

Accredited Standards Committee*
InterNational Committee for Information Technology Standards (INCITS)

Doc. No.: T13/07-100r0

Date: March 5, 2007

Reply to: Mark Overby

To: T13 Membership
From: Mark Overby
Subject: T13 Plenary Meeting (Foothill Ranch, CA) -- February 20-22, 2007

Agenda

1. Opening Remarks
2. Approval of Agenda
3. Attendance and Membership
4. Approval of the Previous Minutes
5. Document Distribution
6. Review of Previous Action Items
7. Old Business
8. New Business
9. Liaison Reports
10. Call for Patents
11. Review of Action Items
12. Meeting Schedule
13. Adjournment

Results of Meeting

1. Opening Remarks

Dan Colegrove, the T13 Chair, called the meeting to order at 0903 Tuesday, February 20th, 2007. Dan Colegrove thanked Curtis Stevens and WD 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.

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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 22 organizations.

The number of eligible voting members required for establishing a quorum was 8. 17 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
Steve Livaccari	IBM		Paul Chicoine	Phoenix
Jim Hatfield	Seagate		Mark Overby	NVIDIA
Martin Furnhjelm	Lexar Media		Joseph Chen	Samsung
Sumit Puri	Fujitsu		Mladen Luksic	Western Digital
Dan Colegrove	Hitachi GST		Curtis Stevens	Western Digital
Wayne Bellamy	HP		Avraham Shimor	SanDisk
Tom Pratt	Dell		Aaron Wilson	ST Microelectronics
Frank Shu	Microsoft		Duncan Penman	Western Digital
Brian Dees	Intel		Bill Martin	Emulex
John Geldman	Lexar Media		Wally Bretzer	CPR Tools
Paul Borsetti	PMC-Sierra		Hale Landis	Broadcom
Mark Quinn	Toshiba			

4. Approval of the minutes from the previous T13 plenary meeting (e07100r0)

Jim Hatfield noted corrections to the minutes in e07114r0. Curtis Stevens moved, Sumit Puri seconding, that items 1, 2, and 5 be approved as corrections to the minutes. The motion passed with 14 ayes, 1 nay, and 0 abstentions. Curtis Stevens moved, John Geldman seconding, that the minutes be approved as revised. The motion passed with 12 ayes, 1 nay, and 2 abstentions. Mark Overby stated that he voted no because the only substantive error was item number 1 from Jim's document.

5. Document Distribution

No documents were distributed by hard copy.

6. Review of Previous Action Items

1. Dan Colegrove to post the list of IEEE projects for potential liaison {Done}
2. Dan Colegrove to restart the DDT technical report through INCITS {In Progress}
3. Dan Colegrove to find out the status of the EDD erratum {EDD Erratum is published and attached to the purchasable document}

7. Old Business

7.1 ATA/ATAPI-7: 1532D

7.1.1 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.

7.1.2 ATA/ATAPI-7 Amendment [Overby]

7.1.2.1 INCITS Status

Dan Colegrove has not received status yet from INCITS.

7.2 HBA Amendment 1

Dan Colegrove stated that public review was scheduled for April 2007.

7.3 HBA-2 Standard Project: 2014-D

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

7.4 DDT Technical Report

Dan Colegrove reported that the project was delayed at INCITS and Dan is attempting to work this out with INCITS to get the project processed.

7.5 ATA/ATAPI-8 Projects

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

7.5.1.1 Results of ACS NV Cache Ad Hoc Meeting

7.5.1.1.1 Ad-Hoc Recommendations (e07119) [Chen]

Joseph Chen reviewed the meeting minutes of the NV cache teleconference call and the resulting recommendations and those were incorporated into Curtis Stevens document e06190 for discussion during the meeting.

7.5.1.1.2 NV Cache Interaction FUA, Read, and Verify (e06190) [Stevens]

Curtis Stevens reviewed the proposal to update the NV cache (r3). The committee held a debate about if NV cache is media, underlying the question about what happens with FUA and flush operations. Definitions were attempted for cache, non-volatile cache, media, and non-volatile media. Debate continued about what happens with these operations under various different models of operation. Mark Overby suggested, and Sumit Puri agreed, that the various parties to this debate have not changed positions and that the committee just needs to finalize this proposal and put it up for a vote. There was general agreement that this issue needs to be closed.

As a result, the proposal was examined in depth.

Dan Colegrove stated, during discussion of WRITE DMA FUA, that merely the user data has to move to a non-volatile location. Curtis and Dan stated that the choice of sending it to multiple non-volatile locations is allowed.

As the rest of the proposal was reviewed, the definitions were fine tuned in order to reflect how they would be used in those updated.

After the clarifications on the definitions, each editors note in the proposal was reviewed and resolved.

A lengthy discussion ensued about if an enable/disable function was needed. Dan Colegrove requested a straw poll if an enable/disable function was needed. 12 were in favor, 3 were opposed. Curtis requested a straw poll if it was mandatory or not. 14 were in favor, 1 was opposed. Curtis modified the enable or disable text to reflect the outcome of the straw polls.

Jim Hatfield moved, Curtis Stevens seconding, moved that e06190r2 as revised (e06190r3) be incorporated into ATA8-ACS. The motion passed with 11 ayes, 2 nays, and 2 abstentions. Frank Shu stated that he voted no because of the enable and disable feature. Mark Overby stated that he voted no for the continuing reason that not flushing to the underlying media is the wrong behavior and that the feature set is too immature for inclusion into ATA8-ACS.

7.5.1.2 NV Cache Power State Update [Chen]

Dan Colegrove moved, Curtis Stevens seconded, that the text for the existing draft for changing the behavior of the drive on power-on remain unchanged. The motion passed with 11 ayes, 1 nay, and 4 abstentions.

7.5.1.3 ATA Feature Summary (e05144) [Chen]

Joseph Chen stated that this proposal was dependent on his DCO proposal and asked that this be deferred until that proposal was taken up.

7.5.1.4 HPA State Machine Diagram (e03124) [Chen]

Joseph Chen reviewed the open issues against the HPA state diagram revision. Feedback was given to Joseph and the general feeling was that this is close to being ready for a vote. Joseph agreed to post a new revision of the document with the requested changes.

7.5.1.5 1K/4K Physical Sector Informative Annex (e05122) [Colegrove]

Wayne Bellamy noted that this document did not have any text about the interactions between 4k and nv cache. Dan Colegrove moved, Curtis Stevens seconding, that e05122r6, as revised, be incorporated into ATA8-ACS. The motion passed 13 ayes, 1 nay, and 1 abstention. Wayne noted that he voted no because they prefer this as a technical report.

7.5.1.6 NOP Clarifications (e06126) [Bellamy]

Wayne Bellamy stated that this was voted in at the last meeting and could be removed from the agenda.

7.5.1.7 Security Command Update (e07105) [Chen]

Joseph Chen reviewed revision 1 of his proposal, not yet posted to define behaviors that were not previously documented. Curtis noted this document is allowing new behaviors that were not previously allowed by taking something outside the standard and allowing it because it is in the field. Brian Dees and Curtis both stated that they felt that the table was confusing and that if there was a problem with the new documentation then it should be corrected. Curtis stated that he would be willing to consider this for ACS-2, but not ACS. Joseph agreed that he would move this to ACS-2 and would post revision 1 to the website.

7.5.1.8 SCT Command Timer Update (e07103) [Chen]

Joseph Chen reviewed his proposal to set command timer values across resets. Jim Hatfield stated that he felt that it was not necessary. Mark Overby also stated that his current use of this does not need for the setting to be non-volatile. Curtis stated that he has heard no requests from the field as needing this at this point. Joseph stated that he would withdraw this for the time being and determine if it is needed for ACS-2.

7.5.1.9 Editorial Change in ACS for IEEE 1667 (e07122) [Shimor]

Avraham Shimor requested that the references be updated now that IEEE 1667 is a published standard. Dan Colegrove moved, Avraham Shimor seconded, that the change be accepted into ATA8-ACS. The motion passed with unanimous consent.

7.5.1.10 Write Uncorrectable Simplification (e07112) [Colegrove]

Dan Colegrove presented his proposal to simplify the write uncorrectable command (r0). Jim Hatfield noted that he would like to require only one of the two modes that Dan is proposing because of limitations in the way some drives can operate. Dan stated that the proposal allows the device to not log the error when reading a flagged sector in the standard error logs. Jeff Wolford worked with Dan during the review to revised the wording about logging to be clearer. Dan accepted these changes into the document.

Dan Colegrove moved, Curtis Stevens seconding, that e07112 r0 as revised be incorporated into ATA8-ACS. The motion passed with 14 ayes, 0 nays, and 1 abstention.

7.5.1.11 Modify definition of Device Fault (e07117) [Hatfield]

Jim Hatfield presented his proposal that allows a device to continue accepting commands. Discussion revolved around if there was a need to accept commands with device fault set. Curtis Stevens moved, Jim Hatfield sec-

ending, that e07117r0 be incorporated into ATA8-ACS. The motion failed with 5 ayes, 5 nays, and 6 abstentions.

The next day Mark Overby moved, Jim Hatfield seconding, that the motion be reconsidered. The motion passed with 6 ayes, 3 nays, and 2 abstentions. On debate of the motion, Mark stated that he had new information that requires him to change his vote.

Mark Overby stated that he was changing his vote from no to yes because there are conditions where vendor-specific commands are desired to be sent even if DF is on because there are no impacts on the safety of the data. He stated an example of using vendor-specific commands for diagnostics or repair of a RAID device. Dan Colegrove stated that he was opposed because if it is permissible, it becomes unclear which commands are permitted and which are not. Curtis stated that he thought a compromise might be possible to allow vendor-specific commands but require that all others abort.

The motion failed with 4 ayes, 5 nays, and 5 abstentions.

7.5.1.12 ATA8-ACS Endianness clarifications (e07129) [Bellamy]

Wayne Bellamy presented revision 0 of his proposal. Hale Landis pointed out the history of why the bits, bytes, and words are laid out as they are in IDENTIFY DEVICE. Hale also noted that the method in which they are transmitted across the physical interface is irrelevant as to how the data appears in the structure. It is the responsibility of the host and host software to deal with the mapping once the data has come off the wire and into host memory. Curtis noted that the proposal also included a definition of bits inside the OUI. There were questions about what value documenting these bits has.

Curtis also reviewed the definitions that were part of the proposal and noted that the MSb and LSb definitions could be useful for ATA8-ACS. Curtis and Dan Colegrove both noted that some of the other clarifications would be useful (e.g., WWN definition). Curtis stated that the tables for showing byte swapping were good and he thought that including them has value.

Wayne stated that he would work on the proposal and bring it back to the next meeting.

7.5.1.13 Proactive Reporting and Error Correcting (e05142) [Shu]

Frank Shu asked that this item be deferred to ACS-2.

7.5.1.14 SATA-IO Commands for ATA-8 (e07131) [Stevens]

Curtis Stevens reviewed r0 of his document, not yet posted. This document covers the non-NCQ material from SATA that still needs to be integrated into ATA8. Curtis noted that the cross references in this material need to not be a specific section number in another document, but rather references to SATA 2.6. He also took a note to make sure all references were now SATA 2.6. Curtis took various editorial feedback for the document and agreed to turn a new revision before the next meeting.

Curtis Stevens moved, Jim Hatfield, to authorize a teleconference to discuss this proposal (e07131) before the next plenary. The motion passed with unanimous consent.

7.5.1.15 SATA-IO 2.6 Transport Bit [Dees]

Brian Dees requested that the same transport word in IDENTIFY DEVICE that reports the device transport type also be added for packet devices as well. Curtis agreed to add that to the open issues list. Brian also requested that SATA 2.6 be added to the list of transports. Curtis agreed with this as well.

Curtis Stevens moved, Brian Dees seconding, that the changes (as recorded in issue #180) be made in ATA8-ACS. The motion passed with unanimous consent.

7.5.1.16 Data Transfer Errors and Device Inconsistencies [Dees]

Brian Dees stated that SATA-IO just went through an effort to clarify data transfer errors and clarifying behavior for how transfer errors are handled. Brian suggested that as this work is continuing, that T13 should also look at this since the NCQ material is being incorporated into ATA8.

7.5.1.17 Error Outputs for FPDMA Not Defined [Stevens]

Curtis Stevens reported that this was handled as part of the open issues list.

7.5.1.18 Remove Input and Output Structures (e07134) [Bellamy]

Wayne Bellamy presented a document from himself and Rob Elliott to make changes to how the parameters for each command are presented in the document. The suggestion is to break the structures out into various fields and display those fields into arguments, more like the SCSI style. Discussion ensued about the merits of changing. Further discussion was held about the word column in the structure and the fact that it has no meaning to how the data is transported across the wire(s).

A straw poll was conducted on if the word column should remain in the data structures. 11 were in favor of keeping it, and 3 were opposed.

Wayne agreed to continue looking at this as asked that the proposal be kept on the agenda.

7.5.1.19 Little Endian WWN (e07132) [Bellamy]

Wayne Bellamy reviewed a proposal from Wayne and Rob Elliot involving how the WWN is laid out in the data structure. Wayne stated that the way it was laid out was not consistent with how SCSI lays out the field. It was acknowledged that this was true and that the host SW or processor or controller has to deal with laying out the field and comprehending it. Hale Landis noted that the way the words are organized is a legacy of the parallel ATA interface.

Wayne agreed to continue looking at this and asked that this proposal be kept on the agenda.

7.5.1.20 IDENTIFY DEVICE Update (e07130) [Chen]

Joseph Chen reviewed his document to provide clarity on IDENTIFY DEVICE data bits for which bits are tied to other bits and controls.

Joseph Chen moved, Curtis Stevens seconded, that e07130 be included into ATA8-ACS. The motion passed with 13 ayes, 0 nays, and 3 abstentions.

7.5.1.21 DCO and IDENTIFY Data Structure (e07120) [Chen]

Joseph Chen reviewed his document that describes the various interactions of DCO and IDENTIFY DEVICE and SET FEATURES. After review, Joseph asked if people thought this should go into the standard or an annex. There was general feeling that this is good material, but shouldn't be in the standard.

7.5.1.22 Reporting RPM, Footprint, and Connector Type (e06176) [Bellamy]

Wayne Bellamy presented revision 0 of his proposal to report RPM and form factor for a device. The committee discussed the proposal and provided feedback to Wayne about form factor concerns. Suggestions were also made about possible alternative locations to provide this information as opposed to IDENTIFY DEVICE data. Wayne agreed to revised his proposal and bring to the next meeting.

7.5.1.23 ATA8-ACS Open Issues (e06122) [Stevens]

Curtis Stevens reviewed the current open issues list and what remains to be resolved from these issues.

Discussion ensued about the error returns from the NCQ commands when the command has already been accepted. The log page return value needs to have a unique set of error returns that are in that log page and that it should be the READ DMA EXT results.

7.5.1.24 Draft Review [Stevens]

7.5.1.24.1 Comments on ATA-8 ACS From Reflector

Curtis Stevens stated that these items were covered during the open issues discussion.

7.5.1.24.2 Seagate comments on ATA8-ACS (e07139) [Hatfield]

Curtis Stevens and Jim Hatfield reviewed the Seagate open issues list.

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

7.5.2.1 Review of Draft

Mark Overby reviewed revision 1 of the ATA8-APT. The major changes reviewed were the changes to the state machines for PACKET to reflect the removal of the overlapped feature set. In addition, the general changes were reviewed. Mark asked if people would rather see a rough version of ATA8-APT or wait for it to be more complete. There was general consensus that people would rather see the rough version. Mark agreed to post revision 1 of the ATA8-APT before the March T10 meeting.

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

7.5.3.1 Review of Draft

Mladen Luksic reviewed his latest material to describe the mapping of ATA8 items to SATA items. Mladen received feedback about his proposal and agreed to turn a new revision. Dan Colegrove suggested that what he would prefer to see is just a raw mapping table of names to names without describing the layout of the FIS. Mladen agreed to revise the document and post.

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

7.5.4.1 Letter Ballot Comment Resolution

No comments have been received, so no review was held.

7.5.5 ATA8 Schedule Review

Curtis Stevens stated that the last major remaining piece to be incorporated into ATA8-ACS is the SATA-IO material. Curtis stated that he wants to have all proposals voted in for ACS by April so that the ACS document can be voted to send to letter ballot at the June meeting.

7.6 ACS-2 Project 2015-D [Stevens]

7.6.1 Additional device statistics - Usage Length [Chen]

Joseph Chen requested that this be deferred to the authorized teleconferences.

7.6.2 Additional device statistics - Errors [Chen]

Joseph Chen requested that this be deferred to the authorized teleconferences.

7.6.3 Additional device statistics - Free Fall (e06182) [Chen]

Joseph Chen requested that this be deferred to the authorized teleconferences.

7.6.4 Additional device statistics - Temperature [Chen]

Joseph Chen requested that this be deferred to the authorized teleconferences.

7.6.5 Additional device statistics - NV Cache (e06184) [Chen]

Joseph Chen presented a proposal for additional device statistics related to NV cache. There was concern raised that these statistics expose too much of the vendors implementation for most people to be comfortable with. Joseph agreed to work on this proposal and bring it back for consideration.

7.6.6 Data Path Protection [Stevens]

Curtis Stevens asked that this be deferred to the next meeting.

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

Wayne Bellamy asked that this be deferred to the next meeting.

7.6.8 Freefall Feature Set Enhancements (e06120) [Chen]

Joseph Chen stated that he didn't know what changes still need to be made to this proposal. Curtis Stevens suggested that this proposal get more review for feedback before proceeding. It was agreed to defer this to the next meeting.

7.6.9 Set Feature Indicate Power Source (e07121) [Hatfield]

Jim Hatfield presented a proposal to add a SET FEATURES subcommand to indicate to the device the current power state of the host. Dan Colegrove stated that he was concerned about the interactions between this and APM and other power management feature sets. Jim stated that he would work on clarifying this and bring a new revision of the proposal.

7.6.10 Request Sense for ATA (e07123) [Overby]

Mark Overby presented a proposal to create a mechanism to get additional sense information and/or error information from an ATA device. Jim Hatfield stated that he favored the proposal, but there were issues with using bit 11 of the device register as it is not transported. Mark agreed to correct this and find another mechanism. Other feedback was given about tying this to SCSI SPC ASC and ASCQ's and Mark agreed to incorporate that feedback into the next revision of the proposal.

7.6.11 TCG Command Error Code Mechanism [Chen]

Joseph Chen stated that he felt that this was covered by Mark Overby's proposal for REQUEST SENSE for ATA.

7.7 EDD Erratum

7.7.1 INCITS Status

Dan Colegrove stated that the EDD erratum has been published and is available for purchase as part of the EDD standard and this item could be removed from the agenda for future meetings.

7.8 PARTIES Amendment

7.8.1 Withdraw PARTIES Amendment

Mark Overby moved, Curtis Stevens seconded, that the project to do amendment 1 for PARTIES be withdrawn. The motion passed with 15 ayes, 0 nays, and 0 abstentions.

7.9 T13 reflector, FTP, and web site setup

7.9.1 Web Site Tutorial

This item was deferred for lack of time.

7.9.2 Web Site and Reflector Items

Curtis Stevens stated that the new reflector is up and running and the remainder of the website has been deployed. He encouraged people to provide him with any feedback if there are problems.

7.10 INCITS Membership and Meeting Attendance Policy

Dan Colegrove reported no new information.

8. New Business

8.1 Items from the Reflector

No items were reported as needing action.

9. Liaison Reports

9.1 T10 [Colegrove]

9.1.1 SCSI to ATA Translation (SAT) Working Group Report

Mark Overby reported that SAT-2 revision 0 is now available and that the current list of open items and work items for SAT-2 is also posted. Both documents are available at the T10 website.

9.1.2 General T10 Report

Dan Colegrove stated that he has not yet posted the T10 liaison report, but will do so.

9.2 T11 [Colegrove]

Dan Colegrove reported that FC-SATA has gone to letter ballot.

9.3 IEEE

Dan Colegrove stated that he posted the liaison opportunities document to the website.

9.4 Trusted Computing Group [Hatfield]

Jim Hatfield stated that the SIIF working group is meeting following the T13 meeting for TCG members. He also noted that the working group is meeting during the T10 meeting week.

9.5 SFF [Colegrove]

Dan Colegrove stated that he had nothing to report.

9.6 IDEMA [Colegrove]

Dan Colegrove reported that IDEMA is having a long block symposium on May 2, 2007 in Longmont, CO.

9.7 CFA

Dan Colegrove stated he had not received any more information about reserved field recovery at this time, but would continue to pursue with CFA.

9.8 Serial ATA IO [Dees]

Brian Dees was not available to present his liaison report.

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 restart the DDT technical report through INCITS

12. Approved Proposals

ATA8-ACS:

e06190 NV Cache Clarifications
 e05122 1k/4k Annex
 e07112 Write Uncorrectable Simplification
 e07130 Identify Device Update

13. Meeting Schedules

13.1 Meeting Length

The April meeting will remain at 3 days.

13.2 Authorization of Ad-Hoc Working Groups

One teleconference was authorized to discuss e07131. Curtis Stevens will publish the details of the teleconference to the website and reflector.

Joseph Chen moved, Mark Overby seconding, that up to two teleconferences be authorized to discuss device statistics. The motion passed with unanimous consent. Joseph stated he would post announcements to the reflector and the web site.

Curtis Stevens moved, Jim Hatfield, that up to two teleconferences be authorized to discuss ATA8-ACS. The motion passed with unanimous consent.

13.3 Long-Term Meeting Schedule

Table 2: 2007 Dates

Date	Location	Host	Contact
April 24-27, 2007	Longmont, CO	ST Microelectronics	Aaron Wilson
June 19-22, 2007	San Jose, CA	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, Jim Hatfield seconding, that the meeting be adjourned at 1640 Thursday, 22 February 2007. The motion passed with unanimous consent.