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Date: 17 Dec 2004
Reply to: Mark Overby

To: Membership of T13
From: Mark Overby, Secretary of T13, and Dan Colegrove, Chairman of T13
Subject: Minutes of 50th T13 Plenary Meeting at the Tropicana, Las Vegas, NV.
December 14th to December 17th, 2004

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Results of the Meeting

1 Opening remarks

Dan Colegrove, the T13 Chair, called the meeting to order at 9:15 A.M. on Tuesday, May 22nd, 2004. Dan Colegrove stated that his firm, Hitachi GST was hosting the meeting.

As is customary, the people in attendance introduced themselves, and a copy of the attendance list was circulated. Copies of the agenda were made available to those in attendance.

The Chair briefly reviewed the meeting rules: T13 is a Technical Committee of INCITS and operates under INCITS rules. Anyone with interest in the work of the committee is free to attend and take part in discussions. However, motions and votes are limited to member organizations, one vote per member organization.

The Chair also noted that T13 operates under the INCITS antitrust guidelines. There should never be discussion of the following topics at any INCITS or an INCITS subgroup meeting:

- Any company's prices or pricing policies;
- Specific R&D, sales and marketing plans;
- Any company's confidential product, product development or production strategies;
- Whether certain suppliers or customers will be served;
- Prices paid to input sources; or
- Complaints about individual firms or other actions that might tend to hinder a competitor in any market.

Policies and Procedures and antitrust guidelines for INCITS are available at the web site at www.incits.org. T13 operates under these policies and procedures augmented by the T13 procedures at the T13 web site at www.t13.org.

2 Approval of agenda

Jim Hatfield noted that there was a missing revision ID field in the ATA IDENTIFY data and requested that this be added to the agenda. Curtis Stevens requested that the download microcode change and removal of ATAPI prohibited states proposals be added to the agenda. Jim also requested the annex of historical command usage and restricted definition proposal be added to the agenda. Mark Overby moved, Curtis Stevens seconded, that the agenda be approved as amended. The motion passed with 12 ayes, 0 nays, and 0 abstentions.

3 Membership and attendance

The Chair reviewed the rules for membership and attendance:

3.1 Membership

An individual from an organization new to T13 must attend at least one T13 plenary meeting before requesting voting membership. After that meeting, the representative may request membership from the T13 chair stating expertise and material interest in the scope of the committee and pay the required fees to INCITS. The time when membership becomes effective has just changed. Membership now becomes effective at the start of the next meeting the organization attends assuming the organization attends one of the next two meetings.

3.2 Fees

Current INCITS memberships fees for Principal or additional Alternates are 800.00 USD. The First Alternate is free with a Principal membership.

Mailings of committee documents are available to any interested party after each plenary meeting. The cost for mailings for one year is 300.00 USD for mailing in the USA and 400.00 USD for mailing to a location outside of the USA.

Persons with questions or requests regarding membership fees and/or subscriptions for mailings should contact Parthenia Purnell, ITI Standards Operations, at ppurnell@itic.org.

3.3 Attendance

In addition to payment of fees, there are also minimum attendance and participation requirements to maintain voting membership status on T13. A representative from a member organization must attend two of every three plenary meetings and vote on at least every other letter ballot. If a member organization fails to have a representative in attendance at two of the last three T13 plenary meetings or vote on every other letter ballot, they are warned that failing to attend the next T13 meeting or to vote on the next letter ballot will result in their voting membership being terminated.

Attendance at a working group meeting does not affect voting membership status in T13.

The T13 voting membership during the meeting was 21 organizations.

The number of eligible voting members required for establishing a quorum was 7. 12 Member organizations were present at the start of the meeting, thus a quorum was present.

The following individuals attended:

Name	Company	E-Mail
		E-Mail Addresses
		Removed due to spam mail abuse.
		Contact the committee chairman
Bellamy, Wayne	HP	For attendee contact information
Puri, Sumit	Fujitsu	
Colegrove, Dan	Hitachi GST	
Livaccari, Steve	IBM	
Thompson, Tim	LSI Logic	
Zelenko, Karen	Phoenix	
Evans, Mark	Maxtor	
Overby, Mark	NVIDIA	
Elkins, Greg	QLogic	
Chen, Joe	Samsung	
Luksic, Mladen	Western Digital	
Hatfield, Jim	Seagate	
Arakawa, Yutaka	Toshiba	
Stevens, Curtis	Western Digital	
Masiewicz, John	Western Digital	
Dees, Brian	Intel	
Maxwell, Conrad	NetCell	
Luksic, Mladen	Western Digital	
Priborsky, Tony	Seagate	
Sharma, Ajay	Pacific Digital	

4 Approval of the Minutes from the Previous T13 Plenary Meeting

Jim Hatfield requested a change in the minutes about the SCT BIST proposal. The change requested was to indicate that the SCT BIST proposal (section 7.4.1 of the previous minutes) contains a copy of a log page on SATA-II. Jim Hatfield stated that his objection that this was encroaching on the copyrights and IP of the SATA IO organization. Curtis Stevens and John Masiewicz stated that the copy of the log page was not included in any proposal. John also stated that any response needed to be included with any documentation of the objection. Jim Hatfield moved that the minutes be amended with the text suggested from document number e04163r0. The motion failed for lack of a second.

Curtis Stevens moved, Mark Evans seconded, that the minutes be approved. The motion passed with 12 ayes, 1 nay, and 0 abstentions. Jim Hatfield stated that e04163r0 contains the reasons for his voting no on the approval of the minutes.

Curtis Stevens moved, Jim Hatfield seconded, that the agenda item be added to discuss IDENTIFY DEVICE revisions. The motion passed with unanimous consent.

5 Document Distribution

The following documents were distributed either via hard copy, soft copy, or both:

Agenda and document directory

6 Review of Previous Action Items

6.1 Review of Open Issues

1. Dan Colegrove to draft an ATA-7 erratum for the device signature issues.
[Carryover]
2. Dan Colegrove to query INCITS about the procedure for canceling a project.
[Notification required]
3. Dan Colegrove to notify INCITS the intention to cancel PARTIES-2.
[Project cancelled]
4. Mark Overby to bring example document of state diagram conversion to UML
[On Agenda for this meeting, e04131r0]
5. Jim Hatfield to bring proposal for the addition of the term restricted.
[Agenda item]
6. Mark Evans will research if a separate letter is needed from Maxtor for a Quantum patent related to UDMA that was released for ATA-5 and subsequent projects.
[Carryover]
7. Nathan Obr to bring a proposal to clarify the behavior as to what hosts shall expect and devices shall do when a command is not supported and for how to report unsupported commands

(clarification)

[Carryover]

8. Dan Colegrove to find out if documents should have a –N (for national standard) on all pages containing the document number.

[Moot point and will drop]

9. Dan Colegrove to report back about establishing liaison for the MMC (Multimedia Card).

[Not yet heard back from MMC. Carryover]

7 Old Business

7.1 ATA/ATAPI-7 Project 1532D

7.1.1 INCITS Status

John Masiewicz stated that the editors have finished with volume 1 and that it was very difficult to find the changes that were made by the editors. Most of the changes that he could find were related to formatting, indenting, and so on.

7.1.1.1 Editorial Changes to the dpANS [Masiewicz]

John Masiewicz noted that a minor error was found in a table in volume 3 regarding the BIST Activate FIS where the data bits [23:16] were repeated twice. Curtis Stevens moved that a correction to figure 67 in volume 3, DWORD 1/2, to fix the mislabeling of bits 8 through 15 is a non-substantive change. Greg Elkins seconded the motion. The motion passed with 13 ayes, 0 nays, and 0 abstentions. After further review the chair ruled the motion out of order as this needed to be a roll call vote. A roll call vote was held on the motion as recorded previously.

Absolute Software: Not present
 Apple Computer: Not present
 Emulex: Not present
 Fujitsu: Yes
 Hitachi GST: Yes
 IBM: Yes
 Intel: Yes
 LSI: Yes
 Maxtor: Yes
 Microsoft: Not present
 Net Cell: Yes
 NVIDIA: Yes
 Pacific Digital: Not present
 Phoenix: Not present
 QLogic: Yes
 Samsung: Yes
 Seagate: Yes
 Silicon Image: Not present
 ST Microelectronics: Not present
 Toshiba: Yes

Western Digital: Yes

The motion passed with 13 ayes, 0 nays, and 0 abstentions.

John Masiewicz pointed out an additional ANSI editor comment that a reference to a table for V_{SSO} values do not appear that in the table that the document points to (the error appears in section 7.2.3.3). The committee agreed that the reference is actually to table 4, not table 5 as currently stated. The error appeared because the table reference was typed as opposed to be a cross-reference. John Masiewicz agreed that there should be a reference to the definitions of V_{SSO} .

John Masiewicz made a motion to revise e04151r0 to r1 to include the changes for the problem observed in 7.2.3.3 to reference 7.2.1.2 and table 5, and to approve e04151r1 as non-substantive changes. Tim Thompson seconded the motion. A roll call vote was held.

Absolute Software: Not present
 Apple Computer: Not present
 Emulex: Not present
 Fujitsu: Not present
 Hitachi GST: Yes
 IBM: Yes
 Intel: Yes
 LSI: Yes
 Maxtor: Yes
 Microsoft: Not present
 Net Cell: Yes
 NVIDIA: Yes
 Pacific Digital: Not present
 Phoenix: Yes
 QLogic: Yes
 Samsung: Yes
 Seagate: Yes
 Silicon Image: Not present
 ST Microelectronics: Not present
 Toshiba: Yes
 Western Digital: Yes

The motion passed with 13 ayes, 0 nays, and 0 abstentions.

7.1.1.2 Minor revision numbers for IDENTIFY DEVICE data

Jim Hatfield pointed out that in table 17 for minor revision identifiers do not contain a revision for the final ANSI INCITS version number and that the last version was 4b not 4a. Curtis Stevens noted that in the ATA-6 final draft there was no value for the final value of ATA-6. Jim stated that the reserved value for 4a for ATA-7 should be volume 4b. John Masiewicz pointed out that there are no substantive changes between ATA-7 revision 4a and 4b. It was generally agreed that no changes were needed.

7.1.2 ISO Status

Gary Robinson indicated to the chairman before the meeting that he would do the ISO edits as necessary for ATA/ATAPI-7 when the ANSI edit was completed.

7.1.3 ATA/ATAPI-7 Errata

Dan Colegrove has not yet drafted the erratum only has the one item for device signatures currently needed to be documented for an errata.

7.2 Time Limited Commands Project Proposal [Hatfield]

7.2.1 INCITS Status

Jim Hatfield reported that the document has completed INCITS processing and a final document number was assigned (INCITS TR-37-2004). Jim also noted that it is available for purchased on the ANSI website now. Public review closed successfully. The electronic version is \$18.00 and the hard copy is \$25.00.

7.3 EDD-3 Project 1572D Status

7.3.1 INCITS Status

Dan Colegrove stated that the documents required to conduct the first public review have been forwarded to INCITS. Mark Evans changed the Maxtor vote to yes after the letter ballot comment resolution. Curtis Stevens reported that the first public review would take place from December 24, 2004 through February 7, 2005. The INCITS document number assigned was 407.

7.4 ATA/ATAPI-8 Projects

7.4.1 Review Cut Off Dates / Proposals

Curtis Stevens moved that the cut-off date be moved to June 05 and stabilization to October 05. The motion passed with 13 ayes, 0 nays, and 0 abstentions. Mark Overby moved that the cut-off date for the parallel document move to Feb 05, stabilization to Jun 05, and letter ballot in August 05. The motion passed with 13 ayes, 0 nays, and 0 abstentions.

7.4.2 AT Attachment-8 – Architecture Model

7.4.2.1 Architecture Model Discussion and Diagram [Evans]

Mark Evans has volunteered to become the editor for the architecture model document. Mark presented his rough proposal for the architecture model document. Mark discussed the new use of “transmit” vs. “send” and “indicate” and “specify” to clarify if it is a component of an object from the host or the device, appears of the wire vs. an internal data transition. There was discussion amongst the attendees about how this would apply to the other documents and the need for additional clarification or examples of the term.

A discussion was also held about the definitions for devices and hosts. In addition, the concepts of device managers, device servers, and device ports and how they map to the internal scope of the device was discussed.

A long discussion was held about the “procedure execution” model and if such a sweeping change to move to a high level description was needed in this document. It was generally agreed to that Mark Evans would bring in another draft of the document with the procedure calls fleshed out with the ATA protocols and that further discussion could be held at that time.

7.4.3 AT Attachment-8 – ATA/ATAPI Command Set (ATA8-ACS)

7.4.3.1 HPA State Diagrams [Zelenko]

Karen Zelenko posted r3 of the HPA state diagram proposal. Curtis Stevens stated that it would be helpful to do a change bar review of the document. Karen Zelenko led a review of the latest revision of the state diagrams. Curtis pointed out some improvements to the diagrams and that the notes in the diagrams have nothing referencing them. Karen agreed to incorporate the suggestions about how to reference the notes to give them context and create r4 of this proposal for the next meeting. Dan Colegrove asked the attendees to give a thorough review to this document for the next meeting with an eye towards taking a vote for inclusion in ATA-8.

7.4.3.2 SMART Table Settings / Single SMART Table Proposal [Stevens]

Curtis Stevens presented his proposal again (no revisions were made) to go to a single table for the log pages. The remaining issue was when referencing SMART pages with READ LOG / WRITE LOG extended that the pages referenced were the same as being referenced by SMART. Curtis Stevens moved, Jim Hatfield seconding, that e04143r0 be incorporated into the ATA8-ACS document. Joseph Chen raised a point that for log page 0 that the formats are different between GPL and SL. Curtis agreed to change the proposal to make the requirement that the pages be accessible from both GPL and SL only apply to host and device vendor-specific log commands. Mark Evans argued that this should be subject to the two week rule since there have been substantive changes to the document. Curtis Stevens asked for a straw poll on if data returned from a device vendor specific page is the same regardless of which method is used to access the data. Making the access method vendor specific was preferred by a vote of 6-5. Curtis Stevens withdrew the motion.

7.4.3.3 READ WRITE VERIFY Proposal [Puri]

Sumit Puri reviewed the latest revision of the document that includes clarification on the behavior of the write verify operations when an error occurs and when the write cache is enabled. Sumit responded that they took this to their customers and the customers requested the write cache is available and if an error occurs later when the verification actually happens an error is reported at that time. Curtis Stevens suggested that the device raise DF and halt until power cycle. Sumit agreed that DF would be a better error to use and that no commands would be executed after that event. Dan Colegrove suggested that a DCO bit would be appropriate for this proposal and that a statement about that the write time may be extended significantly due to the error recovery and verify mechanism. Sumit agreed to add the DCO.

A substantial discussion was held about how the DF gets communicated on both parallel and serial and what is the recovery mechanism from a DF condition. Joseph Chen stated that it would be a good idea to think of how to report the reason for a DF and give the system environment an opportunity on how to correct or clear the error without having to power cycle.

7.4.3.4 Download Microcode Enhancements [Livaccari]

Curtis Stevens and Jim Hatfield both stated that they believe that there are ways to accomplish the need of this proposal without changing the standard. Steve Livaccari commented that he would take back the discussion to his designers and report back at the next meeting. A discussion was held between Wayne Bellamy, Curtis Stevens, and others about if the existing DOWNLOAD MICROCODE command is sufficient to cover the issues raised and if a new opcode or new IDENTIFY BITS were needed.

7.4.3.5 DRQ=1 when ERR=0 [Livaccari]

Steve Livaccari presented his proposal about having a set features bit that indicates that when ERR=1 that DRQ must be zero. A long discussion was held as to what this feature was actually trying to solve and if this needs to be documented in ATA-8. Jim Hatfield and Tony Priborsky both stated that they were opposed to incorporating this into a standard that would need to be implemented for a long time into the feature. Mark Overby stated that this seems like better content for a technical report. Jim stated that the possible resolutions are to take the proposal as written, to mark some codes as obsolete, to mark codes as obsolete and write a technical report, to add a single bit to IDENTIFY DATA to indicate support for this, to put a recommendation into ATA-8, or to do nothing. A straw poll was held to indicate which of the following 5 options were preferred and the results of the straw poll are noted below. The straw poll was conducted with each voter voting for any option they found acceptable.

Option 1: [10 yes votes]
Do Nothing

Option 2: [11 yes votes]
Technical Report (mention reservations ATA8)

Option 3: [1 yes vote]
Accept the proposal as is (add to ATA8)

Option 4: [5 yes votes]
Change the proposal (add to ATA8)

Option 5: [4 yes votes]
Obsolete SET FEATURES / ID bits (ATA8) with no documentation

A second straw poll was conducted to indicate which of the two top options are preferred (with each voter only picking one proposal that was acceptable). The result of the second straw poll was that option 1 received 5 votes and option 2 received 13 votes.

7.4.3.6 Secure Freeze Lock Proposal

The item will be carried forward to the next meeting and no discussion was held on the agenda item.

7.4.3.7 Corrections to the ATA signature [Hatfield] (e04127r0)

Jim Hatfield reviewed the proposal to reserve the signatures for the serial ATA devices, correcting an error that was introduced into ATA-7 where the signatures do not match their usage. Mark Overby stated that he was concerned because the standard does not have a definition for what these values are used for even though they are defined. Jim Hatfield responded that this was no different than the CFA and other reservations that this organization makes for other groups. Curtis Stevens moved, Jim Hatfield seconded, to incorporate this proposal to ATA-8. The motion passed with 11 ayes, 2 nays, and 1 abstention. Steve Livacarri stated his no vote was in agreement with Mark Overby that the fact that there was a signature that has no meaning for ATA-7 even though serial technology is defined in ATA-7.

7.4.3.8 Self-test Polling Time [Hatfield]

Jim Hatfield noted that he had no material to present and the item is carried to the next meeting.

7.4.3.9 ATAPI Command Overlap and Queuing Obsolescence [Stevens]

Curtis Stevens reviewed his proposal to obsolete overlap and queuing for ATAPI devices (not ATA devices). Curtis noted that this did not meet the 2-week rule so he was not bringing this to a vote at this meeting. Jim Hatfield noted some small corrections to the document to make it easier to read and Curtis agreed to make those changes and return with another draft at the next meeting.

7.4.3.10 Download Microcode Temporary Copy Obsolescence (e04162r0) [Stevens]

Curtis Stevens proposed that subcommand 01h for DOWNLOAD MICROCODE be marked as obsolete for ATA-8. This subcommand is used for “temporary” usage of firmware. The problem is that temporary and immediate are not well defined in the standard and there is no clear usage of this type of command. Dan Colegrove objected to taking a vote at this meeting because he needed more time to confer in order to determine Hitachi’s position. Curtis stated he had no issue with postponing any vote on this until the next meeting.

7.4.3.11 Removing ATAPI Prohibited States [Stevens]

Curtis Stevens reviewed his proposal to remove the restrictions from packet devices from using commands that are currently prohibited. The motivation for this proposal was to improve the documentation. Curtis stated that there were several ways to handle this including removing the restriction on ATAPI devices or documenting the restrictions in the feature sets. Curtis brought this up for discussion and for future discussion in February.

7.4.3.12 Annex of Historical Command Usage [Hatfield]

Jim Hatfield presented a proposal that shows the history of all of the opcodes for each command, when they were brought forward into ATA as well as the observations about the history of each command. The proposal was to add this as an annex to the command set for ATA-8.

7.4.3.13 Define Term Restricted [Hatfield]

The agenda item is carried over to the next meeting due to lack of remaining time.

7.4.4 AT Attachment-8 – Parallel Transport (ATA8-PT)

7.4.4.1 Review Draft

The agenda item is carried over to the next meeting due to lack of remaining time.

7.4.5 AT Attachment-8 – Serial Transport (ATA8-ST)

7.4.5.1 Device Initiated Power Management [Masiewicz]

The agenda item is carried over to the next meeting due to lack of remaining time.

7.4.5.2 Detecting PATA Device behind SATA Bridge [Overby]

The agenda item is carried over to the next meeting due to lack of remaining time.

7.5 SMART Command Transport (SCT) Technical Report [Stevens]

7.5.1 SCT BIST Proposal [Stevens] (e04148r1)

The agenda item is carried over to the next meeting due to lack of remaining time.

7.5.2 SCT Letter Ballot Results (e04042r0)

Dan Colegrove reviewed the results of the letter ballot. The letter ballot passed with 15 yes votes, 5 no votes, and 1 ballot not returned.

7.5.3 Comment Resolution

Curtis Stevens led a review of the letter ballot comments. Joseph Chen noted that it appeared that some comments of his were missed as they were provided in a separate document. There was some confusion about how the comments were submitted. Joseph agreed to point out the missing comments during the review wherever possible. Responses to the letter ballot comments were incorporated into e04157r0.

Joseph also led a separate review of clarification requests that he generated that were not posted until recently. Editorial comments were incorporated into the letter ballot comments.

7.6 A/V Technical Report project [Colegrove]

7.6.1 Draft Review

Dan Colegrove noted that the draft has been posted. The agenda item is carried over to the next meeting due to lack of remaining time.

7.7 T13 reflector, FTP, and web site setup

No issues were reported. Dan Colegrove stated that when a document is posted the document posting date will be in red if the document was added to the website since the last meeting.

8 New Business

8.1 Items from Reflector

8.1.1 ATAPI DOWNLOAD MICROCODE feature set enabled bit

A reflector item from HP indicated that there is a bit in IDENTIFY PACKET DEVICE indicating if DOWLOAD MICROCODE is supported, however DOWNLOAD MICROCODE is prohibited for ATAPI devices. Curtis Stevens agreed to make a change (editorial) for ATA-8 to indicate that this bit shall always be zero.

8.1.2 Clarification on reset signature

The agenda item is carried over to the next meeting due to lack of remaining time.

8.1.3 Clarification on INTRQ / BSY behavior in state machine diagrams

The agenda item is carried over to the next meeting due to lack of remaining time.

8.1.4 Execute Device Diagnostic

The agenda item is carried over to the next meeting due to lack of remaining time.

8.2 Obsolete Bits from ATA Signature [Hatfield]

The agenda item is carried over to the next meeting due to lack of remaining time.

8.3 UML Conversion for State Diagrams [Overby]

Mark Overby presented an example from the parallel document to show a simple UML state diagram (host power-on reset).

8.4 Discussion of SATA-IO Copyrights [Hatfield]

Tony Priborsky from Seagate stated his concerns that there are proposals being brought forward from the T13 organization that could cause the SATA-IO specifications to diverge from the ATA versions of SATA. Mark Overby raised a point of order to the chair that the proposal as raised by Seagate could violate the INCITS anti-trust guidelines and requested the chair to obtain clarification from INCITS if this is true or not. Dan Colegrove agreed that he would attempt to get clarification. Brian Dees stated that Intel's position is that they do not want to see the documents diverge from each other.

9 Liaison Reports

9.1 T10

Dan Colegrove posted a liaison report from the T10.

9.1.1 SCSI to ATA Mapping Study Group

9.1.1.1 WW Name Assignment Implementation Process

Wayne Bellamy stressed that, for the purposes of SAT, it was very important that devices implement the world wide name as defined in the ATA standards.

9.1.1.2 FUA on writes without Command Queuing

Wayne Bellamy stated that for the purposes of SAT, it was important to important to implement the FUA commands

9.2 Trusted Computing

The agenda item is carried over to the next meeting due to lack of remaining time.

9.3 SFF

The agenda item is carried over to the next meeting due to lack of remaining time.

9.4 IDEMA

The agenda item is carried over to the next meeting due to lack of remaining time.

9.5 Compact Flash Association

The agenda item is carried over to the next meeting due to lack of remaining time.

9.6 Serial ATA II

Dan Colegrove stated that he has provided a letter to SATA-IO to release the copyright for ATA-8 to SATA-IO. Brian Dees stated that SATA-IO has received the letter and intends to provide the copyright release to SATA 1.0a and the errata that apply to that document.

9.7 MMC (Multi Media Card)

The agenda item is carried over to the next meeting due to lack of remaining time.

10 Call for Patents

The Chair explained the patent policy. A document is available from ANSI, "Procedures for the Development and Coordination of American National Standards", at no charge. This document is also on the INCITS web site at ftp://www.incits.org/help/ansi_sdo.html. Section 1.2.11 contains the ANSI patent policy. Amy Marasco manages patent issues for ANSI and can be contacted at amarasco@ansi.org or 212-642-4954.

The Chair then called for patents and/or patent applications that may be necessary to comply with the requirements in T13 standards, draft standards, technical reports, or draft technical reports.

There was no response to the call for patents.

11 Review of Action Items

1. Curtis Stevens will assign a minor revision for ATA-7 ANSI published version in the minor revisions of IDENTIFY DATA.
2. Dan Colegrove to query Gordon Hughes about the status of the freeze lock proposal.
3. Dan Colegrove to incorporate e04127r0 into the ATA-7 errata.
4. Curtis Stevens to liaison with Mt. Fuji and MMC on the proposal to obsolete ATAPI overlap and queuing.
5. Dan Colegrove to update the long name policy for documents to include the project acronym in the title.
6. Dan Colegrove to check with INCITS about the anti-trust implications for the SATA-IO proposal.
7. Jim Hatfield to work on a proposal to create a procedures document for T13 activities
8. Dan Colegrove to draft an ATA-7 erratum for the device signature issues.
9. Mark Evans will research if a separate letter is needed from Maxtor for a Quantum patent related to UDMA that was released for ATA-5 and subsequent project
10. Nathan Obr to bring a proposal to clarify the behavior as to what hosts shall expect and devices shall do when a command is not supported and for how to report unsupported commands
11. Dan Colegrove to report back about establishing liaison for the MMC (Multimedia Card).

12 Schedule

12.1 Meeting length

Dan Colegrove made a motion, Curtis Stevens seconded, that the meetings from April forward be extended to 3.5 days (Tues – Friday noon). The motion passed with 7 ayes, 0 nays, and 2 abstentions.

12.2 Authorization of Ad Hoc Working Groups

No ad-hoc meetings were authorized.

12.3 Long term meeting schedule

The meeting dates, locations, hosts, and contacts were reviewed through CY2005 (included below).

12.3.1 Hosting Volunteers

CY 2005 Dates	Location	Host	Contact
February 22-24, 2005	Santa Clara, CA	NVIDIA	Mark Overby
April 19-21, 2005	Longmont, CO	Seagate	Jim Hatfield
June 21-23, 2005	Orange County, CA	Western Digital	John Masiewicz.
August 23-25, 2005	Longmont, CO	Maxtor	Mark Jackson
October 18-20, 2005	Las Vegas, NV	Fujitsu	Sumit Puri
December 13-15, 2005	Las Vegas, NV	Hitachi Global	Dan Colegrove
NOTE – Meetings are scheduled for 2.5 days, 3.5 days from April 2005.			

13 Adjournment

Curtis Stevens moved, Jim Hatfield seconded, that the meeting be adjourned at 1224 16 December 2004. The adjournment passed by unanimous consent.