

Accredited Standards Committee*

InterNational Committee for Information Technology Standards (INCITS)

Doc. No.: T13/08-139r0

Date: November 1, 2008

Reply to: Mark Overby

To: T13 Membership
From: Mark Overby
Subject: T13 Plenary Meeting (Sunnyvale, CA) -- October 21-13, 2008

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. Call for Patents
8. Old Business
9. New Business
10. Liaison Reports
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, October 21st, 2008. Dan Colegrove thanked Fujitsu for hosting.

As is customary, the people in attendance introduced themselves, and a copy of the attendance list was circulated.

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.

The INCITS Patent Policy Slides (April 2008) were shown without comment.

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

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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

Curtis Stevens 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 are 1200.00 USD. Alternates are included in the membership fee.

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 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. 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
Mark Overby	NVIDIA		Dan Colegrove	Hitachi GST
Joe Scanlon	AMD		Bill Martin	Emulex

Table 1: Attendance List

Attendee	Company		Attendee	Company
Sumit Puri	Fujitsu		Jeff Wolford	Hewlett Packard
Robert Strong	Intel		Ken Foust	Kionix
John Geldman	Lexar Media		Dan Meyer	LSI
George Penokie	LSI		Frank Shu	Microsoft
Fred Knight	NetApp		Joseph Chen	Samsung
David Landsman	San Disk		Jim Hatfield	Seagate
Patrick Hery	Toshiba		Curtis Stevens	Western Digital
Aaron Wilson	STEC		Anil Godavarthi	Kionix

4. Approval of the minutes from the previous T13 plenary meeting (e08112r1)

Curtis Stevens moved, Joseph Chen 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

All previous action items were completed.

7. Call for Patents

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.

Seagate (Jim Hatfield) responded that Seagate will comply with the INCITS patent policy for patents relating to SCT and that a letter will be posted shortly.

Microsoft responded to the call for patents and stated that they had provided a letter to INCITS for patents relating to ATA8-ACS and that they would comply with INCITS patent policy for that material.

8. Old Business

8.1 INCITS Change in RD1 [Colegrove]

Dan Colegrove stated that the INCITS board has balloting a policy to allow groups to pick an open or closed format. Open groups still have to keep drafts of standards for members only. Dan also noted that INCITS is requiring the committees to convert to Kavi for document and group management. This is expected to roll out in March 2009.

8.2 ATA/ATAPI-7: 1532D

8.2.1 ISO Status

Dan Colegrove stated that he would put on the agenda if we want to continue to proceed with ATA-7 ISO versions or not. Mark expressed frustration that there has been significant communication problems in getting the documents resolved with ISO editors. He also noted that the IR for T10 has decided to work with Curtis Stevens instead

on ATA-7. Curtis stated that he did not have the bandwidth to complete ATA-7. Dan Colegrove stated that he would attempt to make the changes that were being requested.

8.3 HBA-2 Standard Project: 2014-D

Mark Overby stated that the project was pending the next draft of ATA8-AST for further work.

8.4 ATA/ATAPI-8 Projects

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

8.4.1.1 *INCITS Status*

Dan Colegrove stated that the public comments have been replied to and the INCITS editor is still working on the document and is pending management review.

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

8.4.2.1 *ATA8-APT Open Issues (e07177)*

Mark Overby stated that all open issues have been handled.

8.4.2.2 *Review of Draft*

Mark Overby stated that no changes had been made since the last meeting when the draft was reviewed as well as the mapping document. He requested that Dan Colegrove issue a letter ballot to forward APT to first public review in approximately two weeks.

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

8.4.3.1 *Review of Draft*

Curtis Stevens stated that he is waiting to work on the next version pending the release of APT.

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

8.4.4.1 *INCITS Review*

Dan Colegrove reported that AAM was pending executive board approval at INCITS.

8.4.5 ATA8 Schedule Review

Curtis Stevens moved, Joseph Chen seconding, that new proposal cutoff be set following the December T13 plenary. The motion passed with 14 ayes, 0 nays, and 1 abstention.

8.5 ACS-2 Project 2015-D [Stevens]

8.5.1 ACS-2 Open Issues List (e07172) [Stevens]

Curtis Stevens reviewed the current revision of the open issues list and took feedback. George Penokie moved, Curtis Stevens seconding, that issue number 61 be incorporated into ACS-2. The motion passed with 7 ayes, 0 nays, and 3 abstentions.

8.5.2 SCT Zone Control (e07169) [Colegrove]

Dan Colegrove asked that this item be deferred to the next meeting.

8.5.3 Device Statistics

8.5.3.1 *Ad Hoc Teleconference Report [Chen]*

Joseph Chen presented the report of the teleconference activities relating to device statistics.

8.5.3.2 *Device Statistics Overview (e08106) [Hatfield]*

Jim Hatfield moved, Bill Martin seconding, that e08106r8 as modified be accepted for inclusion into ACS-2. The motion passed with 13 ayes, 0 nays, and 0 abstentions. Curtis Stevens moved, Bill Martin seconded, to reconsider the motion to accept e08106r8 for inclusion into ACS-2. The motion passed with 14 ayes, 0 nays, and 0 abstentions. Further discussion then occurred to modify the proposal based on conversations about other statistic formats. Jim Hatfield made revisions based on the feedback received. Bill Martin moved, Curtis Stevens seconding, that e08106r9 as revised be accepted for inclusion into ACS-2. The motion passed with 14 ayes, 0 nays, and 0 abstentions.

8.5.3.3 Additional device statistics - Solid State (e06184) [Chen]

Joseph Chen presented a comparison of the two solid state statistics proposals. John Geldman suggested that the comparison wasn't necessarily helpful in closing on what statistics should be added to ACS-2. A lengthy discussion was held about the usefulness of the statistics in the use cases that were discussed at the June meeting in Colorado. Curtis Stevens noted that many of these statistics seem to be trying to address use cases that the committee had already decided on. Mark Overby suggested that if we ignore failure prediction, a use case Curtis noted that the committee rejected, all of these boils back to using the existing SMART notification mechanisms. Curtis and John Geldman agreed that these mechanisms allow you to indicate to the user that failure is imminent. Rob Strong indicated that he agreed that the proposed statistics do not help the use cases that were agreed upon and that the current propose statistics are not capable of generating uniform information for failure analysis.

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

Joseph Chen presented revision ten of the proposal to add statistics for error reporting. There was a straw poll on if the timestamps should be removed from this page as well. There were 12 in favor of removing the timestamp, none were in favor.

Joseph Chen asked for a straw poll on if the statistic for device errors that are not uncorrectable errors be broken into multiple statistics, left as a single statistic, or have none of this recorded. None were in favor of leaving them as a single statistic. 1 was in favor of having multiple statistics of this type. 9 were in favor of recording none of these statistics.

Significant concerns were raised about the viability of the torn write statistic (incomplete writes). Several parties raised the fact that this has significant implementation problems and may not be implementable. A straw poll was held asking if this statistic should be kept in the proposal. 1 was in favor, 14 were opposed.

During discussion of rotating media statistics a set of straw polls were held:

Should the number of reallocated sectors be kept in this proposal? 8 were in favor, 6 were opposed.

Should the number of remaining spare logical sectors be kept normalized, not normalized, or not be kept at all? Normalized received one vote. Not normalized received zero votes. 12 people were in favor of not doing this statistic.

Should the number of reallocation candidate sectors be kept in the proposal? 1 was in favor. 13 were in favor of removing.

Should the number of retry revolutions be kept in the proposal? 0 were in favor. 9 were in favor of removing.

Should the number of read errors requiring multiple revolutions be kept? 4 were in favor. 2 were in favor of removing.

Should the write retries be kept? 2 were in favor. 7 were in favor of removal.

Should seek errors be kept? 1 was in favor. 4 were in favor of removal.

Should mechanical start failures be kept? 6 were in favor of mechanical start failures. 2 were in favor of removal.

8.5.3.5 Additional device statistics - Transport Statistics [Chen] (e07168)

During discussion of the transport statistics a straw poll was requested. 2 people were in favor of having a timestamp in the transport statistics, 0 people wanted a short term statistic, and 7 people were in favor of having neither. 5 people were in favor of having a combined timestamp and statistic, none were in favor of having them separate. If the choice was between having a timestamp or a short term statistic, 7 were in favor of having a timestamp, 2 in favor of a short-term statistic.

Joseph Chen moved, Jim Hatfield seconded, that e07168r10 as revised be incorporated into ACS-2. The motion passed with 12 ayes, 1 nays, and 2 abstentions.

8.5.3.6 *Alternative Media Solid State Statistics (e08135) [Hatfield]*

Jim Hatfield presented his proposal for an alternative method of doing solid state device statistics. Discussion occurred about the statistics and George Penokie noted that the read statistic seems identical to the general read error statistic. There was further discussion about the overall health indicator statistic. It was generally agreed that this seems like a good concept, but the method of determining that statistic is going to be difficult and will end up dictating if the statistic is usable or not. Jim agreed to take the feedback received and turn a revision of the proposal for the next meeting.

8.5.4 Data Path Protection (e07162) [Stevens]

Curtis Stevens asked that this be removed from future agendas.

8.5.5 Freefall Feature Set Enhancements (e06162) [Chen]

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

8.5.6 Security Command Update (e07104) [Chen]

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

8.5.7 Extended Security (e07189) [Chen]

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

8.5.8 Sanitize Command (e07197) [Geldman]

John Goldman reviewed revision two of the proposal to add the sanitize feature set. John received significant editorial and technical feedback about the proposal during review with the committee and agreed to bring a new revision of his proposal to the next meeting.

8.5.9 Set Features Set Policy (e07121) [Hatfield]

Jim Hatfield asked that this be deferred to the next meeting.

8.5.10 SSD Identify (e07153) [Shu]

Frank Shu asked that this be deferred to the next meeting.

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

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

8.5.12 New DMA Commands (e08129) [Hatfield]

Jim Hatfield presented revision one of his proposal to add additional commands for commands that are PIO-only to give them DMA versions. There was discussion about if some of the commands that Jim were proposing such just be sub-commands of their existing parent command (e.g., DCO). Curtis Stevens stated that he was concerned

about consuming additional opcodes for commands and potentially running out in the future. Jim Hatfield stated that he would revise the proposal for the next meeting.

8.5.13 Reporting Non-Volatile Write Cache (e08116) [Livacarri]

This item was deferred as Steve Livacarri was not present.

8.5.14 Extended Power Conditions (e08120) [Hatfield]

Jim Hatfield asked that this be deferred to the next meeting.

8.5.15 Long Physical Sector Diagnostics (e08121) [Stevens]

Curtis Stevens reviewed revision zero of his proposal and received feedback. Jim Hatfield moved, Curtis Stevens seconding, that e08121r0 as revised be incorporated into ACS-2. The motion passed with 14 ayes, 0 nays, and 1 abstention.

8.5.16 Data Set Management (e07154) [Shu]

Frank Shu asked that this be removed from the agenda as this document has been completed and already approved. Further extensions will be a new document proposal.

8.5.17 ACS-2 Acronyms (e08128) [Hatfield]

Jim Hatfield reviewed his proposal for updating the incorporation of a new acronym list.

Jim Hatfield moved that e08128r1 as revised, John Geldman seconding, be incorporated into ACS-2. The motion passed with 12 ayes, 0 nays, and 1 abstention.

8.5.18 ATA String Identifying the OEM (08130) [Stevens]

Curtis Stevens reviewed his proposal to add a string to IDENTIFY DEVICE DATA for OEM strings. Curtis Stevens moved that e08130r0 as modified, John Geldman seconding, be incorporated into ACS-2. The motion passed with 10 ayes, 1 nay, and 2 abstentions.

8.5.19 Protocol Identifier for TrustedFlash (e08126)

This item was requested to be deferred until T10 had completed their discussions on the matter.

8.5.20 DRAT (e08137) [Knight]

Fred Knight reviewed a proposal to revise the data set management for ATA to reflect changes that were being discussed in T10 about deterministic or non-deterministic behavior. Fred received feedback and agreed to turn a new revision of the proposal for the next meeting.

8.6 EDD Erratum

8.6.1 INCITS Status

Dan Colegrove stated that EDD is still pending management review.

8.7 EDD-4 Study Group / Project Proposal

The EDD-4 project proposal was reviewed. Curtis Stevens moved that e08114r1, as revised, with Bill Martin seconding be forwarded to INCITS for project creation. The motion passed with 14 ayes, 0 nays, and 0 abstentions.

Rob Strong then presented e08134r0 showing a proposal for material to be incorporated into the EDD-4 project. Rob Strong moved that e08134r0 as modified, Mark Overby seconding, be incorporated into EDD-4. The motion passed with 13 ayes, 0 nays, and 3 abstentions.

8.8 ATA/ATAPI-6 Amendment [Stevens]

8.8.1 Signatures in ATA/ATAPI-6

Dan Colegrove stated that he believed that this would not be necessary now as SATA is working on a proposal to address this internally. Jim Hatfield is working on the proposal with SATA. Curtis Stevens said that he could wait to advance this project proposal to see how the effort in SATA-IO progresses.

8.9 T13 reflector, FTP, and web site setup

Website items were covered in discussion of RD1.

9. New Business

9.1 Reaffirm, Withdraw, or Stabilize for 2009

9.1.1 Host Adapters Standard (ATA - Adapter) INCITS 370:2004

Curtis Stevens moved, Jim Hatfield seconded, that the Host Adapters Standard be reaffirmed. The motion passed with 12 ayes, 0 nays, and 1 abstention.

9.1.2 Erratum to INCITS 361:2002 (ATA/ATAPI-6) INCITS 361:2002 Erratum :2004

Curtis Stevens moved, Jim Hatfield seconded, that the erratum to INCITS 361:2002 be reaffirmed. The motion passed with 12 ayes, 0 nays, and 1 abstention.

9.1.3 Time-limited Read/Write Mode TR INCITS/TR-37 :2004

Curtis Stevens moved, Jim Hatfield seconded, that the time-limited read/write mode technical report be reaffirmed. The motion passed with 12 ayes, 0 nays, and 1 abstention.

9.2 Items from the Reflector

None were reported. It was noted that the reflector is currently having issues in sending e-mail to all members.

10. Liaison Reports

10.1 T10 [Colegrove]

10.1.1 SCSI to ATA Translation (SAT) Working Group Report [Overby]

Mark Overby reported that SAT-2 letter ballot comment resolution is continuing and the SAT-3 project has been approved.

10.1.2 Reading of SSD LBA Pointer Managed Blocks [Knight]

Fred Knight was not present at this Liaison Report agenda item, so this was deferred to the next meeting.

10.1.3 Power Management Issues [Hatfield]

Jim Hatfield reported that the power management proposal at T10 that is the basis for the T13 proposal is close to agreement and once done, the T13 version can proceed.

10.1.4 RD1 Change Reaction [Colegrove]

Dan Colegrove stated that T10 and T11 have found the new changes to be acceptable.

10.1.5 General T10 Report

Dan Colegrove stated that he will post the T10 plenary report to the website.

10.2 T11 [Colegrove]

10.2.1 RD1 Change Reaction [Colegrove]

This was covered in the T10 liaison report about RD1.

10.3 JEDEC

10.3.1 Liaison Report [Overby]

Mark Overby reported that the material from JC64.8 was covered during the discussion of the SSD statistics. He also reported that there is a face to face meeting next week (29th and 30th).

10.4 IEEE

10.4.1 IEEE1667

The liaison report stated that there was no current activities that affected

10.4.2 INCITS Liaison Opportunities

Dan Colegrove stated that he did not see any new opportunities for IEEE liaisons for this committee

10.5 Trusted Computing Group [Hatfield]

Jim Hatfield stated that there was no update to report.

10.6 SFF [Colegrove]

Dan Colegrove stated that there are no SFF issues that affect T13.

10.7 IDEMA [Colegrove]

10.7.1 4K Physical

Dan Colegrove reported that IDEMA is having a 4k meeting following the T13 meeting this week.

10.7.2 HDD & SSD Reliability

Dan Colegrove stated that IDEMA has created a HDD and SSD reliability group, but had not status on progress to report.

10.8 CFA [Geldman]

John Geldman was not present during liaison reports, so this item was deferred.

10.9 Serial ATA IO [Hatfield]

Jim Hatfield reported that there are proposals to synchronize SATA 2.6 to ATA-8 currently in discussion.

11. Review of Action Items

1. Dan Colegrove to forward EDD-4 project proposal to INCITS for processing.
2. Dan Colegrove to forward committee recommendations for renewal of standards to INCITS.

12. Meeting Schedules

12.1 Authorization of Ad-Hoc Working Groups

Joseph Chen moved, Jim Hatfield seconding, that two teleconferences be authorized for discussion of solid state statistics. The motion passed with unanimous consent.

12.2 Next Meeting

Table 2: 2008 Dates

Date	Location	Host	Contact
Dec 16 - 18, 2008	Santa Ana, CA	Western Digital	Curtis Stevens

13. Adjournment

Mark Overby moved, Dan Colegrove seconding, that the meeting be adjourned at 1144 PT, 23 October 2008. The motion passed with unanimous consent.