

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

Doc. No.: T13/08-102r0

Date: January 10, 2008

Reply to: Mark Overby

To: T13 Membership
From: Mark Overby
Subject: T13 Plenary Meeting (Redmond, WA) -- December 11-12, 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 0900 Tuesday, December 11th, 2007. Dan Colegrove thanked Frank Shu and Microsoft for hosting.

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 currently 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.

Dan Colegrove noted that the fee structure is changing for next year to \$1200 USD and details of the new fare structure was posted to the T13 website.

Persons with questions or requests regarding membership fees and/or subscriptions for mailings should contact Barbara Bennett, ITI Standards Operations, at bbennett@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. 15 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
Bill Martin	Emulex		Mark Overby	NVIDIA
Jim Hatfield	Seagate		Joseph Chen	Samsung
Larry Barras	Apple		Curtis Stevens	Western Digital
Wally Bretzer	CPR Tools		Yoni Shternhell	SanDisk
Dan Colegrove	Hitachi GST		Steve Livaccari	IBM
Wayne Bellamy	HP		Duncan Penman	Western Digital
Patrick Hery	Toshiba		John MacInnis	Phoenix
Marty Stevens	Dell		Brian Day	LSI
Frank Shu	Microsoft		Hale Landis	Broadcom
John Geldman	Lexar Media		Duncan Penman	Western Digital
Joe Scanlon	AMD			

4. Approval of the minutes from the previous T13 plenary meeting (e07164r0)

Dan Colegrove moved, Mark Overby seconded, that the minutes be approved. The motion passed with unanimous consent.

5. Document Distribution

No documents were distributed.

6. Review of Previous Action Items

1. Dan Colegrove to check the status of the DDT technical report. [Carryover]
2. Dan Colegrove to check with Apple and Intel for patent policy letters for ATA8-ACS. [Patent letter received from Intel. Apple not yet received. Carryover]

7. Old Business

7.1 INCITS Maintenance ATA/ATAPI-4

The committee resumed discussion about what should be done with ATA/ATAPI-4. John Geldman noted that CFA was still referencing ATA-4 for many of their supported device types and suggested that stabilization seemed appropriate for this standard. Dan Colegrove stated that he was opposed to stabilization as there was a desire to withdraw ATA-4 eventually. Curtis Stevens moved, John Geldman seconding, that ATA-4 be reaffirmed. The motion passed with 11 ayes, 0 nays, and 1 abstention.

7.2 ATA/ATAPI-7: 1532D

7.2.1 ISO Status

Mark Overby stated that the ISO editor had some questions about volume 3 and Mark was researching.

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 stated that the amendment is going through management review and public review with INCITS.

7.5 ATA/ATAPI-8 Projects

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

7.5.1.1 *Review of Working Group Recommendations*

Curtis Stevens led a review of the resolution of letter ballot comments from the November working group meeting. Changes made during the working group were reviewed and open questions from that meeting were discussed. Curtis noted any additional resolutions in the letter ballot comment resolution document.

7.5.1.2 *Letter Ballot Comment Resolution (e07174)*

Curtis Stevens moved, Dan Colegrove seconded, that e07174r4 be incorporated into ATA8-ACS. The motion passed with 12 ayes, 1 nay, and 1 abstention. Curtis stated that he would post a revision 4c of ATA8-ACS that incorporates the letter ballot comment resolutions. Dan Colegrove stated that he would issue a letter ballot in January to send revision 4c to INCITS for first public review.

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

7.5.2.1 *Report of Working Group Action*

Mark Overby reported that the working group reviewed e07199, e07145, and ATA8-APT. The working group made a recommendation to the plenary that e07199r0 be incorporated into ATA8-APT that passed with unanimous consent.

7.5.2.2 *SLEEP and INTRQ clarifications (e07199)*

Mark Overby reviewed the clarifications to maintain the current behavior of the SLEEP command as was recommended by the working group. No additional suggestions were made. Jim Hatfield moved, Mark Overby seconded, that e07199r0 be incorporated into ATA8-APT. The motion passed with 10 ayes, 0 nays, and 2 abstentions.

7.5.2.3 *ACS Mapping Proposal (e07145)*

Mark Overby reviewed r0 of the mapping proposal to map ATA8-ACS items into ATA8-APT. Several suggestions were made for clarification and review for r1 of the proposal. Mark agreed to look at these suggestions and turn a revision of the proposal for the next plenary meeting.

7.5.2.4 *Review of Draft*

Mark Overby led a review of the current draft of ATA8-APT with changes made at the working group as well as editorial changes made since the last meeting. Mark agreed to post this document as r2 and then post r2a with approved proposals and with the comments accepted. Mark suggested that the document should be stable by the April meeting and that possibly could be sent to letter ballot after that meeting or after the June meeting.

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

7.5.3.1 *Review of Draft*

Curtis Stevens reviewed the latest, non-posted, version of AST. There were several requests to post this as soon as possible as the existing draft that is posted was very confusing. Curtis agreed to do so.

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

7.5.4.1 *Letter Ballot Comment Resolution*

There were no new comments received on ATA8-AAM for inclusion.

7.5.5 ATA8 Schedule Review

ATA8-APT schedule was discussed during agenda item for ATA8-APT draft review.

7.6 ACS-2 Project 2015-D [Stevens]

7.6.1 INCITS Status

Dan Colegrove reported that there was no new status.

7.6.2 SCT Zone ERP (e07169r1) [Colegrove]

Dan Colegrove presented a proposal to allow setting default time limits by LBA ranges. There was significant discussion about the usage models of streaming and why this feature set is needed. There was general understanding about the usage models for streaming and why this proposal helps address a technical need in the market. There were some additional concerns related about the interactions between this feature set and other feature sets. Dan agreed to go back and look at some of those interactions and clarify, as needed, in the next revision of the proposal.

7.6.3 Additional device statistics - Usage (e06180) [Chen]

Joseph Chen discussed revision 4 of his proposal. There was significant discussion over the spindle motor power-on hours statistic and how it was tracked and updated. Further discussion ensued also about tracking read data and write data and what read data and write data is. Joseph took feedback from the group and agreed to revise the proposal. Later in the meeting Joseph displayed the revised proposal. Joseph Chen moved, Jim Hatfield seconded, that e06180r4 as revised be incorporated into ATA8-ACS-2. Wayne Bellamy asked if the statistics are stated to be non-volatile. Jim noted that ACS does not currently state that the device statistics are non-volatile. Wayne stated that this was not clear about what the initialization state is and if they are saved. Joseph made changes that Wayne thought would address his concerns. The motion passed with 9 ayes, 2 nays, and 2 abstentions. Mark Overby stated that he voted no because he felt that there was still too much churn over these statistics and they are not ready for integration.

7.6.4 Additional device statistics - Errors (e06181) [Chen]

Joseph Chen presented revision 1 of his proposal. There was significant discussion about the reporting of reallocation sectors. There was confusion about if this is logical sectors or physical sectors. Joseph clarified the proposal to be logical sectors. During that discussion it was noted that there was significant confusion about when statistics are updated, if they are updated during sleep or standby, if updating the statistic can require a spin up, and other related issues. Jim Hatfield agreed to bring a separate proposal to a future meeting to try and address these problems. Mark Overby and Wayne Bellamy noted that they were concerned about the general state of these proposals and wanted to see some of these concerns before they were incorporated. Jim Hatfield moved, Curtis Stevens seconded, that two teleconferences be authorized for device statistics. The motion passed with unanimous consent.

7.6.5 Additional device statistics - Temperature (e06183) [Chen]

Joseph Chen asked that this be deferred to the next meeting.

7.6.6 Transport Statistics [Chen] (e07168)

Joseph Chen asked that this be deferred to the next meeting.

7.6.7 Data Path Protection (e07162) [Stevens]

Curtis Stevens reported that during the SAT meeting all options for type 2 data protection had been basically eliminated. He was intending to defer type 2 protection to a future proposal and his proposal would address types 1 and 3. He stated that he would continue to work with those people that are interested in type 2. Curtis also agreed to bring a revised proposal to the next meeting.

7.6.8 Freefall Feature Set Enhancements (e06120) [Chen]

Joseph Chen asked that this be deferred to the next meeting.

7.6.9 Security Command Update (e07104) [Chen]

This item was deferred to the next meeting.

7.6.10 Extended Security (e07189) [Chen]

This item was deferred to the next meeting.

7.6.11 Security Erase Change (e07188) [Chen]

Joseph Chen presented a proposal that would change the behavior of the SECURITY ERASE UNIT

Mark Overby moved, John Goldman seconded, that SECURITY ERASE UNIT be changed to allow all ones or all zeros for a pattern. The motion passed with 6 ayes, 2 nays, and 5 abstentions. Curtis Stevens and Jim Hatfield stated that they voted no because they thought that this was too large of a change at this point.

7.6.12 Data Set Management (e07154) [Shu]

Frank Shu reviewed revision 5 of his proposal for data set management commands for ATA. Mark Overby noted that the working group has recommended this proposal for inclusion into ATA8-ACS2 at the November working group by unanimous consent. Frank brought up a new concern that was raised about the data in the LBA becoming indeterminate when the sector is trimmed. The concern was that there should be a restriction that the data for a trimmed LBA cannot be obtained, when read, from another non-trimmed sector. Later in the meeting discussion resumed about the need to make sure that the device does not return data for a trimmed sector that comes from another sector. After lengthy discussion, it was determined that the requirement to do so does not exist with today's drives for scenarios involving such things as reallocation. It was generally agreed to leave the trimmed data as being indeterminate. Frank Shu moved, Mark Overby seconded, that e07154r5 as revised be approved for incorporation into ATA8-ACS2. The motion passed with 12 ayes, 0 nays, and 2 abstentions.

7.6.13 Proactive Reporting and Correcting (e05142) [Shu]

Frank Shu stated that based on progress on device statistics and the REQUEST SENSE proposal that they would withdraw their proposal for the time being.

7.6.14 Set Features Set Policy (e07121) [Hatfield]

The committee gave Jim Hatfield feedback on the proposal. Comments included requests for state description improvements and a request to consider an enable bit for low performance policy setting. Jim will turn a new revision for the next meeting.

7.6.15 SSD Identify (e07153) [Shu]

The committee gave Frank Shu feedback on the proposal. One comment was: aren't data rates already observable so they do not have to be in Identify. Also there was the suggestion that the identify data could include parameters for sequential and random access rates. Frank will turn a new revision for the next meeting.

7.6.16 Change Host Vendor Specific to Scratch Pad (e07159r0) [Stevens]

First draft due in June 2008.

7.6.17 Sanitize Command (e07197r0) [Goldman]

The committee gave John Goldman feedback on the proposal. Comments included improvements to resume on power on, overwrite patterns, removal of the hours timer, interaction with DCO, power cycle immunity / continuation, and no requirement to set LBA 0 to all zeros. John will turn a new revision for the next meeting.

7.7 EDD Erratum

7.7.1 INCITS Status

Dan Colegrove stated that the erratum was being prepared for INCITS executive board and public review.

7.8 T13 reflector, FTP, and web site setup

7.8.1 Web Site and Reflector Items

No items were reported.

7.9 INCITS Membership and Meeting Attendance Policy

Dan Colegrove noted that the membership fees for 2008 had been revised and encouraged people to view the documents posted to both the T10 and T13 sites describing the new membership and fee structure.

8. New Business

8.1 Items from the Reflector

There were no items from the reflector that needed to be addressed. Curtis Stevens believed that all existing problems with the reflector were fixed. He noted that the search feature was still broken on the website.

9. Liaison Reports

9.1 T10 [Colegrove]

9.1.1 SCSI to ATA Translation (SAT) Working Group Report

Mark Overby noted that SAT will meet the week of the February T13 plenary on Friday.

9.2 T11 [Colegrove]

There is no need for further FC-SATA updates as activity at T11 on FC-SATA has been concluded.

9.3 IEEE

The IEEE is developing encryption methods that may apply to T13 activities eventually:

1619.0 Encryption algorithms

1619.1 Authenticated encryption commands for tape

1619.2 Wide encryption methods, meets with T10

9.4 Trusted Computing Group [Hatfield]

There will be no more SIIF meetings co-located with T13.

9.5 SFF [Colegrove]

There were no SFF items to report.

9.6 IDEMA [Colegrove]

Idema is continuing to promote 4K physical sectors. They are emphasizing performance improvements such as reliability, performance and density.

9.7 CFA [Geldman]

CFA held a meeting in La Jolla in November. They are developing a Serial ATA interface CFA form factor specification called CFast.

9.8 Serial ATA IO [Hatfield]

SATA-IO is working on clarifications for sleep and the 2 second wait for interrupt clearing rule. Setting FUA off with DCO only applies to the FUA commands not the FUA bit in NCQ commands. SATA-IO is considering aligning future SATA-IO documents with ATA8-ACS.

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.

Wayne Bellamy stated that HP has provided a letter to the chair regarding patents held by HP for ATA8-ACS. Dan Colegrove stated that he would post the letter to the website.

11. Review of Action Items

1. Dan Colegrove to check the status of the DDT technical report.
2. Dan Colegrove to check with Apple for patent policy letters for ATA8-ACS.

12. Approved Proposals

ACS-2:

e07154r6 (Dataset Management)

e06180r5 (Usage Device Statistics)

APT:

e07199r0 (Sleep and INTRQ)

13. Meeting Schedules

13.1 Meeting Length

The February meeting will remain at 3 days.

13.2 Authorization of Ad-Hoc Working Groups

One teleconference and one face to face was authorized during discussion of agenda items (see the agenda item details for the authorization motions, details, and voting results).

13.3 Long-Term Meeting Schedule

Table 2: 2008 Dates

Date	Location	Host	Contact
February 19-22, 2008	Lake Forest, CA	Western Digital	Curtis Stevens
April 22-25, 2008	Las Vegas, NV	Hitachi GST	Dan Colegrove
June 24-27, 2008	Longmont, CO	ST Microelectronics	Aaron Wilson
August 18-22, 2008	San Jose, CA	Samsung	Joseph Chen
October 21-24, 2008	San Jose, CA or Las Vegas, NV	Fujitsu	Sumit Puri
December 16-19, 2008	Austin, TX or Seattle, WA	NVIDIA	Mark Overby

14. Adjournment

Jim Hatfield moved, Dan Colegrove seconding, that the meeting be adjourned at 1700, 12 December 2007. The motion passed with unanimous consent.