**Project Proposal
For a New
NCITS Standard**

SCSI Bridge Controller Commands

(BCC)

6 March 2001

1. Source of the Proposed Project

1.1. Title: SCSI Bridge Controller Commands (BCC)

1.2. Date Submitted: 9 March 2001

1.3. Proposing Group: T10, **[8?]** members of T10 are also members of NCITS.

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. [what?]

2.5. Recommended NCITS 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):
July 2002.

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:
The SCSI Bridge Controller Commands provides commands for SCSI protocol bridge controller devices that bridge between SCSI protocols like SPI, FCP, SRP, and iSCSI.

The following items should be considered for inclusion in BCC:
1) support bridging between SPI, FCP, SRP, and iSCSI;
2) support SCSI parallel interface LUN bridges as described in EPI;
3) use the "bridging expanders" device type reserved in SPC-2 by EPI;
4) provide interfaces to fabric name servers like the Fibre Channel name server, InfiniBand configuration manager, and TCP/IP iSNS name server;
5) support bridges that present one target with multiple LUNs;
6) support bridges that present multiple targets with multiple LUNs;
7) commands for discovery of targets and LUNs on remote busses;
8) commands for managing mapping of remote targets and LUNs through the bridge;
9) commands for managing remote bus initiator operation and reporting status (e.g. on a bridge to SPI, the PPR negotiated settings with each target);
10) other capabilities that may fit within the general application scope of this project.

3.2. Existing Practice and the Need for a Standard:
SRP (for InfiniBand™) and iSCSI (for TCP/IP) have recently joined FCP (for Fibre Channel) as popular SAN fabric interconnect protocols. Interoperability of all these fabrics is important for compatibility with existing devices and future ease of use. SCSI-based management capabilities for bridges between these fabric will make bridges easier to use and manage. Additionally, SCSI parallel interface LUN bridges have been proposed as a way to expand the size of parallel SCSI domains. This proposed standard provides a standard interface for management software to communicate with all these bridges.

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
The nature of the proposed project is to provide for growth in the SCSI bridge device and management software product industries. Bridges and management software from multiple vendors will be able to interoperate if they follow this standard.

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 NCITS, 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 NCITS, ANSI, and/or ISO/IEC.

4. Related Standards Activities:

4.1. Existing Standards:

ID Number	Title
X3.269:1996	Fibre Channel Protocol (FCP)
X3.270:1996	SCSI-3 Architecture Model (SAM)
X3.301-1997	SCSI-3 Primary Commands (SPC)
NCITS.318.1998	SCSI-3 Controller Commands - 2 (SCC-2)
NCITS TR-23:1999	SCSI Enhanced Parallel Interface (EPI) Technical Report

4.2. Related Standards Activity:

ID Number	Title
T10/1157-D	SCSI Architecture Model - 2 (SAM-2)
T10/1236-D	SCSI Primary Commands - 2 (SPC-2)
T10/1415-D	SCSI RDMA Protocol (SRP)
T10/1144-D	SCSI Fibre Channel Protocol – 2 (FCP-2)
T10/1365-D	SCSI Parallel Interface – 4 (SPI-4)
IETF IPS iscsi	iSCSI

4.3. Corresponding ISO projects:

ID Number	Title
ISO/IEC 14776	Multipart SCSI standard
ISO/IEC 14776- 411	SCSI-3 Architecture Model (SAM)
ISO/IEC 14776- 311	SCSI-3 Primary Commands (SPC)

4.4. Recommendations for Coordinating Liaison:
None.

4.5. Recommendations for Close Liaison:
None.