INCITS T10 Annual Report

Annual Report for:	T10 Technical Committee
Covering the Period:	October 2002 to September 2003
Title of INCITS Subgroup:	SCSI Storage Interfaces
Informal Description of Work:	T10 develops standards and technical reports on I/O interfaces, particularly the Small Computer System Interface (SCSI).

Links:

- T10 web site http://www.t10.org/
- Executive summary
- T10 area on the Secretariat's Projects Database http://www.incits.org/tc_home/t10sd4.htm
- T10 Projects Status http://www.t10.org/projects.htm
- Significant accomplishments
- Significant challenges
- Expected challenges
- Previous year's meetings
- Next year's meetings
- Liaison activities
- Officers and Membership
- Future Trends
- Other administrative information

1. **Executive Summary**

   T10 continues to run smoothly with 57 approved projects, of which 39 are in maintenance mode. Most of the active projects are related to the SCSI-3 family of standards. T10 membership is at 41 organizations, down from 46 last year. This decline is due largely to the weak economy.

   Over the last few years, there has been increasing interest in attaching more storage devices over longer distances using interfaces such as Fibre Channel, the Internet (e.g., iSCSI), and Serial Attached SCSI (SAS). These larger topologies have required some enhancements in the SCSI architecture and the command sets (e.g., access controls, extended copy commands, persistent reservations, etc.). This has also led to organizations joining T10 that have not previously participated (e.g., Microsoft, Intel, and Cisco Systems).

2. **Significant accomplishments**

   - SCSI Fibre Channel Protocol - 2 (FCP-2) [INCITS.350:2003] was approved and published
   - SCSI Parallel Interface - 4 (SPI-4) [INCITS.362:2002] was approved and published
   - SCSI RDMA Protocol (SRP) [INCITS.365:2002] was approved and published
   - SCSI Architecture Model - 2 (SAM-2) [INCITS.366:2003] was approved and published
   - SCSI Parallel Interface - 5 (SPI-5) [INCITS.367:2003] was approved and published
   - SCSI Passive Interconnect Performance (PIP) [INCITS.368:2003] was approved and published
   - SCSI Signal Modeling - 2 (SSM-2) [INCITS.369:2003] was approved and published
   - Serial Attached SCSI - 1.1 (SAS-1.1) project 1601-D was approved
   - SCSI Stream Commands - 3 (SSC-3) project 1611-D was approved

3. **Significant challenges**

   The computer industry is still suffering from a weak economy. This has adversely affected participation on standards committees and may inhibit or delay adoption of newer technologies. However, there are some signs that a recovery is beginning.

4. **Expected challenges**

   None expected.

5. **Previous year's meetings**

Number	Date	Location
#53	November 7, 2002	Huntington Beach, CA
#54	January 16, 2003	Potland, OR
#55	March 13, 2003	Dallas, TX
#56	May 7, 2003	Nashua, NH
#57	July 10, 2003	Colorado Springs, CO
#58	September 11, 2002	Seattle, WA
#59	November 6, 2003	Austin, TX

6. **Next year's meetings**

   http://www.t10.org/meeting.htm

7. **Liaison activities**

   INCITS T11 http://www.t11.org/

   INCITS T13 http://www.t13.org/

   SFF Committee http://www.sff.org/

   IEEE P1394

   SCSI Trade Association (STA) http://www.scsita.org/

   IETF SCSI over IP http://www.ietf.org/html.charters/ips-charter.html

   Storage Networking Industry Association (SNIA) http://www.snia.org/

   ISO/IEC JTC1/SC25/WG4

   Serial ATA Working Group http://www.serialata.org/

8. **Officers and membership**

   a. Officers

Position	Name	Organization	Training date
Chair	John Lohmeyer	LSI Logic	December 2002
Vice Chair	George Penokie	IBM/Tivoli	December 2002
Secretary	Ralph Weber	ENDL Texas	December 2002
International Representative	Gary Robinson	EMC	May 2002

Vocabulary Representative	open			

b. Membership

http://www.t10.org/ftp/t10/members.txt

Note: The INCITS Secretariat provided a file containing their database of T10 members as of September 10, 2003. A number of discrepancies were found and noted to Ms. Parthenia Purnell on September 16, 2003. She is in the process of updating the INCITS database. Due to the magical HTML in the supplied file, I did not incorporate it into this file. (I didn't understand it, therefore it is magic to me.)

9. **Future trends**

SPI-5 (a.k.a., Ultra640 SCSI), published this year, was the last generation of the parallel SCSI physical interface. Products that previously used the parallel SCSI physical interface will migrate to serial interfaces such as SAS, iSCSI, and Fibre Channel. Because SAS uses the same physical layer as Serial ATA, systems integrators can build products that use either SATA or SAS disk drives, depending on cost, performance, and reliability objectives.

The SCSI command sets are evolving to encompass the latest developments in storage (e.g., much larger address spaces, DVDs, CD-Recordable devices, and array controllers) as well as refinements to deal with current interconnect issues (e.g., network storage, security, and power management).

10. **Other administrative information**

Video Projectors

As noted last year, availability of video projectors at committee meetings is critical to having effective meetings. The situation has improved somewhat over the last year as more T10 members (including myself) are bringing video projectors to our meetings. Also, some hosts are able to supply one or two projectors for T10 usage.

I am still requesting that INCITS consider ways to address this problem. One possible solution would be for INCITS to purchase a few video projectors that could be loaned to subgroups for specific meetings.

Financial Statement

The INCITS Secretariat maintains an escrow account on T10's behalf to pay for technical editing services. See the T10 Procedure for Funding Technical Editors http://www.t10.org/ftp/t10/document.95/95-148r0.pdf for details of how this account is administered. The current account balance as of September 17, 2003 is $31,830.75.

T10 Internal Procedures

The T10 internal procedures are as follows:

Procedure	URL
T10 Standards Development Policies and Procedures	http://www.t10.org/ftp/t10/document.00/00-283r1.pdf
T10 Electronic Procedures	http://www.t10.org/ftp/t10/document.95/95-146r2.pdf
T10 Procedure for Funding Technical Editors	http://www.t10.org/ftp/t10/document.95/95-148r0.pdf
T10 Document Retention Policy	http://www.t10.org/ftp/t10/document.98/98-107r1.pdf
T10 Plenary Meetings & Accompanying Meeting Weeks	http://www.t10.org/ftp/t10/document.00/00-221r2.pdf