

X3T10/96-188r0

Project Proposal
For a New
X3 Standard

SCSI Unified Parallel Requirements
(SUPR)

July 18, 1996

1. IDENTIFICATION OF PROPOSED PROJECT

1.1 TITLE: SCSI Unified Parallel Requirements (SUPR)

1.2 PROPOSER: X3T10.

1.3 DATE SUBMITTED: July 18, 1996

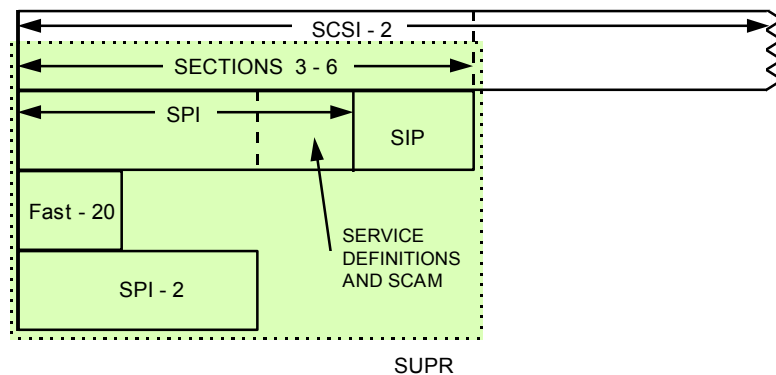
1.4 PROJECT TYPE: D - Development of a standard within an X3 TC.

2. JUSTIFICATION OF PROPOSED STANDARD

2.1 NEEDS:

The SCSI physical interface has undergone a rather rapid series of enhancements since SCSI-2 (SPI, SPI Amendment 1, Fast-20, and SPI-2). Furthermore, SPI did not include documentation on all of the connector options included in SCSI-2 -- These were incorporated by reference to the SCSI-2 standard. All of this has resulted in a series of documents that are confusing and difficult to use.

The SUPR project would develop a single standard that encompasses all of the above documents plus the SCSI-3 Interlocked Protocol (SIP). The resulting standard will be a complete definition of the SCSI parallel interface. Pictorially, SUPR relates to the previous SCSI parallel documents as shown in the shaded area of the following figure:



2.2 RECOMMENDED SCOPE OF STANDARD:

The SUPR standard will define a unified physical and protocol layer for parallel SCSI, while maintaining a high degree of compatibility with the current SPI, SIP, and Fast-20 standards plus the draft SPI-2 standard.

Candidates for inclusion in the SUPR draft standard are:

- a) document viable cable and connector options previously documented in SCSI-2, SPI, and SPI-2.
- b) document electrical driver and receiver specifications for single-ended, high-voltage differential, and low-voltage differential.
- c) document data phase speeds at least up to 40 mega-repetitions per second.
- d) document the SCSI parallel (interlocked) protocol including SCAM.
- e) other capabilities which fit within the general application scope of the SCSI physical and protocol levels that may be proposed during the development phase by the participants in the project.

This proposed standard is not intended to address areas above the protocol level (such as command sets).

2.3 EXISTING PRACTICE IN AREA OF PROPOSED STANDARD:

The proposed project involves consolidation and evolutionary expansion of the present SCSI parallel 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 the SCSI parallel interface 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: None.

3.3 EXPECTED RELATIONSHIP WITH APPROVED X3 REFERENCE MODELS:

The SUPR standard is intended for use in closed systems.

3.4 RECOMMENDED PROGRAM OF WORK:

The following program of work is planned for the SUPR:

- (1) 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 SUPR standard.
- (2) Prepare a draft proposed standard based on proposals submitted and other information gathered during the initial investigation.
- (3) Consider the results of SUPR testing as may be available to the committee through the voluntary efforts of the X3T10 membership.
- (4) 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.

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: July 1998.

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 SUPR 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 SUPR 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 SUPR 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. 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	0375-M
X3.253-1996	SCSI-3 Parallel Interface	0855-D
X3.277-1996	SCSI-3 Fast-20	1071-D

5.2 X3 STANDARDS DEVELOPMENT PROJECTS:

BSR Number	Title	Project
X3.292-199x	SCSI-3 Interlocked Protocol	0856-D
X3.xxx-199x	SCSI Parallel Interface -2	1142-D

5.3 X3 STUDY GROUPS: None.

5.4 OTHER RELATED DOMESTIC STANDARDS EFFORTS: None.

5.5 ISO/IEC JTC 1 STANDARDS DEVELOPMENT PROJECTS: It is anticipated that SUPR 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.