

**Project Proposal
For a New
NCITS Standard**

**SCSI VI Protocol
(SVP)
Protocol Layer**

November 4, 1999

1. Source of the Proposed Project**1.1. Title:** SCSI VI Protocol (SVP)**1.2. Date Submitted:** November 4, 1999**1.3. Proposer:** 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:

The concept of clustering, the linking together of individual computers into a cohesive unit, has helped shape many advances in the computing industry. Many companies have adopted clustering technology for its ability to provide availability and scalability for mission-critical applications such as data warehousing, decision support, and transaction processing.

The Virtual Interface (VI) Architecture is a proposed architecture for the interface between high performance network hardware and computer systems. The goal of this architecture is to improve the performance of distributed applications by reducing the latency and overhead associated with critical IO and message passing operations. This goal is attained by substantially reducing the system software processing required to exchange messages compared to traditional network interface architectures. Technical Committee T11 is currently developing a standard for mapping the Virtual Interface Architecture onto Fibre Channel. Efforts to map the Virtual Interface Architecture to other interconnects, both proprietary and public, are ongoing within the industry.

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

This standard is expected to be used in closed systems.

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 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, 2001

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:**

Much clustering communication takes place at application or file system levels. However many clustering applications may require frequent device level access as well. A standard protocol for use of the Virtual Interface Architecture by SCSI will aid interoperability and assist future development of clustering technology.

The SCSI VI Protocol (SVP) will define a SCSI protocol mapping onto the Virtual Interface Architecture and/or functionally similar cluster protocols. The SCSI VI Protocol will allow the SCSI architecture and command sets to be used with any implementation of the Virtual Interface Architecture.

3.2. Existing Practice and the Need for a Standard:

The proposed project provides a compatible way for present SCSI command sets and architecture to be used on a new protocol layer. The protocol layer is based on the Virtual Interface Architecture, which is rapidly gaining wide industry acceptance.

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 a standard applicable to an emerging industry growth area. In the absence of a standard ad hoc proprietary mechanisms would likely provide the same function.

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 is judged 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:

BSR Number	Title	Project
X3.270:1996	SCSI-3 Architecture Model (SAM)	
X3.301:1997	SCSI-3 Primary Commands (SPC)	
NCITS.325:1998	Serial Bus Protocol 2	

4.2. Related Standards Activity:

BSR Number	Title	Project
	Fibre Channel Protocol for SCSI, Second Revision	1144-D
	SCSI Architecture Model - 2 (SAM-2)	1157-D
	SCSI Primary Commands - 2 (SPC-2)	1236-D
	Fibre Channel – Virtual Interface Architecture Mapping	1332-D

4.3. Corresponding ISO projects:

ISO/IEC Number	Title	Project
IS 14776-411	SCSI-3 Architecture Model (SAM)	
DIS 14776-311	SCSI-3 Primary Commands (SPC)	
DIS 14776-232	Serial Bus Protocol 2	

4.4. Recommendations for Coordinating Liaison:

None.

4.5. Recommendations for Close Liaison:

NCITS T11 and T11.4

Virtual Interface Developer Forum (VIDF)