T10/97-129r2

Project Proposal
For a New
NCITS Standard

SCSI Socket/SSL Services

(SSS)

Command Set

March 13, 1997

1. IDENTIFICATION OF PROPOSED PROJECT

1.1 TITLE: SCSI Socket/SSL Services (SSS) Command Set

1.2 PROPOSER: T10.

1.3 DATE SUBMITTED: March 13, 1997

1.4 PROJECT TYPE: D - Development of a standard within an NCITS TC.

2. JUSTIFICATION OF PROPOSED STANDARD

2.1 NEEDS:

The SCSI standard currently does not include a command set to implement a Platform/Device Independent (PDI) SCSI Socket/SSL Services (SSS) interface at the Application Programming Interface (API) level.

When communication devices are accessed at the hardware register level it is impossible to have a secure system due to the problems of cipher key management and promiscuous software.

When communication devices are accessed at the hardware register level portability between platforms is severely limited/complicated by the large quantity of platform/device specific systems software required between the register level hardware and the platform/device independent Socket/SSL Applications Programming Interface (API).

Despite user interest in processor to processor communication via SCSI, there is currently no comprehensive SCSI command set for implementing processor to processor communication via SCSI.

There is no SCSI command set that allows standard socket applications such as e-mail or web browsers to platform/device independently access SCSI devices.

The SCSI Socket/SSL Services (SSS) command set would allow all hard/firm/software to implement a rational and SECURE Socket/SSL system to be physically inside a communication device. The SSS could also be used for direct processor to processor communication via SCSI.

The SCSI Socket/SSL Services (SSS) command set would allow any real/virtual device to implement any useful Internet Request for Comment (RFC) to provide services such as HTTP, FTP, PING, FINGER, SMTP, POP3, DHCP, TELENET, & others platform/device independently.

2.2 RECOMMENDED SCOPE OF STANDARD:

The SSS standard will:

a) define a platform and device independent method of communication between processor devices and communication devices or other devices.

b) be optimized for platform/device independence.

c) provide other capabilities which fit within the general application scope of the SCSI Socket/SSL Service that may be proposed during the development phase by the participants in the project.

2.3 EXISTING PRACTICE IN AREA OF PROPOSED STANDARD:

The proposed project involves consolidation and evolutionary expansion of the present SCSI standards.

2.4 EXPECTED STABILITY OF PROPOSED STANDARD WITH RESPECT TO CURRENT AND POTENTIAL TECHNOLOGICAL ADVANCE:

The nature of the proposed project is to insure that SCSI has an upward, highly compatible growth path. This will insure that current investments in SCSI are provided with more stability in the face of technological developments.

3. DESCRIPTION OF PROPOSED PROJECT:

3.1 TYPE OF DOCUMENT: Standard.

3.2 DEFINITION OF CONCEPTS AND SPECIAL TERMS:

DHCP:	Distributed Host Configuration Protocol
FTP:	File Transfer Protocol
HTTP:	Hyper Text Transfer Protocol
POP3:	Post Office Protocol - 3
Socket:	Internet Application Programming Interface (API)
SMTP:	Simple Mail Transfer Protocol
SSL:	Secure Socket Layer

3.3 EXPECTED RELATIONSHIP WITH APPROVED NCITS REFERENCE MODELS:

The SSS standard is intended for use in open systems. It will comply with applicable network models.

3.4 RECOMMENDED PROGRAM OF WORK:

The following program of work is planned for the SSS:

(1) Solicit continuing participation by the current membership of T10 through NCITS procedures. Invite comments and proposals from organizations that may have a contribution to the SSS standard.
(2) Prepare a draft proposed standard based on proposals submitted and other information gathered during the initial investigation.
(3) Consider the results of SSS testing as may be available to the committee through the voluntary efforts of the T10 membership.
(4) Submit the draft proposed standard to NCITS for further processing.

3.5 RESOURCES - INDIVIDUALS AND ORGANIZATIONS COMPETENT IN THE SUBJECT MATTER:

The current membership of T10 includes representatives from all parts of the computer industry, from semiconductor chip manufacturers to large mainframe system manufacturers as well as government agencies. The members of T10 have expressed their desire to participate and cooperate in the development of this proposed standard.

There are sufficient resources to complete the development of this standard without delaying work on other projects.

3.6 RECOMMENDED NCITS DEVELOPMENT TECHNICAL COMMITTEE:

It is recommended that the development work be done in Technical Committee T10 which is responsible for developing the family of SCSI standards.

3.7 ANTICIPATED FREQUENCY AND DURATION OF MEETINGS:

Technical Committee T10 meets bimonthly. Specific task ad hoc groups are called as may be required for one to three days between the regular meetings but their results are not binding.

3.8 TARGET DATE FOR dpANS TO NCITS: July 1999.

3.9 ESTIMATED USEFUL LIFE OF STANDARD:

It is anticipated that this standard will have a life of 5 years.

4. IMPLEMENTATION IMPACTS

4.1 IMPACT ON EXISTING USER PRACTICES AND INVESTMENTS:

The proposed SSS standard will provide an evolutionary growth path to the existing practices and investments. It is likely that any isolated negative impacts would occur in any case through non-standard evolution or revolution.

4.2 IMPACT ON SUPPLIER PRODUCTS AND SUPPORT:

The proposed SSS standard will provide an evolutionary growth path to the existing practices and investments. It is likely that any isolated negative impacts would occur in any case through non-standard evolution or revolution.

4.3 TECHNIQUES AND COSTS FOR COMPLIANCE VERIFICATION:

The committee will consider the results of SSS 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.

4.4 LEGAL CONSIDERATIONS:

There are no known legal considerations. A Call for Patents will be made.

5. CLOSELY RELATED STANDARDS ACTIVITIES

5.1 EXISTING STANDARDS:

BSR Number	Title	Project
X3.131-1994	Small Computer System Interface - 2 (SCSI-2)	0375-M
X3.270-1996	SCSI-3 Architecture Model (SAM)	0994-M

5.2 NCITS STANDARDS DEVELOPMENT PROJECTS:

BSR Number	Title	Project
X3.301	SCSI-3 Primary Commands (SPC)	0995-D
	SCSI Primary Commands - 2 (SPC-2)	1236-D
	SCSI Architecture Model - 2 (SAM-2)	1157-D

5.3 NCITS STUDY GROUPS: None.

5.4 OTHER RELATED DOMESTIC STANDARDS EFFORTS: None.

5.5 ISO/IEC JTC 1 STANDARDS DEVELOPMENT PROJECTS: It is anticipated that SSS will be proposed to JTC1/SC25/WG4.

5.6 OTHER RELATED INTERNATIONAL STANDARDS DEVELOPMENT PROJECTS: None.

5.7 RECOMMENDATIONS FOR COORDINATING LIAISON: None.

5.8 RECOMMENDATIONS FOR CLOSE LIAISON: T11, IEEE 802, JTC1/SC6