATA-3 - Project 2008D Status

The standard was approved by BSR in 9/97. The ANSI editor is Janice Sewall.

8. NCITS 317-199x ATA/ATAPI-4 - Project 1153D - Resolution of Public Review Comments (If Any)

Public review to closed February 17, 1998. There have been no public review comments.

9. NCITS/TR-21:199x -Enhanced BIOS Services For Disk Drives Technical Report Project D1226 -Status

Management review failed to happen at the last OMC meeting, this has been rescheduled for the March OMC meeting. Upon successful completion of the management review TR-21 will be published as an NCITS technical report available for purchase from global engineering documents.

10. NCITS 316-199x -1394 to AT Attachment - Tailgate- Project 1248D - Resolution of Public Review Comments (If Any)

Public review to closed February 17, 1998. There have been no public review comments.

11. Old Business

11.1 Power-up in Standby [McLean] (D97150r1)

Pete McLean observed that although his company is not anxious to add jumpers, they believe this is best handled by a jumper. Tom Hanan noted that a few bits of non volatile storage can be very economically included in the drive's silicon providing the requirement is established with sufficient lead time. Dan Colegrove cautioned that non-reversible storage would be unacceptable for drive refurbishment and Pete cautioned that it would not be testable. It was agreed to defer further discussion of the proposal until the EPA Energy Star needs are clarified.

11.2 T13 Reflector, ftp, and Web Site Setup [Hanan]

Tom Hanan will close the old reflector X3T13@dt.wdc.com. In doing so, he will send out a discontinue notice with the information on how to subscribe to t13@dt.wdc.com. Tom will also close out the ATAPI reflector with a notice to use the T13 reflector for ATAPI transport protocol items, T10 for ATAPI command set items (MMC), and the SFF reflector for SFF document items. Tom will also add a monthly reminder on how to unsubscribe and how to sign up to the T13 reflector. The notice will offer an automatic unsubscribe by responding to the notice.

Pete McLean has provided a new T13 web page through ftp:\\fission.dt.wdc.com/x3t13/t13.html. The web site access via www.t13.org is not activated yet. Pete requested members review the web page and give feedback to him. Tom requested that Pete investigate the possibility of having the CD mailing include the equivalent of the T13 web page with associated links. Pete said he will check out the feasibility of doing this with the tools he has.

11.2 Items from the Open Issues List [] ()

There are none.

12. New Business

12.1 Future Projects ATA/ATAPI-5 Proposal

Discussion of the contemplated project led to the following:

Goals and candidates:

- Low Cost Version
- Higher Transfer Rate
- Evolutionary to ATA/ATAPI-4
- Direct connection (no cable)
- Include all needed specifications
 - Cable, mechanical, and connectors
 - Power
 - Electrical
- Bus Vs device clarification
- Interrupt pending Vs INTRQ
- 25 micron support
- Dual power issues
- Resolve ATAPI protocol issues

Scope: Free standing standard

Editor: Dan Colegrove and Pete McLean indicated they would seek management approval to serve as technical editor.

At the suggestion of Tom Hanan the chair conducted the following straw pole concerning priority and schedule:

Goals and candidates:	High	Low	Never	12Mo	18Mo	later	Expected Proposers
Low Cost Version	6	3	0	0	11	1	
Higher Transfer Rate	13	0	0	2	10	0	Noblitt/Evans
Evolutionary to ATA/ATAPI-4	13	0	0	N/A	N/A	N/A	N/A
Direct connection (no cable)	2	5	0	0	1	7	Hanan
Include all needed specifications							
Cable, mechanical, and connectors	11	1	0	4	7	0	Colegrove/McLean
Power	4	4	1	1	5	1	Hanan
Electrical Interoperability	10	0	0	0	11	0	Evans/Hanan
Bus Vs device clarification	9	3	0	0	9	1	McLean
Interrupt pending Vs INTRQ	5	6	1	0	6	1	McLean
<40 micron support	8	1	1	1	9	0	Colegrove/Hanan/Evans
Dual power issues	9	0	1	0	10	1	Hanan
Resolve ATAPI protocol issues	9	1	0	1	8	0	

Schedule:

Dan Colegrove and Tom Hanan presented two alternative schedules and the rational behind them. Gene Milligan suggested an alternative to the Colegrove schedule with an earlier stabilized draft.

Schedule Item : Date	Colegrove	Hanan	Milligan
Project proposal	4/98		4/98
Initial draft	4/98	4/98	4/98
Proposal cut off	10/98	6/98	10/98
Stabilized drafts	4/99	10/98	2/99
Letter Ballot	5/99	1/99	5/99
Forward	6/99	2/99	6/99

Pete McLean moved and Mike Christensen seconded a motion to adopt Colegrove's schedule. Tom Hanan requested a definition of the proposal cutoff since he postulated that the key schedule item was the point at which vendors could safely use as the appropriate time to dedicate testing resources to verify credibility of the new definitions. Tom suggested that the proposal cutoff date should be the last date for voting to include the proposal in the draft. The consensus was that the cutoff date was the last date to present a completed technical definition for a proposed item. Ron Roberts requested conformation from proposal volunteers on the validity of the 10/98 cut off date and indicated that it seemed too optimistic. The motion passed 9 YES: 0 NO: 2 ABSTAIN.

After discussing the importance of the proposal cutoff date Tom Hanan moved and Mike Christensen seconded a motion that T13 establish a proposal procedure that to include a proposal in the project draft after the cutoff date or to change the cutoff date shall require a formal 2/3 majority in favor. If approved this procedure would also be submitted to NCITS to be approved as an addition to the formal T13 policies and procedures. The Chair also noted that if approved by T13 the Chair would use it as standard operating procedure pending a ruling by NCITS. The motion passed 8 YES: 3 NO: 1 ABSTAIN. The Chair noted that while the motion had passed he was concerned that since it did not have a majority of the membership NCITS might not be persuaded and consequently the Chair will conduct a letter ballot on the approved procedure change.

Subsequent to the passing of the motion it became apparent that some of the voters had forgotten what the NCITS definition of two-thirds was. A two-thirds vote in favor is defined by NCITS to be the combination requirement of a majority of the Principal Membership voting in favor and in addition that two-thirds of those voting other than Abstain

have voted in favor. The Chair pointed out that in the case of votes requiring a NCITS two-thirds Technical Committees are required to not allow abstentions.

Upon realization that the term “formal 2/3” had been misunderstood Ron Roberts moved and Marc Noblitt seconded a motion that the proposal cutoff procedure motion be rescinded on the basis that it is too restrictive considering active attendance. This meeting was an example of a meeting at which no motions requiring the NCITS two-thirds rule could pass. (Actually if all members who had arrived at the meeting and signed the attendance roster had stayed for all the agenda items this meeting would not have been an example of the problem.) The motion failed due to the simple Robert’s Rules two-thirds majority rule by a vote of 6 YES: 4 NO: 2 ABSTAIN (1 vote short).

Tom Hanan moved and Mark Evans seconded a motion that attendance at future meetings be taken at the end of the plenary meeting. The motion passed 6 YES: 4 NO: 2 ABSTAIN.

12.2 ATA/ATAPI State Diagrams Introduction and Review [McLean] (D98101R0)

Pete McLean presented a proposal to replace existing ATA/ATAPI-4 flow diagrams in future standards with state diagrams. Pete requested that participants evaluate the proposed state diagrams and submit comments, and proposals, at the next scheduled meeting.

12.3 Proposal to Modify the Multiple Commands (D98102R0)[Evans]

Mark Evans noted that in spite of the proposal title it was actually directed for ATA/ATAPI-4. Mark agreed to add the single sector power of two. While zero sectors would be allowed this would still be accomplished with multi mode enabled. Attendees were urged to check what if any impact the proposal had upon their implementations.

12.4 EDD V3.0 New technical project proposal [Stevens]

Mike Christensen reported that Curtis Stevens has requested that the April plenary agenda include an item for him to propose work on a new version of the EDD

12.5 Master Password Revision Code Feature (D98104R0) [Colegrove]

Dan Colegrove presented a review of the proposal indicating that Compaq had authorized him to indicate that it was a Compaq requirement. Dan was requested to ask for an OK to identify a specific contact for further off-line discussions regarding this proposal.

12.6 Power Supply Parameters [Hanan]

Tom Hanan noted that some of the new power supply designs are resulting in excessive surge currents and component damage. In response to questions he said that system suppliers are now more receptive to the standard including power supply requirements than they were in the past. This led to a discussion of the EPA meeting on 2/20/98 to address power requirements for peripherals.

Tom Hanan moved and Ron Roberts seconded a motion that T13 nominates ~~Pete~~ McLean as the T13 liaison to the EPA meeting on February 20, 1998 and requests the EPA to allow T13 to initiate a study group in cooperation with T10 to address future Energy Star requirements for storage devices. The motion passed unanimously. The Chair instructed Pete McLean to feel free to wear two hats, one for Maxtor and one for T13 but to make it clear to the EPA which one he had on at the moment.

12.7 Soft Reset Response [Evans]

Mark Evans presented a concern that the requirement that both Device 0 and Device 1, if present, respond to the SRST being written. A review showed that this requirement was moved but is still clearly included in the standard. However the requirement for NIEN is not as clear.

13. Liaison Reports

13.1 T10

The T10 liaison report was posted on the reflector. Ron Roberts provided a brief MMC report.

13.2 IEEE 1394 / IEC 61883

The Chair provided a brief liaison report. Pete McLean gave a brief report concerning the joint RBC and MMC-2 meeting.

13.3 SFF

Pete McLean noted the items that were on a SFF letter ballot.

14. Call for Patents

There was no response to the call for patents.

15. Open Issues List Summary

15.1 NIEN definition

16. Review of Action Items

62) Tom Hanan to correct remaining reflector, ftp and web site issues.

69) Gene Milligan to issue letter ballot on the cutoff procedure.

70) Gene Milligan to generate project proposal for ATA/ATAPI - 5

71) Gene Milligan to issue letter ballot on project proposal for ATA/ATAPI - 5.

72) Gene Milligan to include EDD proposal and EPA report on April agenda.

17. Meeting Schedule

17.1 Authorization of Working Group Meetings

No working groups will be held prior to the April T13 plenary.

17.2 Long term meeting schedule

Date	Location	Host	Contact
April 14-16, 1998 *	Boulder, CO	Seagate	Marc Noblitt
<i>May 20-22, 1998+</i>	<i>Irvine, CA</i>	<i>Phoenix</i>	<i>Mike Christensen</i>
June 16-19, 1998*	Irvine, CA	Western Digital	Tom Hanan
<i>July 22-24, 1998 +</i>			<i>Marc Noblitt</i>
August 18-21, 1998*	Boulder, CO	Maxtor	Pete McLean
<i>September 23-25, 1998+</i>			<i>Curtis Stevens</i>
October 26-30, 1998*	Wailea, Maui, HI	Quantum	Mark Evans
December 1-4, 1998*	Irvine, CA	Western Digital	Tom Hanan

* indicates plenary meeting.

+ indicates this meeting is tentative and may be canceled.

As noted above the next meeting of T13 is April 14-16, 1998 hosted by Seagate in Boulder Colorado at the Boulderado Hotel with rates of \$108/\$120 and a March 1st reservation cutoff date.

The Chair has an unavoidable conflict with the dates for the December meeting. The attendees agreed to pushing the meeting back one week if this is acceptable to the host's meeting room availability.

18. Adjournment

The meeting adjourned upon completion of all the agenda items.

T13 Attendance Database - Enclosure (1)

ORGANIZATIONAL ATTENDANCE AT LAST THREE MEETINGS				-----+	
INDIVIDUAL ATTENDANCE				-----+	
				v	v
Charles	Brill	AMP, Inc.	P	5	2
Richard	Kalish	Adaptec, Inc.	P	6	2
Lawrence	Lamers	Adaptec, Inc.	A1	8	2
Ron	Roberts	Apple Computer	A	8	3
Richard	Schnell	Apple Computer	P	0	3
William	Benson	Avatar Systems Corp.	O	0	0
Jeff	Chen	Award Software Intl.	A	0	1
George	Huang	Award Software Intl.	P	0	1
Raymond	Liang	CMD Technology	A	5	3
Victor	Siu	CMD Technology	P	1	3
Ben	Chang	Cirrus Logic Inc.	O	4	0
Ken	Bush	Compaq Computer Corp.	O		0
Hale	Landis	Consultant	P	9	3
Irv	Tjomsland	Consultant	G	2	0
Paul	Raikunen	Digital	P	8	3
Andy	Chen	Fujitsu	A	0	2
Robert	Liu	Fujitsu Computer Products	P	4	2
Tony	Goodfellow	GSI	P	6	2
Richard	Harcourt	GSI	A1	1	2
John	Moore	Hewlett Packard Co.	P	0	1
J. R.	Sims	Hewlett Packard Co.	P	4	1
Anthony	Yang	Hitachi America Ltd.	P	6	2
Hitoshi	Ogawa	Hitachi Ltd.	O	0	2
Quang	Vuong	Hitachi Storage Products	A	0	2
Dan	Colegrove	IBM Corp.	P	9	3
Duncan	Penman	IIX Consulting	O	3	0
George	Blattner	Imation	O	1	0
John	Blagaila	Integral Peripheral	O	0	0
Darrell	Redford	Iomega Corp.	P	0	2
Ron	Stephens	Iomega Corp.	A	5	2
LeRoy	Leach	Maxtor Corp.	A	1	3
Pete	McLean	Maxtor Corp.	P	8	3
Darrin	Bulik	Micro House Int.	O	3	0
Chris	Smith	NEC Systems Laboratory	O	0	0
Son	Ho	Neomagic Corp.	O	3	1
Lance	Flake	O.R. Technology	P	1	2
Christopher	Mayne	O.R. Technology	A	3	2
Joe	Chen	Oak Technology	O	2	0
Lam	Dang	Oak Technology	O	0	0
Dan	Salmonsens	Oak Technology	O	0	0
Stephen	Heil	Panasonic Technologies	O	0	0
Mike	Christensen	Phoenix Technologies	A	4	3
Curtis	Stevens	Phoenix Technologies	P	5	3
Skip	Jones	QLogic	A	0	3
Greg	Elkins	QLogic Corp.	P	7	3
Mark	Evans	Quantum Corp.	P	9	3
James	McGrath	Quantum Corp.	A1	1	3
Kenichi	Kojima	Sanyo Electric Co Ltd	P	4	0
John	Masiewicz	Seagate Technology	A	1	3
Gene	Milligan	Seagate Technology	P	9	3
Marc	Noblitt	Seagate Technology	A	8	3
Paresh	Sheth	Silicon Systems Inc.	P	2	2
ORGANIZATIONAL ATTENDANCE AT LAST THREE MEETINGS				-----+	
INDIVIDUAL ATTENDANCE				-----+	
				v	v
Yogi	Schaffner	Silicon Systems, Inc.	A	4	2
Rich	Wahler	Standard Microsystems Corp	O	0	0
Alan	Longo	SyQuest Technology Corp	P	0	1
Patrick	Mercer	SyQuest Technology Corp	A	4	1
David	Evans	Symbios Logic	A	3	3
Mike	Winchell	Symbios Logic	P	4	3

Tokuyuki	Totani	Toshiba America Info.	P	6	2
Ken	Hallam	Unisys Corp.	O	0	0
Carl	Bonke	Western Digital Corp.	A2	1	3
Tom	Hanan	Western Digital Corp.	P	9	3
Masa	Morizumi	Yamaha	O	1	0

T13 Document Database - Enclosure (2)

Doc#	Description	subdir	Pgs	Date	Mailing	Submittor
D0791R4c	ATA-1 revision 4c	/project	66	5/12/94	----	lamers
D0948R4c	ATA-2 revision 4c	/project	111	3/18/96	DM9602	finch
D1153R17	ATA/ATAPI-4 revision 17	/project	331	10/30/97	DM9704	mclean
D1226R7	BIOS Enhanced Disk Drive Specification	/project	35	10/23/97	DM9704	stevens
D1248R5	1394 to AT Attachment - Tailgate	/project	71	10/28/97	DM9704	hanmann
D2008R7b	ATA-3 revision 7b	/project	194	1/27/97	DM9701	mclean
D98100R0	1996-1997 Document Directory	/meetings	5	1/1/98	DM9801	mclean
D98101R0	State diagram proposal	/technical	61	2/6/98	DM9801	mclean
D98102R0	Set multiple proposal	/technical	2	2/17/98	DM9801	evans
D98103R1	Minutes of 2/17-18/98 plenary meeting	/meetings	10	2/19/98	DM9801	milligan
D98104R0	Master password revision proposal	/technical	2	2/12/98	DM9801	colegrove