Project Proposal
for a new
INCITS Standard

SAS Protocol Layer
(SPL)

17 July 2008

1 Source of Proposed Project

1.1 Title: SAS Protocol Layer.

1.2 Date Submitted: 17 July 2008.

1.3 Proposing Group: INCITS TC T10.

2 Process Description for the Proposed Project

2.1 Project Type: D - Development.

2.2 Type of Document: Standard.

2.3 Definitions of Concepts and Special Terms: none.

2.4 Expected Relationship with Approved Reference Models, Frameworks, Architectures, etc.

None, it is expected that this standard will be used in closed systems.

2.5 Recommended INCITS Development Technical Committee: T10.

2.6 Anticipated Frequency and Duration of Meetings

Technical Committee T10 meets on a regularly scheduled basis (see http://www.t10.org for the current meeting schedule). Specific task ad hoc groups are called as required between the regular meetings but their results are not binding.

2.7 Target Date for Initial Public Review (Milestone 4): January 2010

2.8 Estimated Useful Life of Standard or Technical Report: 5 Years.

3 Business Case for Developing the Proposed Standard or Technical Report

3.1 Description

Serial Attached Protocol is the next generation of the protocol portion of current Serial Attached SCSI. It follows the protocol portions of SAS-2, SAS-1.1, and SAS. The following items should be considered for inclusion in Serial Attached Protocol:

a) enhancements to reduce congestion in the SAS topology;
b) interface power management;
c) corrections and clarifications; and
d) other capabilities that may fit within the scope of this project.

3.2 Existing Practice and the Need for a Standard

The proposed project involves a compatible evolution of the present protocol portion of the Serial Attached SCSI standard.

3.3 Implementation Impacts of the Proposed Standard

3.3.1 Development Costs

Members of T10 will provide the necessary resources. The T10 members will host the required meetings for development, provide for the necessary lab experiments, and provide the Technical Editor for the project.

3.3.2 Impact on Existing or Potential Markets

This project is intended to preserve as much of the existing Serial Attached SCSI software and hardware investment as possible, while adding new features.

3.3.3 Costs and Methods for Conformity Assessment

The committee will consider the results of testing as may be available to the committee through the voluntary efforts of the various participants in T10. With this method all costs are borne by the organizations of the various participants and have for the most part been mainly an adjunct of their normal development costs.

3.3.4 Return on Investment

ROI information is considered proprietary data by the member organizations, but members have stated that the ROI is expected to be large.

3.4 Legal Considerations

3.4.1 Patent Assertions

Calls will be made to identify assertions of patent rights in accordance with the relevant INCITS, ANSI, and ISO/IEC policies and procedures.

3.4.2 Dissemination of the Standard or Technical Report

Drafts of this document will be disseminated electronically. Dissemination of the final standard will be restricted, as the document becomes property of INCITS, ANSI, and/or ISO/IEC.

4 Related Standards Activities

4.1 Existing Standards:

ID Number	Title
ISO/IEC 14776	Multipart SCSI standard
INCITS 376-2003	Serial Attached SCSI (SAS)
INCITS 402-2005	SCSI Architecture Model - 3 (SAM-3)
INCITS 408-2005	SCSI Primary Commands - 3 (SPC-3)
INCITS 417-2006	Serial Attached SCSI (SAS-1.1)

4.2 Related Standards Activity

ID Number	Title
T10/1559-D	SCSI Enclosure Services - 2 (SES-2)
T10/1683-D	SCSI Architecture Model - 4 (SAM-4)
T10/1729-D	SCSI Primary Commands - 4 (SPC-4)
T10/1760-D	Serial Attached SCSI - 2 (SAS-2)
T10/1799-D	SCSI Block Commands - 3 (SBC-3)
T13/1697-D	AT Attachment - 8 - Serial Transport (ATA8-ST)
T13/1699-D	AT Attachment - 8 - ATA/ATAPI Command Set (ATA8-ACS)

T13/1700-D AT Attachment - 8 - Architecture Model (ATA8-AM)

4.3 Recommendations for Close Liaison

INCITS Technical Committee T13 (ATA Storage Interfaces).

5 Units of Measurement used in the Standard

The International System of Units (SI) units will be used.