

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

Doc. No.: T13/09-159r0
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Date: January 4, 2010

Reply to: Mark Overby

To: T13 Membership  
From: Mark Overby  
Subject: T13 Plenary Meeting (Santa Clara, CA) -- December 15 - 17, 2009

## Agenda

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

## Results of Meeting

### 1. Opening Remarks

Dan Colegrove, the T13 Chair, called the meeting to order at 0910 Tuesday, December 15th, 2009. Dan Colegrove thanked NVIDIA 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 INCITS procedures including antitrust guidelines and such procedures and guidelines were displayed. 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 chair displayed the policies and procedures, patent guidelines, and antitrust guidelines for INCITS which are also available at the <http://www.incits.org/call.htm>, [http://www.incits.org/pat\\_slides.pdf](http://www.incits.org/pat_slides.pdf), <http://www.incits.org/>

\*Operating under the procedures of The American National Standards Institute.  
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patdec\_form.pdf, and <http://www.incits.org/inatrust.htm>. T13 operates under these policies and procedures augmented by the T13 procedures at the T13 web site at [www.t13.org](http://www.t13.org).

## 2. Approval of Agenda

Mark Overby moved, Dan Colegrove seconded, that the agenda be approved as revised. The motion passed with 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](mailto: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 22 organizations. IBM was in attendance and was restored to a voting member.

The number of eligible voting members required for establishing a quorum was 8. 12 voting 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
Tom Pratt	Dell		Bill Martin	Emulex
Kum Katsumata	Fujitsu America		Jeff Wolford	HP

Table 1: Attendance List

Attendee	Company		Attendee	Company
Dan Colegrove	Hitachi GST		Steve Livacarri	IBM
Robert Strong	Intel		George Penokie	LSI
John Geldman	Lexar Media		John Schadegg	Marvell
Fred Knight	NetApp		Mark Overby	NVIDIA
Joseph Chen	Samsung		Jim Hatfield	Seagate
David Landsman	SanDisk		Aaron Wilson	STEC
Patrick Hery	Toshiba		Curtis Stevens	Western Digital
Prajakta Gudadhe	NVIDIA			

#### 4. Approval of the minutes from the previous T13 plenary meeting

Dan Colegrove moved, Mark Overby seconded, that the minutes from the previous meeting be approved. The motion passed by unanimous consent.

#### 5. Review of Previous Action Items

1. Jim Hatfield to ask SATA-IO if they want a SATA-IO log page for IDENTIFY DEVICE data defined (for the proposed IDENTIFY DEVICE log). [Done - Jim to propose]
2. Jim Hatfield to ask SATA-IO if they would be willing to take an ECN and have their liaison bring the proposal as a letter ballot or other form to T13. [Done]
3. Curtis Stevens to change the website to comply with the notification of the public access model. [Carry-over]

#### 6. Call for Patents

The Chair displayed the patent policy. The chair displayed the policies and procedures, patent policy, and antitrust guidelines for INCITS which are also available at the <http://www.incits.org/call.htm>, [http://www.incits.org/pat\\_slides.pdf](http://www.incits.org/pat_slides.pdf), [http://www.incits.org/patdec\\_form.pdf](http://www.incits.org/patdec_form.pdf), and <http://www.incits.org/inatrust.htm>.

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.

#### 7. Old Business

##### 7.1 Unassigned

7.1.1 Withdrawal of TR-27 Address Offset Boot Method [Colegrove]

Dan Colegrove reminded the committee that had been suggested during ACS-2 letter ballot comment resolution to withdraw this TR to resolve letter ballot comments from ACS-2. Jeff Wolford from HP stated that HP supported this position. Dan Colegrove moved, Mark Overby seconded, that TR-27 be withdrawn by INCITS.

Dell: Yes  
Emulex: Yes  
Fujitsu: Abstain  
HP: Yes  
Hitachi GST: Yes  
IBM: Yes

Intel: Not Present  
 Kionix: Not Present  
 Lexar: Not Present  
 LSI: Yes  
 Marvell: Yes  
 Microsoft: Not Present  
 NetApp: Abstain  
 NVIDIA: Yes  
 Samsung: Yes  
 SanDisk: Not Present  
 Seagate: Abstain  
 STEC: Yes  
 Toshiba: Yes  
 Western Digital: Yes

The motion passed.

#### 7.1.2 T13 Website, Reflector, and FTP

Curtis Stevens reported that there was a problem with Internet Explorer 8 with the T13 website menus and he was investigating.

### 7.2 ATA/ATAPI-7: 1532D

#### 7.2.1 Replace ANSI version with ISO Version

Dan Colegrove reported that he was going to do an electronic comparison of the ISO and ANSI version to see if there are any problems that would require us to not replace the ANSI version with the ISO version.

### 7.3 ATA8-AST

John Goldman was not present and this item was deferred.

### 7.4 AT Attachment-8 - Parallel Transport (ATA8-APT)

#### 7.4.1 Letter Ballot Review

Mark Overby is still preparing the draft with integrated letter ballot comment

### 7.5 AT Attachment 8 - Command Set (ATA8-ACS)

#### 7.5.1 ISO Status

Curtis Stevens is working on preparing the FDIS draft.

#### 7.5.2 Amendment INCITS Status

Curtis Stevens stated that he had received comments from Harvey during ANSI edit and he was responding with the answers to the questions. Curtis Stevens moved, Jim Hatfield seconded, that no foreword be provided for the amendment. The motion passed with unanimous consent.

### 7.6 HBA-2 Standard Project: 2014-D

Mark Overby noted that he was still waiting on a new draft of ATA8-AST.

### 7.7 ACS-2 Project

2015-D [Stevens]

#### 7.7.1 Results of Letter Ballot Comment Resolution Teleconferences [Stevens]

Curtis Stevens reviewed the status of the letter ballot comment resolutions as part of letter ballot comment review.

#### 7.7.2 Sanitize Frozen State Transition Change (e09134) [Goldman]

John Goldman reviewed a proposal to modify the sanitize command state machine to incorporate a change to how hardware reset is handled when SSP is enabled or disabled. Feedback was given and John agreed to prepare a revision for the next meeting.

## 7.7.3 Restructure Power Conditions Log (e09148)

[Hatfield]

Jim Hatfield reviewed his proposal to address letter ballot comments regarding EPC and the layout of the power conditions log. Curtis Stevens moved, Bill Martin seconded, that standby conditions move to the bottom of the log page with reserved space between idle C and standby Y. 13 people were in favor, 1 was opposed, and 0 abstaining. The motion passed. Jim Hatfield stated that he voted no because he saw no issue with the current layout. Jeff Wolford moved, Joseph Chen seconding, that the power conditions add 32 bytes of reserved space to each condition in the log. The motion passed with unanimous consent. Curtis Stevens moved, Jeff Wolford seconding, that e09148r0 as revised be incorporated into ACS-2 to resolve letter ballot comments relating to the EPC log page. The motion passed with 12 ayes, 0 nays, and 2 abstentions.

## 7.7.4 DOWNLOAD MICROCODE Clarifications (e09157)

[Hatfield]

Jim Hatfield presented a proposal to clarify DOWNLOAD MICROCODE and to not introduce any new requirements or behaviors. A line by line review of the document was conducted and feedback was received from multiple committee members. After discussion Curtis Stevens stated that he was uncomfortable with this level of change to resolve the letter ballot comments in this section as this was approaching a complete rewrite of this section. George Penokie stated that he could accept resolving his letter ballot comment about missing text and moving the resolution of this to ACS-3. Jim agreed and stated that he would move this proposal to an ACS-3 agenda item for future meetings.

## 7.7.5 Letter Ballot Comment Resolution

[Stevens]

Curtis Stevens led a review of remaining letter ballot comments.

During comment resolution a straw poll was taken asking if the word processed or the word performed should be used to describe command actions. 3 were in favor of performed and 3 were in favor of processed.

**7.8 EDD-4 (Project D2132)**

## 7.8.1 EDD-4 Hybrid MBR support (e09127)

[Elliott]

Jeff Wolford reviewed revision 2 of the proposal to add hybrid MBR functionality into EDD-4. Jeff Wolford moved, Mark Overby seconded, that e09127r2 as revised be incorporated into EDD-4. The motion passed with 11 ayes, 0 nays, and 3 abstentions.

## 7.8.2 Draft Review

[Stevens]

Curtis Stevens reported that no draft review was needed at this meeting.

**7.9 ACS-3 Project**

## 7.9.1 Device Alert Log Pages (e08151r0)

[Geldman]

John Geldman was not present, so this item was carried forward.

## 7.9.2 Identify Data Log (e08156)

[Stevens]

Curtis Stevens reviewed the latest draft of his proposal to move identify device information in a log page. He reviewed comments that had been made against the proposal and how he planned to resolve them. Curtis also stated after review that he believed that the proposal will be ready for a vote at the next plenary meeting.

## 7.9.3 ATAPI Removal (e08157)

[Stevens]

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

## 7.9.4 ASC/ASCQ Recommendations for ACS-2 (No Doc)

[Overby]

Mark Overby requested that this be deferred to the next meeting.

## 7.9.5 Report buffer size in IDENTIFY DEVICE (e09143r0)

[Hatfield]

Jim Hatfield moved, Curtis Stevens, that e09143r0 as revised be incorporated into ACS-3. During discussion Bill Martin stated that he would like to see the final draft. Mark Overby stated that he could not support this until the IDENTIFY DATA LOG is finalized since this relies on that. Jim agreed and withdrew the proposal.

**7.9.6 Set Date and Time (e09132)**

[Stevens]

Curtis Stevens reviewed his proposal to add commands to allow the current date and time to be sent to a device. Curtis stated that the feature was designed to allow for a drive to detect that has been sitting for a long period of time without use and that utilities or other software could use that to determine that there are actions that need to be taken. Mark Overby and Jim Hatfield pointed out that the reliance upon correct behavior from the host leaves the data ripe for being misinterpreted or wrong. Curtis agreed to revise the proposal for the next meeting.

**7.9.7 Feature for Device Encryption Supported Identify Bit (e09147) [Colegrove]**

Dan Colegrove presented a proposal for using word 243 to describe a device that encrypts all user data. Dan Colegrove noted that this has the same authentication issues that was raised. Significant discussion was held about where this bit should be located and several members raised resistance to taking a piece of word 243. Other people stated that is where devices have already done that so we should document the existing practice. After discussion, Dan revised the proposal to use word 69. George Penokie moved, Jeff Wolford seconded, the e09147r2 be incorporated into ACS-3. The motion passed with 10 ayes, 1 nays, and 1 abstentions. Jim Hatfield stated that he voted no because he wanted word 243 to be used.

**7.9.8 Obsolete bit 6 of the device field (e09155)**

[Hatfield]

Jim Hatfield presented a proposal to obsolete bit 6 of the device field (the LBA / CHS bit). Jim stated that he was bringing this proposal to introduce the concept and get people to do the research to determine if we can obsolete the field.

**7.9.9 Reporting Security Compliance (e09151)**

[Hatfield]

Jim Hatfield presented a proposal to report compliance with various security standards. Mark Overby stated that he believed that this information needed to be transmitted and obtained in an authenticated manner otherwise incorrect assumptions could be made about the capabilities of the device. Curtis Stevens stated that he felt that the use cases that needed this made more sense to be handled by existing security mechanisms such as 1667 or TCG.

Curtis Stevens moved, Patrick Hery seconding, that the TCG liaison be requested to take e09151 to TCG for consideration for incorporation into a TCG document or documents. The motion passed with 10 ayes, 3 nays, and 2 abstentions.

**8. New Business****8.1 Unassigned items****8.1.1 Reflector Item on Successful Command Counting**

[Hatfield]

This item was deferred due to a lack of time.

**8.1.2 Twitter usage?**

[Hatfield]

This item was deferred due to a lack of time.

**8.1.3 Reflector Item on Non-Volatile Write Cache**

[Hatfield]

Jim Hatfield reported on the reflector item for interactions between reporting a non-volatile write cache and other ACS-2 and ACS-3 actions that refer to caches and if there are any interactions. Jim agreed to take this offline with Steve Livacari and would report back if there was a need for a proposal.

**8.2 ATA-7**

No new agenda items were requested for this project.

**8.3 ATA8-AST**

No new agenda items were requested for this project.

**8.4 ATA8-APT**

No new agenda items were requested for this project.

**8.5 ATA8-ACS**

No new agenda items were requested for this project.

**8.6 HBA-2**

No new agenda items were requested for this project.

**8.7 ACS-2**

## 8.7.1 Behavior of Write Uncorrectable in 4k devices (e09154) [Hatfield]

Jim Hatfield presented a proposal to clarify the behavior of the write uncorrectable command in the presence of a device that reports a physical sector size of larger than 512 bytes. There was substantial discussion over the behavior of flagged uncorrectable sectors and verification of the sector that could follow the write of such a sector and if that behavior should be required.

Jim Hatfield moved, Bill Martin seconded, that e09154r0 be approved as revised for incorporation into ACS-2 as a resolution to letter ballot comments regarding write uncorrectable. Curtis Stevens mentioned that he would like to review this material further before voting. Jeff Wolford agreed. Bill Martin noted that the document has been posted for a while and the changes that were made during this meeting were editorial. Jim stated that he would withdraw the motion and make the motion at the next meeting.

## 8.7.2 Trim Clarification (e09158) [Knight]

Fred Knight presented a proposal to clarify interactions of TRIM with DRAT and RZAT in ACS-2 to address issues raised during letter ballot on ACS-2. After review Fred Knight stated that he would request approval of the modified proposal at the next meeting.

**8.8 EDD-4**

No new agenda items were reported.

**8.9 ACS-3**

## 8.9.1 New download microcode subcommands (09156) [Hatfield]

Jim Hatfield introduced a new proposal to add additional functionality to download microcode for deferred download and deferred activation. Jim agreed to revise the proposal for the next meeting.

**9. Liaison Reports****9.1 T10**

[Colegrove]

This items was deferred due to a lack of time.

**9.2 T11**

[Martin]

This items was deferred due to a lack of time.

**9.3 SATA-IO**

[Hatfield]

Jim Hatfield reported that the proposal for the copyright agreement that SATA-IO was requesting additional changes to by their legal counsel. Jim stated that he was continuing to follow-up

**9.4 JEDEC**

[Overby - Hatfield]

This items was deferred due to a lack of time.

**9.5 SNIA**

[Colegrove]

This items was deferred due to a lack of time.

**9.6 IEEE 1667**

[Landsman]

This items was deferred due to a lack of time.

**9.7 Trusted Computing Group**

[Hatfield]

This items was deferred due to a lack of time.

**9.8 SFF**

[Colegrove]

This items was deferred due to a lack of time.

**9.9 IDEMA**

[Colegrove]

This items was deferred due to a lack of time.

**9.10 CFA**

[Geldman]

John Geldman reported that there was interest in CFA 5.1 of doing UDMA 166 and inquired if there was interest in doing that work at T13.

**10. Review of Action Items**

1. Curtis Stevens to change the website to comply with the notification of the public access model.
2. Dan Colegrove to request INCITS withdraw TR-27.

**11. Meeting Schedules**

**11.1 Authorization of Ad-Hoc Working Groups**

Curtis Stevens moved, Bill Martin seconded, that the following ad-hoc meetings be authorized:

1. January 7th, 1300 - 1600 PT and January 26th, 0900 - 1200 PT for ACS-2 letter ballot comment resolution; and
2. January 22nd 0900 - 1000 PT (tentative) for a joint call with TCG for discussion of the security identify discussion.

The motion passed with unanimous consent.

**11.2 Next Meeting**

Table 2: Next Meeting Information

Date	Location	Host	Contact
February 23 - 25, 2009	Santa Ana, CA	Western Digital	Curtis Stevens

**12. Adjournment**

Dan Colegrove moved, Mark Overby seconding, that the meeting be adjourned at 1600 December 17, 2009.