

Accredited Standards Committee*

InterNational Committee for Information Technology Standards (INCITS)

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Date: September 6, 2006

Reply to: Mark Overby

To: T13 Membership
From: Mark Overby
Subject: T13 Plenary Meeting (Redmond, WA) -- August 22-25, 2006

Agenda

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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 0910 Tuesday, August 22nd, 2006. Dan Colegrove thanked Frank Shu from Microsoft who hosted this 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

Some modifications were made to the 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 21 organizations.

The number of eligible voting members required for establishing a quorum was 7. 8 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		Karen Zelenko	Phoenix
Jim Hatfield	Seagate		Mark Overby	NVIDIA
Tom McGoldrick	Toshiba		Joe Chen	Samsung
Sumit Puri	Fujitsu		Marc Noblitt	Seagate
Dan Colegrove	Hitachi GST		Mladen Luksic	Western Digital
Wayne Bellamy	HP		Curtis Stevens	Western Digital
Steve Livaccari	IBM		Ken Foust	Kionix
Frank Shu	Microsoft		Martin Furjhelm	Lexar Media
Brian Dees	Intel			
John Geldman	Lexar Media			

4. Approval of the minutes from the previous T13 plenary meeting (e06141r0)

It was noted that Mark Quinn from Toshiba attended the last meeting but was not reflected in the minutes. Mark Overby moved, Curtis Stevens seconding, that the minutes, as revised, be approved. The motion passed with unanimous consent.

5. Document Distribution

No documents were distributed by hard copy.

6. Review of Previous Action Items

1. Mark Evans will research if a separate letter is needed from Maxtor for a Quantum patent related to UDMA that was released for ATA-5 and subsequent projects {transfer to Jim Hatfield}
2. Dan Colegrove to create a project proposal for an ATA-7 amendment. {carry over}
3. Dan Colegrove to forward the ATA8-ACS2 project proposal to INCITS within 7 days of the close of the meeting. {done}
4. Dan Colegrove to notify INCITS that the A/V technical report project is cancelled. {done}
5. Dan Colegrove to add ATA8-AST to the list of documents that the SATA-IO material can be used in. {tried to negotiate that, but was rejected by SATA-IO. We need to avoid using SATA-IO copyrighted material}
6. Dan Colegrove to forward EDD-3 errata to INCITS for further processing {done}

7. Old Business

7.1 ATA/ATAPI-7: 1532D

7.1.1 ISO Status

Mark Overby stated that the ISO editor had provided some minor edits that were acceptable and work was continuing to progress.

7.1.2 ATA/ATAPI-7 Amendment [Overby]

7.1.2.1 INCITS Status

Dan Colegrove displayed a project proposal for an amendment, that was discussed at the last meeting as being needed. Dan Colegrove moved, Curtis Stevens seconding, that e06018r0 be approved as a new project for ATA-7 amendment 1. The motion passed with 11 ayes, 0 nays, 0 abstentions, and 10 not present.

7.2 HBA Amendment 1

Dan Colegrove stated that he made the same error in that a project proposal is required for the amendment and one was not done. Mark Overby stated that he would submit the project proposal

7.3 HBA-2 Standard Project: D2014

Mark Overby stated that this project has been fully converted to Framemaker 7, but nothing will be published until ATA8-APT is near to letter ballot.

7.4 ATA/ATAPI-8 Projects

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

7.4.1.1 Letter Ballot Comment Resolution

There were no new updates to report.

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

7.4.2.1 Additional SCT Temperature Statistics (e06152r1) [Hatfield]

Jim Hatfield reviewed a proposal to add additional temperature tracking information into SCT. Jim explained that this was being requested as a SMART attribute originally, but was moved into SCT because SCT already has temperature information already. A lengthy discussion ensued about the average temperature and how measuring the average temperature over the lifetime of a device is not useful. Also, it was noted that running average and average over the lifetime of the device are two different terms and it was not clear how the average was measured.

There was discussion about what the real usage model that is driving this because that will dictate what information should be returned how frequently. Jim stated that he would talk to Dell, who was working with him on this proposal, to clarify the usage models.

Jim stated that he would take the comments he received under advisement.

7.4.2.2 ATA Features Summary (e05144r1) [Chen]

Joseph Chen asked that this item be carried over to the next meeting.

7.4.2.3 HPA State Machine Diagram [Chen]

Joseph Chen asked that this item be carried over to the next meeting.

7.4.2.4 1k/4k Physical Sector Informative Annex [Colegrove]

Dan Colegrove stated that there has been discussion about 1k and 4k and the various merits of each approach. Curtis stated that he said that there was strong desire not to have 4k native at this time. Dan stated that the committee should wait to see the white paper for large sectors for the IDEMA committee and perhaps just incorporate that material.

7.4.2.5 Free-Fall Feature Discussion (e06144r3) [Chen]

Joseph Chen discussed revision 3 of his proposal around integrating support for a free fall sensor at the drive. The main point of his proposal is merely to have a reporting mechanism to indicate that there is a sensor and to turn it on or off. Since then, he has received feedback to indicate that more information is desired. After several teleconferences Joseph stated that he believed that this proposal was close to the final version. Marc Noblitt and Joseph stated that he believed that the only required portion of this feature set should be the options to turn the feature on and off.

A long discussion then ensued about sensitivity controls and if they are needed and how they would be used. After a back and forth discussion there was general acceptance that these controls could be exposed, but that they would not be required.

Joseph restated that he would work with Toshiba on a merged proposal for a future meeting.

7.4.2.6 G-Sensor (e06154r0)

Toshiba reviewed their separate proposal for G-sensor controls. They stated that the proposal was similar to Samsung's proposal but they felt that there were some additional controls that were needed. They felt that there should be a way to DCO on or off if the settings for if the sensor is on or off in a non-volatile manner. Joseph Chen stated that he could work with Toshiba and merge the two proposals into a single proposal.

On Thursday Toshiba further discussed the desire for DCO. After some lively debate, it was generally agreed that making the setting of the on or off state non-volatile was the correct thing to do.

Joseph Chen stated that he would give an update to Toshiba of a draft merged proposal and see if it addresses everyone's concerns.

Joseph Chen moved, Dan Colegrove seconding, that one conference call be authorized to discuss the merged G-sensor proposals. The motion passed by unanimous consent.

7.4.2.7 ATA Security Clarifications(e05179r7) [Hatfield]

Jim Hatfield reviewed revision 7 of the clarifications document. He stated that he believed that the document was now complete. Some items were deferred to any enhancement proposals that someone may want to do at some point. Jim stated that the goal was to keep the state diagram unchanged and changing the only text reference(s) that were incorrect in relation to the state machine.

A lengthy discussion ensued about the counter and if the wording around how the counter gets decremented needed to be changed. Joseph Chen stated that he believed that the original wording was correct and that there was no need to change it. Jim stated that the text needed to be changed because the requirement was not testable and that there was no method to ensure compliance. Dan Colegrove asked for a straw poll on

including the change or keeping the current language from ATA-7. 8 were in favor of the new language, 6 were in favor of keeping the original language. After further discussion, it was agreed that the text should be removed as it would cause devices that are in compliance to potentially no longer be in compliance.

Another lengthy discussion happened about the difference between a clarification and new requirements. In general backwards compatibility is always desired or required, but that should not stop new features from coming is so long as there is a path to backwards compatibility.

Jim agreed to continue work on this and bring to the next meeting.

7.4.2.8 NOP Clarifications (e06126r0) [Bellamy / Overby]

Mark Overby asked Wayne Bellamy to see if Rob Elliott wanted to proceed with the proposed changes to the NOP command since SAT went a different direction to not use the NOP command.

7.4.2.9 Proactive Error Reporting and Correcting (e05142r2) [Shu]

Frank Shu stated that he had no direct updates to the proposal but was confused by some of the feedback that was given to Nathan Obr at the previous meeting about their proposal. Discussion ensued about the goals of PRCS versus the method of implementing PRCS. Frank stated that the overall goal of PRCS was to provide information to the host as well as notifications of actions that should be taken because of the potential for data impact at the drive. Further debate was held about what to do for various cases of notification (queued command vs. asynchronous notification vs. extended status reporting of commands). Frank agreed to process the feedback.

7.4.2.10 NV Cache and Read Verify Sectors [Overby]

Mark Overby raised the issue of several ATA commands have behaviors that directly relate to media, but the interaction in a drive that has NV cache enabled has not been defined. He specifically raised the example of READ VERIFY. In a SCSI environment, VERIFY causes the data in the NV cache to be submitted to the media and both locations verified. This behavior (or the contrary) is not defined in the ATA8-ACS material. He also pointed out that there were similar issues involved with the write-read-verify feature set as well as the SECURITY ERASE UNIT section. Mark stated his belief that there were potential data integrity issues involved in these holes.

A discussion ensued about if there was a data integrity issue or not. There was no conclusion reached on this.

Marc Noblitt suggested that a proposal be written and brought in for further discussion. Mark agreed to bring such a proposal into a future meeting.

7.4.2.11 ATA8-ACS Open Issues (e06122r6) [Stevens]

Curtis Stevens reviewed the current list of open issues for ATA8.

The issue of needing a refined definition of allocation unit was discussed. Curtis Stevens moved, Jim Hatfield seconding, that the proposed resolution for AU (allocation unit) as documented in the open issues list (as issue #9 from e06122r7) be accepted for incorporation into ATA8-ACS. The motion passed with 11 ayes, 0 nays, and 1 abstention.

Curtis Stevens moved, Jim Hatfield seconding, that the proposed resolution for removing DF from the normal outputs of the SET MAX command as documented as issue #43 in e06122r7. The motion passed with 12 ayes, 0 nays, and 1 abstention.

Curtis Stevens moved, Sumit Puri seconding, that words 219 as fixed and 220 as variable (from IDENTIFY device (as tracked in issue #142 in e06122r7)). The motion passed with 11 ayes, 0 nays, and 0 abstentions.

Curtis Stevens moved, Mark Overby seconding, that words 103 - 100 be renamed to reflect that this are the total number of addressable sectors for the 48-bit feature set. The motion passed with 10 ayes, 0 nays, and 0 abstentions.

Mark Overby moved, Curtis Stevens seconding, that packet devices shall abort commands that are reported as not support (issue #98). The motion passed with 11 ayes, 0 nays, and 0 abstentions.

Curtis Stevens moved, Jim Hatfield seconding, that clarifying text for what to report in the number of user addressable sectors fields be incorporated into ATA8-ACS (issue #120). The motion passed with 10 ayes, 0 nays, and 0 abstentions.

Curtis Stevens moved, Jim Hatfield seconding, that clarifying text for SCT commands are not command aborted on SMART DISABLE OPERATIONS (issue #127). The motion passed with 13 ayes, 0 nays, and 0 abstentions.

Curtis Stevens moved, Jim Hatfield seconding, that clarifying text for WRITE LOG family of commands and SMART WRITE LOG indicating that a count of 0 will cause the command to abort be incorporated into ATA8-ACS (issue #103). The motion passed with 13 ayes, 0 nays, and 0 abstentions.

Jim Hatfield moved, Curtis Stevens seconding, that phrase sector ID field was not found be changed to sector was not found globally.

7.4.2.12 SATA Material for Incorporation in ACS (e06010r0) [Stevens]

Curtis Stevens stated that he had received the material from SATA-IO for all of the released items.

7.4.2.13 NCQ Integration (e06150r1) [Stevens]

Curtis Stevens displayed the proposal that incorporates the NCQ material from the SATA-IO to display the material, without modification, and where that material would live. Curtis stated that he would continue to work and this and start discussing the modifications

7.4.2.14 Draft Review [Stevens]

Curtis Stevens reviewed the latest draft by change bar and received editorial comments for incorporation.

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

7.4.3.1 Review of Draft

No draft review was held.

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

7.4.4.1 Review of Draft

Mladen Luksic stated that he had been examining the SATA documents and the ATA documents and there were two potential approaches. One was to do a straight mapping from the command structure to the SDB FIS and the Reg FIS's. The other approach is to see how the commands work and flow across the SATA interface.

7.5 ACS-2 Project [Stevens]

7.5.1 INCITS Status

Dan Colegrove stated he has not received the new project number following our approval.

7.5.2 Device Statistics [Hatfield]

Jim Hatfield stated that he has received input, but does not have a new draft.

Joseph Chen moved, Jim Hatfield seconded, that 2 teleconferences be authorized before the next plenary meeting. The motion passed by unanimous consent.

7.6 EDD Erratum

7.6.1 INCITS Status

Dan Colegrove stated that the erratum was lost somewhere between INCITS and ANSI. He stated that the erratum was being further processed.

7.7 T13 reflector, FTP, and web site setup

Jim Hatfield reported that he had the following actions to take regarding the website:

- copy abstracts for all projects from each project to the web page
- change absolute links to relative links
- make a copy of the latest revision of each project to a constant permanent URL
- publish the new templates in the 'rules' section
- provide a link to the t10 vote calculator

7.8 INCITS Membership and Meeting Attendance Policy

Dan Colegrove stated that no decision has been reached about the membership policy changes that have been previously discussed. Dan stated that INCITS was reviewing their funding model and decide on the impact of those changes to the technical side of the equation. No decisions have been reached. The chairs of T10, T13, and T11 all are continuing to encourage INCITS to maintain the existing policy.

8. New Business

8.1 INCITS 2/3 Voting Rule Change

Dan Colegrove noted the changes in the INCITS voting rule in that the abstentions are not removed from the total voting membership when calculating the majority of the membership voting. Dan also noted that the voting calculator on the T10 website has been updated to reflect the new rules.

8.2 Items from the Reflector

Jim Hatfield stated that all of the items from the reflector were covered in the ATA8-ACS open items.

9. Liaison Reports

9.1 T10 [Colegrove]

9.1.1 Should T13 use the T10 style guide

Mark Overby asked that this item be removed from the agenda.

9.1.2 SCSI to ATA Translation (SAT) Working Group Report

SAT is continuing letter ballot comment resolution and expects to go to public review at the July meeting. The SAT-2 project was approved and is open for proposals. There are no known proposals that would change ATA behavior at this time.

9.2 T11 [Colegrove]

9.2.1 FC-SATA Status [Hirata]

Dan Colegrove stated that there was no new information to report.

9.3 IEEE

Dan Colegrove stated that INCITS has provided a list of IEEE projects to potentially liaison with. Dan stated he would post the material to the website.

9.4 Trusted Computing Group [Hatfield]

Jim Hatfield stated that there is work ongoing with how trusted command work and what causes each to be completed, aborted, and so on.

9.5 SFF [Colegrove]

Dan Colegrove stated that the 1" form factor was approved for CE-ATA. 1.8" development is continuing.

9.6 IDEMA [Colegrove]

Dan Colegrove stated that conference calls continue for the 4k sector size work.

9.7 MMCA [Colegrove]

No one had any items to report and it was suggested that this be removed from future agendas.

9.8 CFA

Dan Colegrove reported that CFA has not met since our last meeting and he would bring up the reserved fields issue with them at the next meeting.

9.9 Serial ATA IO [Dees]**9.9.1 Liaison Report**

Brian Dees had nothing to report.

9.10 CE-ATA [Overby]

Mark Overby stated there was no activity in CE-ATA that affected T13.

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. 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 {Carry over}
2. Dan Colegrove to create a project proposal for an ATA-7 amendment.
3. Dan Colegrove to pursue recovering CFA reserved fields.
4. Dan Colegrove to ask INCITS about what the committee should do if a patent does not have licensing terms disclosed when a standard goes into letter ballot (for an optional feature). {INCITS said that these issues should be handled at the executive board level}
5. Frank Shu to provide output data structure for pinned cache set data command.

12. Approved Proposals

No proposals were approved at this meeting.

13. Meeting Schedules**13.1 Meeting Length**

Mark Overby moved, Marc Noblitt seconded, that starting in October that the meeting days be reduced to three. Dan Colegrove asked for an amendment to the motion to reduce to three in October only if TCG needs to meet. Dan withdrew the amendment. Curtis Stevens moved to substitute December for October. The amendment was not seconded. Mark Overby amended the motion, Marc Noblitt seconded, to add an authorize an ad hoc meeting for the Friday of the meeting week. The motion passed by unanimous consent.

13.2 Authorization of Ad-Hoc Working Groups

Two ad-hoc meetings were authorized.

13.3 Long-Term Meeting Schedule

Table 2: 2006 Dates

Date	Location	Host	Contact
October 24 - 27, 2006	San Jose, CA	Fujitsu	Sumit Puri
December 12-15, 2006	Las Vegas, NV	Hitachi Global	Dan Colegrove

Table 3: 2007 Dates

Date	Location	Host	Contact
February 20-23, 2007	Orange County, 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 (tentative)	Seagate (tentative)	Jim Hatfield
October 23-26, 2007	Fort Myers, FL	CPR Tools	Tony Alvarez
December 11-14, 2007	Las Vegas, NV	Hitachi Global	Dan Colegrove

14. Adjournment

Mark Overby moved, Dan Colegrove seconding, that the meeting be adjourned at 1700 Thursday, 24 August 2006. The motion passed with unanimous consent.