Project Proposal
For a New
X3 Standard

SCSI-3 Transport via SBP-2

November 7, 1996

1. IDENTIFICATION OF PROPOSED PROJECT

1.1 TITLE: SCSI-3 Transport via SBP-2 (STS).

1.2 PROPOSER: X3T10.

1.3 DATE SUBMITTED: November 7, 1996

1.4 PROJECT TYPE: D - Development of a standard within an X3 Technical Committee.

2. JUSTIFICATION OF PROPOSED STANDARD

2.1 NEEDS:

The Serial Bus Protocol 2 (SBP-2) standards development project has evolved to a general-purpose, low-level interface for the transport and management of commands, data and status on IEEE Std 1394-1995, High Performance Serial Bus. SBP-2 is no longer connected to any particular command set, e.g., the SCSI-3 family of command sets. A need remains for a standard to map SCSI Architecture Model requirements (SAM) to SBP-2 and to specify how SCSI-3 devices shall be implemented if they utilize the facilities of SBP-2.

2.2 RECOMMENDED SCOPE OF STANDARD:

The SCSI-3 Transport via SBP-2 standard will map services required by SAM to the facilities provided by SBP-2.

The SBP-2 proposed standard shall conform to the requirements of the SCSI-3 Architecture Model proposed standard but may also provide extensions (e.g., isochronous services) that are beyond the scope of the SCSI-3 Architecture Model.

2.3 EXISTING PRACTICE IN AREA OF PROPOSED STANDARD:

Serial Bus Protocol 2 (X3T10/1155D). Other X3T10 projects exist that define the transport of the SCSI protocol over different media, for example Fibre Channel and SSA.

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 in the environment of IEEE Std 1394-1995. 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: None.

3.3 EXPECTED RELATIONSHIP WITH APPROVED X3 REFERENCE MODELS:

The SCSI-3 Transport via SBP-2 standard is intended for use in closed systems.

3.4 RECOMMENDED PROGRAM OF WORK:

The following program of work is planned for the SCSI-3 Transport via SBP-2:

a) solicit continuing participation by the current membership of X3T10 through X3 procedures. Invite comments and proposals from organizations that may have a contribution to the SCSI-3 Transport via SBP-2 standard,

b) establish functional requirements for extensions, if any, need in SAM to fully accommodate the isochronous facilities of SBP-2,

c) prepare a draft proposed standard based on proposals submitted and other information gathered during the initial investigation,

d) consider the results of SCSI-3 Transport via SBP-2 testing as may be available to the committee through the voluntary efforts of the X3T10 membership, and

e) submit the draft proposed standard to X3 for further processing.

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

The current membership of X3T10 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 X3T10 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.

High Performance Serial Bus has been adopted for use outside of the computer industry. X3T10 could benefit from contact with other groups that embody High Performance Serial Bus expertise. The 1394 Trade Association, which meets four times a year, is representative of the High Performance Serial Bus community and is an appropriate point of contact.

3.6 RECOMMENDED X3 DEVELOPMENT TECHNICAL COMMITTEE:

It is recommended that the development work be done in Technical Committee X3T10 which is responsible for developing the family of SCSI standards.

3.7 ANTICIPATED FREQUENCY AND DURATION OF MEETINGS:

Technical Committee X3T10 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 X3: November, 1997.

3.9 ESTIMATED USEFUL LIFE OF STANDARD:

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

4. IMPLEMENTATION IMPACTS

4.1 IMPACT ON EXISTING USER PRACTICES AND INVESTMENTS:

The proposed SCSI-3 Transport via SBP-2 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 SCSI-3 Transport via SBP-2 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 SCSI-3 Transport via SBP-2 testing as may be available to the committee through the voluntary efforts of the various participants in X3T10. 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 unique to SCSI-3 Transport via SBP-2. A Call for Patents will be made.

5.   CLOSELY RELATED STANDARDS ACTIVITIES

5.1 EXISTING X3 STANDARDS: None.

5.2 X3 STANDARDS DEVELOPMENT PROJECTS:

BSR Number	Title	Project
X3.270-199x	SCSI-3 Architecture Model	994D
	Serial Bus Protocol 2 (SBP-2)	1155D

5.3 X3 STUDY GROUPS: None.

5.4 OTHER RELATED DOMESTIC STANDARDS EFFORTS: IEEE P1394a / P1394.1 / P1394.2.

5.5 ISO/IEC JTC 1 STANDARDS DEVELOPMENT PROJECTS:

CD 9316-8	SCSI-3 Architecture Model
CD 9316-7	SCSI-3 Serial Bus Protocol

It is anticipated that SCSI-3 Transport via SBP-2 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: None.