

Accredited Standards Committee*

InterNational Committee for Information Technology Standards (INCITS)

Doc. No.: T13/07-100r0

Date: January 2, 2007

Reply to: Mark Overby

To: T13 Membership
From: Mark Overby
Subject: T13 Plenary Meeting (Las Vegas, NV) -- December 12-14, 2006

Agenda

1. Opening Remarks
2. Approval of Agenda
3. Attendance and Membership
 - 3.1 Membership / Fees
 - 3.2 Fees
 - 3.3 Attendance
4. Approval of the Previous Minutes
5. Document Distribution
6. Review of Previous Action Items
7. Old Business
 - 7.1 INCITS 5-year Review
 - 7.2 ATA/ATAPI-7
 - 7.3 HBA Amendment - 1
 - 7.4 HBA-2 Standard
 - 7.5 ATA/ATAPI-8 Projects
 - 7.6 ACS-2 Project Proposal
 - 7.7 EDD Erratum
 - 7.8 T13 reflector, FTP, and web site
 - 7.9 INCITS Membership and Website Policy
8. New Business
 - 8.1 Write Protect
 - 8.2 Items from the reflector
 - 8.3 PARTIES Amendment Proposal
9. Liaison Reports
 - 9.1 T10
 - 9.2 T11
 - 9.3 IEEE
 - 9.4 Trusted Computing Group
 - 9.5 SFF Committee
 - 9.6 IDEMA
 - 9.7 MMCA
 - 9.8 CFA
 - 9.9 SATA-IO
10. Call for Patents
11. Review of Action Items
12. Meeting Schedule
 - 12.1 Meeting Length
 - 12.2 Authorization of Ad-Hoc Working Groups

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

INCITS Secretariat, Information Technology Industry Council (ITI)

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

Email: incits@itic.org Telephone: 202-737-8888 FAX: 202-638-4922

12.3 Long Term Meeting Schedule

13. Adjournment

Results of Meeting

1. Opening Remarks

Dan Colegrove, the T13 Chair, called the meeting to order at 0915 Tuesday, December 12th, 2006. Dan Colegrove thanked Hitachi GST for 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

Mark Overby moved, Dan Colegrove seconded, that the agenda be approved as revised. The motion passed by unanimous consent.

3. Attendance and Membership

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 23 organizations.

The number of eligible voting members required for establishing a quorum was 8. 13 Member organizations were present at the start of the meeting, thus a quorum was present.

The following individuals attended:

Table 1: Attendance List

Attendee	Company		Attendee	Company
Larry Barras	Apple Computer		Paul Chicoine	Phoenix
Jim Hatfield	Seagate		Mark Overby	NVIDIA
Tom McGoldrick	Toshiba		Joseph Chen	Samsung
Sumit Puri	Fujitsu		Mladen Luksic	Western Digital
Dan Colegrove	Hitachi GST		Curtis Stevens	Western Digital
Wayne Bellamy	HP		Ken Foust	Kionix
Tom Pratt	Dell		Zheng Du	AMD
Frank Shu	Microsoft		James Yang	AMD
Brian Dees	Intel		Bill Martin	Emulex
John Geldman	Lexar Media			

4. Approval of the minutes from the previous T13 plenary meeting (e06170r1)

Dan Colegrove moved, Mark Overby seconding, that the minutes of the previous meeting be approved. The motion passed with 7 ayes, 1 nay, and 0 abstentions. Jim Hatfield stated that he had not had sufficient time to review them because they were posted only recently and hence voted no.

5. Document Distribution

No documents were distributed by hard copy.

6. Review of Previous Action Items

1. Jim Hatfield 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 {Jim Hatfield stated that Seagate indicates no separate letter is needed}
2. Frank Shu to provide output data structure for pinned cache set data command {done}
3. Dan Colegrove to forward project proposal for HBA amendment to INCITS for further processing {done}
4. Dan Colegrove to post the list of IEEE projects for potential liaison {carryover}
5. Dan Colegrove to find out the status of the DDT technical report {INCITS had lost the project after the requested the name change. Dan is working with INCITS to resolve. Carryover}
6. Dan Colegrove to find out the status of the EDD erratum {carryover}

7. Old Business

7.1 INCITS 5 Year Review

7.1.1 ATA/ATAPI-6

Jim Hatfield moved, Wayne Bellamy seconded, to recommend that ATA/ATAPI-6 be reaffirmed. The motion passed with 12 ayes, 0 nays, and 0 abstentions.

7.1.2 EDD-2

Curtis Stevens moved, Mark Overby seconded, to recommend that EDD-2 be withdrawn. The vote was taken by roll call.

Apple: Yes
 CPR Tools: Not Present
 Emulex: Not Present
 Finisar: Not Present
 Fujitsu: Yes
 HP: Yes
 Hitachi GST: Yes
 IBM: Not Present
 Intel: Not Present
 Kionix: Yes
 Lexar Media: Yes
 LSI Logic: Not Present
 Marvell: Not Present
 Microsoft: Yes
 M-Systems: Not Present
 NVIDIA: Yes
 Phoenix: Yes
 Samsung: Yes
 Seagate: Abstain
 ST Micro: Not Present
 Toshiba: Yes
 Western Digital: Yes

The motion passed with 12 ayes, 0 nays, and 1 abstention.

7.2 ATA/ATAPI-7: 1532D

7.2.1 ISO Status

Mark Overby reported that ISO has balloted and approved volume 1 as an international standard. Volumes 2 and 3 are being prepared for the ISO editor for editing.

7.2.2 ATA/ATAPI-7 Amendment [Overby]

7.2.2.1 INCITS Status

Dan Colegrove stated that he had forwarded Amendment 1 to INCITS for further processing.

7.3 HBA Amendment 1

Dan Colegrove stated that he would forward HBA Amendment 1 to INCITS for further processing.

7.4 HBA-2 Standard Project: 2014-D

Mark Overby reported that there was nothing new to report at this time.

7.5 ATA/ATAPI-8 Projects

7.5.1 AT Attachment 8 - Command Set (ATA8-ACS)

7.5.1.1 Results of ACS Ad Hoc Meeting

7.5.1.1.1 NCQ Material for Incorporation in ACS (e06150r4)

Curtis Stevens led a review of the NCQ material for integration into ATA8-ACS as was reviewed during the ad hoc meeting that was held prior to this meeting. Various editorial suggestions were made and accepted. The discussion of media and cache were deferred to allow the material to be reviewed for the NCQ portion and avoid rehashing the same discussions that were held about the NV cache command set.

During discussion it was noted that the SATA material did not provide for READ LOG DMA EXT as a method to access the required error log page. Curtis suggested adding this in his proposal. Brian Dees suggested that this be struck, and a proposal be brought to SATA-IO to make sure that the digital committee had an opportunity to consider this. Mladen Luksic stated that he would work with Curtis to note this and work with SATA-IO. Curtis removed the READ LOG DMA EXT addition.

During review there was a discussion if returning a status indication is permitted before returning status for an error. Brian noted that the SATA spec does not currently allow this behavior when you are using command status aggregation. It was noted that the text that Curtis had in his proposal matches the behavior that the current SATA spec allows for and no change was needed.

Mladen noted that a statement needed to be added that the device shall report an error if a non-NCQ command is received by the device while there are queued commands. Curtis added such a statement.

Brian provided feedback from the SATA-IO committee that Curtis incorporated into the proposal.

Curtis Stevens moved, Mark Overby seconded, that e06150r4 as revised be accepted for inclusion into ATA8-ACS. The motion passed with 13 ayes, 0 nays, and 0 abstentions.

7.5.1.1.2 NV Cache Interaction FUA, Read, and Verify (e06190r0) [Stevens]

Curtis Stevens displayed the document that was created at the ad hoc working group meeting to address concerns that had been raised about the NV cache command set and the interactions of that command set with other commands and behaviors.

During discussion of this feature, the debate about what should happen during an FUA commands and flush commands in respect to if data needs to be flushed from non-volatile cache onto the media. Curtis Stevens pointed out that SCSI had defined two bits for FUA to control exactly what the behavior is. Jim Hatfield and Dan Colegrove noted that they believed that the non-volatile cache should be treated as media and it is not required to access the media outside the flash when receiving those commands. Frank Shu stated that

Microsoft's point of view is that the sectors need to be able to be verified and synchronized when the sectors are not pinned.

Continued lengthy discussion occurred about how this feature is used. There was argument about if this feature set was designed for scenarios where the flash is not physically part of the drive or potentially removed. Curtis, Wayne Bellamy, Frank, and Mark Overby all argued that there was no such restriction in the cache proposal. Further argument continued about what constitutes media and if a flash addition to a drive really is cache or if it is media or something in between.

Mark Overby moved, Wayne Bellamy seconded, that the NV cache command set be removed from ATA8-ACS and deferred to ATA8-ACS2. Dan Colegrove stated that he believed that this motion was a bad idea because drives will end up getting implemented for this technology without any documentation. Brian Dees stated that he felt that it was not necessary to pull the feature set at this time. Mark Overby stated that he felt that the committee had come to a deadlock and it he felt that it cause ATA8-ACS to be delayed and it should be moved to ACS-2. Frank Shu stated that he felt that the problems were not unsolvable. Curtis noted that there was probably only one more meeting before ACS was ready for letter ballot. Jim Hatfield moved, Brian Dees seconded, that the motion be postponed to Wednesday after lunch. The motion failed with 3 ayes, 5 nays, and 6 abstentions. The main motion was then voted. Jim Hatfield requested a roll call vote.

Apple: Yes
 CPR Tools: Not Present
 Emulex: Abstain
 Finisar: Not Present
 Fujitsu: No
 HP: Yes
 Hitachi GST: No
 IBM: Not Present
 Intel: No
 Kionix: Abstain
 Lexar Media: No
 LSI Logic: Not Present
 Marvell: Not Present
 Microsoft: No
 M-Systems: Not Present
 NVIDIA: Yes
 Phoenix: Yes
 Samsung: Not Present
 Seagate: No
 ST Micro: Not Present
 Toshiba: No
 Western Digital: No

The motion failed with 4 ayes, 8 nays, and 2 abstentions. Brian Dees stated he voted no because he felt we still had enough time to resolve the issues and if we do become deadlocked we could revisit this.

Dan Colegrove asked for a straw poll asking if it was ok to flush or FUA to just the NV cache before returning status. 8 people agreed, 7 people disagreed.

After that discussion concluded, Curtis moved on into other portions of his proposal.

A length debate was held about if there was a need to disable the NV cache command set through a means other than DCO. Wayne stated that he believed that there was a need to have a method to disable the feature completely and keep the cache from being used. Brian Dees stated that he believed that even if you disable the feature set, the device should be allowed to use the flash and if the device can use the flash for

whatever it wants then what effect does the disable really have. During this discussion it was noted that the bits in IDENTIFY DEVICE word 214 were not well worded. The attendees assisted Curtis in coming up with better definitions for the bits in those words. Curtis made those changes and put them into the proposal.

Jim requested a straw poll asking if there was a desire to have a mechanism to enable and disable the NV cache feature. 9 were in favor of having a method to enable or disable the feature set, 2 were opposed. Curtis stated that based on this straw poll, that he would continue to leave this in the proposal.

Curtis requested a straw poll asking if the enable/disable commands shall be non-volatile. 12 people thought it should be volatile, 1 person thought it should not be.

Further discussion ensued about how a compromise could be achieved. Sumit and Dan both suggested that a potential mechanism that would allow a device to describe its behavior in relationship to how it handles FUA and flush-type operations.

Curtis requested a straw poll if adding a way to describe and control the flush modes would be acceptable. 11 were in favor, 3 were opposed.

Curtis agreed to continue work on the proposal and bring a revision to the next meeting for consideration.

Joseph Chen moved, Jim Hatfield seconded, that two ad hoc conferences be authorized to discuss NV cache IDENTIFY DEVICE data bits. Brian Dees stated that he felt that the teleconferences need to have a document to be discussed before the meetings. Dan Colegrove stated that the documentation should contain the usage of the bits. Curtis stated that he felt this could be handled on the reflector. Joseph amended the motion to delete IDENTIFY DEVICE data bits and replace with command set. The motion passed with unanimous consent.

7.5.1.2 NV Cache Power State Update [Chen]

Joseph Chen asked a question about the meaning of a shall not in the description of the power up the behavior of a drive at boot time. There was confusion about the meaning of the shall not. Curtis Stevens clarified to Joseph that the meaning of that is permissive, it is a may with an stated preference of implementation. The restriction that Joseph believed that was present was not present. Joseph accepted this resolution.

7.5.1.3 Freefall Feature SET FEATURES (e06144r5) [Chen]

The minutes from the previous meeting were reviewed to recap the current state of this proposal.

Minor modifications were made to r5 in order to reflect the removal of the simulation feature.

Jim Hatfield moved, Sumit Pursai seconding, that e06144r5 as revised be accepted for incorporation into ATA8-ACS. The motion passed with 9 ayes, 2 nays, and 2 abstentions. Frank Shu stated that he voted no because of a lack of ability for the host to be notified of the conditions that cause the freefall sensor to activate. Frank also stated that leaving the sensitivity to be settable is not the best design.

Joseph Chen then reviewed e06162r0 which breaks out the simulation portion of the feature set into a separate proposal. Discussion was held about the simulation feature and the purpose of the feature and if it is useful. It was noted that this would be a useful tool for the development of software for hosts and operating systems, and for environmental testing (testing in a full solution). Curtis Stevens, Sumit Puri, and Dan Colegrove all stated that this should not be part of the freefall feature set, but instead is a tool just to create a delay in completing or processing a command. Dan suggested "Simulated Delay Event". Sumit requested a straw poll to gauge interest in the proposal. 5 were in favor of moving forward, and 7 were opposed. Joseph stated that he would think about continuing with the proposal.

7.5.1.4 Proactive Reporting and Correcting (e05142) [Shu]

Frank Shu reported that his company is changing strategy and is collecting more data about how they want to achieve their goals. Frank stated that they are not withdrawing the proposal, but may refocus it. He asked that this agenda item be carried over and reflected in the ATA8-ACS2 agenda for future meetings.

7.5.1.5 ATA Feature Summary (e05144r1) [Chen]

Curtis Stevens stated that he was not clear what the final intent of this document is and where (if anywhere) it should be integrated into a standard. Joseph stated that he wanted this information to be a new annex in ATA8-ACS. Joseph continued that e06149r0 contained just the information about DCO table based on feedback that he got indicating e05144r1 was too confusing. Curtis stated that what he was looking for was for a proposal that correlates all IDENTIFY DEVICE data bits and which bits are dependent on other bits. He continued that what he is looking for is a document that indicates which paragraphs need to have text added indicating the cross-dependency. Dan Colegrove suggested that the document not be incorporated but preserved on the T13 website and list as an other reference in ATA8-ACS.

Joseph requested a straw poll on if there is interest in continuing forward for incorporation in a standard or technical report. 6 people were in favor of continuing, 1 was opposed.

7.5.1.6 HPA State Machine Diagram (e03124r10) [Chen]

Joseph Chen reviewed the latest revision of the HPA state diagram. Discussion was held about the changes in the document and the changes were reviewed. Joseph agreed to make changes that were requested and post a new revision of the document.

7.5.1.7 1K/4K Physical Sector Informative Annex (e05122r4) [Colegrove]

Dan Colegrove reviewed the a proposal for a new annex for 1k/4k implementation actions. Dan reviewed the technical white paper from Western Digital that he edited to make it vendor neutral and remove items that are not appropriate for a technical standard. Dan stated that he would post the document and discuss at the next plenary meeting.

7.5.1.8 NOP Clarifications (e06126r2) [Bellamy]

Wayne Bellamy reviewed Rob Elliot's latest comments on the NOP clarifications proposal. A digression happened that involved a discussion of the meaning of the DF bit. However, it was decided to postpone that discussion to another time.

Wayne Bellamy moved, Mark Overby seconding, that e06126r2 as modified be accepted into ATA8-ACS. The motion passed with 9 ayes, 0 nays, and 0 abstentions.

7.5.1.9 Security Command Update (e07105r0) [Chen]

Joseph Chen presented his document covering two issues on the security command set. Discussion was held, but no resolution was reached. Joseph agreed to work on a proposal and bring to the next meeting. Jim Hatfield agreed to look at Joseph's proposal as well for potential use in the security enhancements proposal that Jim is working on.

7.5.1.10 SCT Command Timer Update (e07103r0) [Chen]

Joseph Chen reviewed a document to discuss issues with the SCT timer. Curtis Stevens suggested that either a new function could be implemented to display the current values in IDENTIFY DEVICE data. Mark Overby stated that he could not identify what the problem really is. Joseph stated that he would bring a proposal to the next meeting.

7.5.1.11 ATA8-ACS Open Issues [Stevens]

Curtis Stevens reviewed the current open items issues list. No issues were resolved that were technical in nature. Curtis updated the open issues list with the resolutions.

7.5.1.12 Draft Review [Stevens]

Curtis Stevens reviewed the addition of the device statistics log page and statistics being tracked in those log pages as part of Appendix A in the ATA8-ACS draft. He requested that any new statistics being developed use this format for the description or documentation of the statistic.

7.5.2 AT Attachment-8 - Parallel Transport (ATA8-APT)

7.5.2.1 Review of Draft

Mark Overby moved, Jim Hatfield seconded, that a virtual face to face meeting be authorized for January 24th for a half day and a face to face meeting (to be scheduled if needed) also be authorized. The motion passed by unanimous consent.

7.5.3 AT Attachment-8 - Serial Transport (ATA8-AST)

7.5.3.1 Review of Draft

Mladen Luksic reviewed some proposed ways of describing serial transport specific items. Dan Colegrove stated that Mladen should go ahead and use the terms FIS and so on so that it is clear about the mapping between the SATA-IO material and the serial transport and ACS. The discussion continued about how to do the mapping between the SATA-IO material the AAM and ACS documents. Numerous suggestions were made about how to map the FIS's into the AST document. Mladen agreed to take the suggestions and incorporate into a new revision.

Mladen then went on to review the mapping of the command structure from ACS into a FIS for transmission. Dan suggested that it could be simplified into just a table of mapping the terminology of ACS to the terminology used in the SATA specification. Mladen agreed to make that change and revise the proposal.

7.5.4 AT Attachment-8 - Architecture Model (ATA8-AAM)

7.5.4.1 Letter Ballot Comment Resolution

No review was held as no comments were unresolved.

7.6 ACS-2 Project 2015-D [Stevens]

7.6.1 INCITS Status

Dan Colegrove stated that he had received that official project number of ACS-2 from INCITS.

7.6.2 Additional device statistics - Usage Length [Chen]

This agenda item was deferred due to a lack of time.

7.6.3 Additional device statistics - Errors [Chen]

This agenda item was deferred due to a lack of time.

7.6.4 Additional device statistics - Free Fall (e06182r0) [Chen]

Joseph Chen reviewed a proposed set of device statistics for obtaining information from the free fall sensors. It was noted that there is no definition of what a "freefall" event is and that a definition is needed. The committee worked on a definition during review of the proposal. In addition, Curtis Stevens and others help Joseph form the proposal into the format being used by the device statistics that have been integrated into ATA8-ACS. Joseph agreed to continue work on this proposal.

A lengthy discussion ensued about the format of these counters and how they should be formatted.

Joseph agreed to continue work on the proposal for the next meeting.

7.6.5 Additional device statistics - Temperature

This agenda item was deferred due to a lack of time.

7.6.6 Additional device statistics - NV Cache

This agenda item was deferred due to a lack of time.

7.6.7 Data Path Protection [Stevens]

Curtis Stevens discussed a Western Digital initiative to provide for higher levels of data integrity for an ATA interface device. The proposal would have the ability to provide a CRC and a locality check. Dan Colegrove asked if this would closely match what SCSI has done. Curtis replied that the proposal would try to match that, but would need some additional changes to match the SATA orientation around a 512-byte multiple transfer size on the bus.

7.6.8 SCT Capabilities (action codes) (e06174r0) [Bellamy]

This agenda item was deferred due to a lack of time.

7.6.9 Reporting RPM, Footprint, and Connector Type (e06176r0) [Bellamy]

This agenda item was deferred due to a lack of time.

7.7 EDD Erratum

7.7.1 INCITS Status

Dan Colegrove stated he would follow up with INCITS before the next meeting.

7.8 T13 reflector, FTP, and web site setup

7.8.1 Web Site Policy and Privacy Statement

Curtis Stevens said the question has been raised about if a password can be read by an administrator. Curtis stated that the answer was yes. Curtis stated that we currently have no privacy policy and did not believe that we need to develop one.

7.8.2 General Website

Curtis then reviewed the general behavior of the website and how various features of the website work.

7.9 INCITS Membership and Meeting Attendance Policy

Dan Colegrove reported that INCITS stated that they will raise the dues, but not restrict the attendance.

8. New Business

8.1 Write Protect Bit (e06158r0) [Hatfield]

Jim Hatfield stated that he was withdrawing the proposal.

8.2 Items from the Reflector

Jim Hatfield stated that there were no items to be covered.

8.3 PARTIES Amendment Proposal [Overby]

Mark Overby presented a project proposal for an amendment to PARTIES to provide some functionality for SAT-2 to provide space for a SATL to store saved mode parameters in a standardized fashion. Mark Overby moved, Tom McGoldrick seconded, that e06179r0 as revised be approved as a new project for technical committee T13. The motion passed with 14 ayes, 0 nays, and 0 abstentions.

9. Liaison Reports

9.1 T10 [Colegrove]

9.1.1 SCSI to ATA Translation (SAT) Working Group Report

Mark Overby reported that the SAT working group met in November for a 1/2 day and will be meeting in January for 1/2 day again. The SAT working group is requesting a full day meeting in February on the Monday before the T13 plenary.

9.2 T11 [Colegrove]

No report was given

9.3 IEEE

Dan Colegrove stated that he would post the list of IEEE projects for potential liaison and had no other information to report.

9.4 Trusted Computing Group [Hatfield]

Jim Hatfield reported that there is a teleconference on 12/15 for discussions of interaction with T13 and a face to face the Friday of the T13 meeting week.

9.5 SFF [Colegrove]

No report was given.

9.6 IDEMA [Colegrove]

Dan Colegrove is liaison with IDEMA for the purposes of 1k and 4k sectors.

9.7 CFA

John Goldman reported that CFA agreed to reduced the amount of reservations used and return them for T13 committee use.

9.8 Serial ATA IO [Dees]

SATA-IO liaison items were covered during the review of the NCQ material.

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 www.incits.org/help/ansi_sdo.html. Section 1.2.11 of that document contains the ANSI patent policy.

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. Dan Colegrove to post the list of IEEE projects for potential liaison
2. Dan Colegrove to restart the DDT technical report through INCITS
3. Dan Colegrove to find out the status of the EDD erratum

12. Approved Proposals

ATA8-ACS:

e06144r6 - Freefall Feature SET FEATURES

e06150r5 - NCQ Feature Set Material from SATA-IO

e06126r3 - NOP Clarifications

13. Meeting Schedules

13.1 Meeting Length

The February meeting will remain at 3 days.

13.2 Authorization of Ad-Hoc Working Groups

Authorized as part of the ATA8-APT agenda item:

Virtual face to face meeting for ATA8-APT (January 24, 2007)

Face to face meeting for ATA8-APT (to be scheduled if necessary)

Authorized as part of the NV Cache clarification proposal:

Two teleconference meetings (January 25, 2007 and to be scheduled)

Joseph Chen raised a question of if there would be value in meeting on a weekly basis by phone. Curtis Stevens and Jim Hatfield both noted that it is difficult to add a weekly scheduled meeting. Mark Overby noted that if we need meetings to discuss specific topics, we could authorize ad-hocs for those. Mladen Luksic suggested that conference calls are useful for letter ballot comment resolution, but other topics seem best for the face to face. Dan Colegrove suggested we could use the ATA8-APT call as a test vehicle to see if a true face to face is needed.

13.3 Long-Term Meeting Schedule

Table 2: 2007 Dates

Date	Location	Host	Contact
February 20-22, 2007	Lake Forest, CA	Western Digital	Curtis Stevens
April 24-27, 2007	Longmont, CO	ST Microelectronics	Aaron Wilson
June 19-22, 2007	TBD	NVIDIA	Mark Overby
August 21-24, 2007	Longmont, CO	Seagate	Jim Hatfield
October 23-26, 2007	Fort Myers, FL	CPR Tools	Tony Alvarez
December 11-14, 2007	Redmond, WA	Microsoft	Frank Shu

14. Adjournment

Mark Overby moved, Dan Colegrove seconding, that the meeting be adjourned at 1615 Thursday, 14 December 2006. The motion passed with unanimous consent.