Project Proposal
For a New
X3 Standard

SCSI-3 Parallel Interface - Low Voltage

(SPI-LV)

September 28, 1994

1. IDENTIFICATION OF PROPOSED PROJECT

1.1 TITLE: SCSI-3 Parallel Interface - Low Voltage (SPI-LV)

1.2 PROPOSER: X3T10

1.3 DATE SUBMITTED: November 10, 1994

1.4 PROJECT TYPE: D - Development of standards within X3 TC.

2. JUSTIFICATION OF PROPOSED STANDARD

2.1 NEEDS:
The SCSI-3 Parallel Interface (SPI) is in the approval phase. New
applications for SCSI have been proposed that would require further
standardization activities, but it is inappropriate to delay the completion
of SPI to complete these activities. The new applications are principally
due to an industry trend toward battery-powered and lower supply voltages.

2.2 RECOMMENDED SCOPE OF STANDARD:

The SPI-LV standard is intended to document extensions to SPI to permit next-generation SCSI applications, while maintaining a high degree of compatibility with SPI.

Functions which will be considered for incorporation include:

a)   Battery-powered and lower voltage power supplies.

b)   Enhanced cabling, connection, and termination technologies consistent with lower power applications.

c)   Other capabilities which fit within the general scope of implementing next-generation SCSI on a broad range of applications, and other capabilities 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 evolutionary expansion of the SCSI-3 SPI standard.

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

The nature of the proposed project is to define SPI-LV in a manner which expands the alternatives available to host system manufacturers while maintaining a high degree of compatibility with SPI.

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 SPI-LV standard is for use in closed systems.

3.4 RECOMMENDED PROGRAM OF WORK:

The following program of work is planned for the SPI-LV standard:

(1) Solicit participation from present and future SCSI participants through X3T10 procedures. Invite comments by end-user organizations and invite proposals from organizations that may have a contribution to a viable SPI-LV standard.

(2) Prepare a draft standard based on proposals submitted and other information gathered during the initial investigation.

(3) Consider the results of SPI-LV testing as may be available to the committee through the voluntary efforts of the various participants in X3T10.

(4) Submit the draft proposed standard to X3 for further processing.

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3.5 RESOURCES - INDIVIDUALS AND ORGANIZATIONS COMPETENT IN 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 standards.

3.6 RECOMMENDED X3 DEVELOPMENT TECHNICAL COMMITTEE:

It is recommended that the development work be done in Technical Committee X3T10.

3.7 ANTICIPATED FREQUENCY AND DURATION OF MEETINGS:

Technical Committee X3T10 meets bi-monthly. 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 (MILESTONE 10): July 1996

3.9 ESTIMATED USEFUL LIFE OF STANDARD:

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

4. IMPLEMENTATION IMPACTS

4.1 IMPACT ON EXISTING USER PRACTICES AND INVESTMENTS:

The proposed SPI-LV standard will provide an upward growth path which complements 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 SPI-LV standard will provide an upward growth path which complements 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 SPI-LV 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.

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4.4 LEGAL CONSIDERATIONS:

There are no known legal considerations. A Call for Patents will be made under Milestone 7 of the SD-2.

5. CLOSELY RELATED STANDARDS ACTIVITIES

5.1 EXISTING STANDARDS: SCSI-2.

5.2 X3 STANDARDS DEVELOPMENT PROJECTS:

The SPI-LV standard is intended to be used in conjunction with the draft SPI standard and the draft SCSI-3 Fast-20 standard, which are part of the SCSI-3 family of standards already in development in X3.

5.3 X3 STUDY GROUPS: None.

5.4 OTHER RELATED DOMESTIC STANDARDS EFFORTS: EIA/TIA RS-485-1983 (for differential implementations).

5.5 ISO/IEC JTC 1 STANDARDS DEVELOPMENT PROJECTS:

SCSI-2 and SCSI-3 Parallel Interface. It is anticipated that this standard will be proposed to JTC1/SC25/WG4.

5.6 OTHER RELATED INTERNATIONAL STANDARDS DEVELOPMENT PROJECTS: ISO 8482-1982 TIA TR30.2 (for differential implementations).

5.7 RECOMMENDATIONS FOR COORDINATING LIAISON: None.

5.8 RECOMMENDATIONS FOR CLOSE LIAISON: None.