

X3T10/96-152r0

Project Proposal  
For a New  
X3 Standard

SCSI Controller Commands - 2  
(SCC-2)

May 9, 1996

## 1. IDENTIFICATION OF PROPOSED PROJECT

- 1.1 TITLE: SCSI Controller Commands - 2 (SCC-2)
- 1.2 PROPOSER: X3T10.
- 1.3 DATE SUBMITTED: May 9, 1996
- 1.4 PROJECT TYPE: D - Development of a standard within an X3 TC.

## 2. JUSTIFICATION OF PROPOSED STANDARD

### 2.1 NEEDS:

The computer industry has developed a number of storage products that incorporate RAID (Redundant Array of Independent Devices) technology. While these products for the most part emulate disk devices, they require additional functions and features to permit efficient control of configuration and device management. Also, some of these storage products include functions to permit system control over activities associated with failed devices such as degraded mode operation and reconstruction. This proposed project would refine the existing SCSI command set for storage subsystem controllers.

### 2.2 RECOMMENDED SCOPE OF STANDARD:

The SCSI Controller Commands-2 standard is intended to provide a complete set of commands to complement the SCSI-3 Primary Command Set, and be applicable to devices which act as subsystem controllers, such as a disk array controllers.

Functions which will be considered for incorporation include:

- a) Transfer commands unique to SCC-2 devices.
- b) Control commands to manage the operation of an SCC-2 device.
- c) Optional device mapping and pass-through support.
- d) Other capabilities which fit within the general scope of implementing the SCSI Controller Commands-2 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:

Other efforts exist within X3T10 to broaden the application of SCSI.

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

The nature of the proposed project is to define the SCSI Controller Commands-2 in a manner which expands the alternatives available to host system manufacturers.

## 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 SCC-2 standard is intended for use in closed systems.

### 3.4 RECOMMENDED PROGRAM OF WORK:

The following program of work is planned for the SCC-2 standard:

- (1) Solicit participation from present and future SCSI participants through X3T10 procedures and through press releases. Invite comments by end-user organizations and invite proposals from organizations that may have a contribution to a viable SCSI Controller Commands-2 standard.
- (2) Establish functional requirements for SCSI Controller Commands-2 functional additions.
- (3) Prepare a draft standard based on proposals submitted and other information gathered during the initial investigation.
- (4) Consider the results of SCSI Controller Commands-2 testing as may be available to the committee through the voluntary efforts of the various participants in X3T10.
- (5) 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 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 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 10 years.

## 4. IMPLEMENTATION IMPACTS

### 4.1 IMPACT ON EXISTING USER PRACTICES AND INVESTMENTS:

The proposed SCSI Controller Commands-2 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 SCSI Controller Commands-2 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 SCSI Controller Commands-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. A Call for Patents will be made.

### 5. CLOSELY RELATED STANDARDS ACTIVITIES

5.1 EXISTING STANDARDS: None.

5.2 X3 STANDARDS DEVELOPMENT PROJECTS:

BSR Number	Title	Project
X3.270-199x	SCSI-3 Architecture Model	X3T10/994-D
X3.xxx-199x	SCSI-3 Primary Commands	X3T10/995-D
X3.276-199x	SCSI-3 Controller Commands	X3T10/1047-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 this standard 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