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

To:        T10 Membership
From:      Mark A. Overby
Subject:   SAT Working Group Meeting -- June 19, 2006
           Santa Clara, CA

# Agenda

1. Opening Remarks
2. Approval of Agenda
3. Attendance and Membership
4. Old Business
     4.1   SAT Revision 8 letter ballot comment resolution (06-121r1) [Sheffield]
     4.2   SAT - Block Mapping Issues (06-216r0) [Sheffield]
     4.3   SAT - Device Server Password Security (06-070r0) [Stevens]
5. New Business
6. Review of Recommendations
7. Meeting Schedule   Next Meeting Announcement   Next Meeting Map
8. Adjournment

# Results of Meeting

## 1.   Opening Remarks

Mark Overby called the meeting to order at 0915 June 7, 2006. Mark thanked NVIDIA for hosting the meeting.

## 2.   Approval of Agenda

The draft agenda was approved as revised by unanimous consent.

## 3.   Attendance and Membership

Attendance at working group meetings does not count toward minimum attendance requirements for T10 membership.  Working group meetings are open to any person or organization directly and materially affected by T10's scope of work.  The following people attended the meeting:

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            Name                    S          Organization
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Mr. Kenneth Hirata                   A  Emulex
Mr. Wayne Bellamy                    V  Hewlett Packard Co.
Mr. Robert Sheffield                 P  Intel Corp.
Mr. Mark Overby                      P  Nvidia Corp.
Mr. Jim Hatfield                     P  Seagate
Mr. Curtis Stevens                   P  Western Digital
Mr. Luben Tuikov                     V  Vitesse

7 People Present

Status Key:  P    -  Principal
             A,A# -  Alternate
             AV   -  Advisory Member
             L    -  Liaison
             V    -  Visitor
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## 4.  Old Business

### 4.1  SAT Letter Ballot Comments Resolution (06-121r1) [Sheffield]

Bob Sheffield reviewed some discrepenacies and comments that had been received around ATA pass through. There was an extensive discussion about if the CHK_COND bit was set to one if a sense key of NO SENSE was appropriate or not. After the discussion there was general consensus that the NO SENSE key should be changed to RECOVERED ERROR. It was also noted that this was described elsewhere in the ATA pass through section and that it was possible to interpret the two paragraphs in conflict. It was agreed to make the change to RECOVERED ERROR.

During further review it was also noted that the use of the term register and field when talking about ATA items was inconsistent. Since the group had decided to forward reference to ATA8 for most things, it was agreed that these should be changed (for ATA command parameters) to fields.

Further discussion over ATA pass-through revealed that the ATA sense descriptor was named inconsistently with SPC-3 and SPC-4. It was decided that this should be revised to be consistent with the naming in SPC-3 and 4 of ATA return descriptor. In addition, there was much discussion about the mapping of LBA parameters from the CDB into the ATA8-ACS command parameters. Revisions were created in situ with a new table that describes the differences between 48-bit and 28-bit commands and how those fields and mapped.

Further extensive revisions were undertaken to make sure that references between the SAT standard and the ATA standards were consistent for the pieces that were being addressed. There were significant numbers of references to ATA-7 instead of ATA-8 and these were revised and fixed. There was discussion about if ATA8-APT and ATA8-AST were appropriate references considering that they are draft standards. It was noted that this problem exists in T10 standards in general because of SPC, SBC, and SAM references (for example). Comments in the ATA pass through section were reviewed one by one to ensure that they were all addressed.

A lengthy discussion was held about the multiple_count field and what purpose the field serves. After back and forth discussion about why this field is used, it was determined that the purpose of the field is to program the ATA host on how many bytes of data to transfer for each IRQ. Bob proposed new text to describe this and that text was accepted by the group.

The discussion of power of two was discussed if it is n2 or 2n. No conclusion was reached.

### 4.2   SAT - Block Mapping Issues (06-216r1) [Sheffield]

Bob Sheffield reviewed the latest revision of his proposal to address the inconsistencies on the block mapping model. Bob suggested that the easiest thing to do would be to go through each section, identify the changes, and make them in place to resolve the issues.

During the review of the definitions in the block mapping section it was noted that the tables in ATA8-ACS and the text for the maximum LBA field for 48-bit address feature set devices are inconsistsent. Curtis Stevens noted this for action in the following T13 meetings during the week. Curtis and Mark Overby agreed to make it a priority so that any changes could be made before the July T10 meeting as needed.

The working group reviewed each set of letter ballot comments in the block mapping section against the new direct and indirect models to ensure that the resolutions were consistent. In several places, the text needed correction in the letter ballot comments and those changes were reflected in this proposal and were reviewed.

Bob took the guidance from the group and will continue to go through the block commands section and revise the sections as needed.

### 4.3   SAT - Device Server Password Security (06-070r0) [Stevens]

Due to a lack of time this item was deferred to the next meeting.

## 5.   New Business

No new business was conducted.

## 6.   Review of Recommendations

There were no recommendations made to the plenary.

## 7.   Meeting Schedule

SAT Working Group meetings are scheduled for:

>   Tuesday July 11, 2006 from 9:00 a.m. to 5:00 p.m. in Colorado Springs, CO at the Hilton-Antlers, hosted by LSI Logic

The working group chose to request the August host to reserve a room for Monday before the T13 meeting for further SAT activities. Mark Overby agreed to bring this to the T13 meeting and respond to the reflect with their response.

## 8.   Adjournment

The meeting was adjourned at 1730 June 19, 2006.