**Project Proposal
For a New
X3 Standard**

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**ATA Packet Interface**

**(ATAPI)**

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**July 21, 1994**

# 1.    IDENTIFICATION OF PROPOSED PROJECT

**1.1.    TITLE:  ATA Packet Interface (ATAPI).**

**1.2.    PROPOSER:  X3T10.**

**1.3.    DATE SUBMITTED:  September 15, 1994.**

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

# 2.    JUSTIFICATION OF PROPOSED STANDARD

## 2.1.    NEEDS:

As the popularity of the ATA interface has increased, its application area has grown outside the originally intended purpose of direct attachment of small disk drives to desktop computers.

ATAPI is needed to provide a packet interface capable of delivering SCSI command descriptor blocks so that other peripherals can be attached to the system via ATA.  Currently CD-ROM and tape devices are planning to use ATAPI.

## 2.2.    RECOMMENDED SCOPE OF STANDARD:

The proposed ATAPI standard maintains a high degree of compatibility with the current ATA interface.

The ATAPI standard aims are:

  a)   provide a means to transfer SCSI commands through the definition of a packet protocol.
  b)   investigate enhancements to provide overlapped commands using a multi-thread protocol
  c)   facilitate a  shared cable connection with ATA disk drives via normative references to ATA, ATA-2 and ATA-3.
  d)   to extend the use of ATA to support devices other than traditional ATA devices.

This proposed standard will not define the command sets used over ATAPI; those are separate projects. The application for the proposed standard does not require compliance with the SCSI-3 Architectural Model (SAM).

## 2.3.    EXISTING PRACTICE IN AREA OF PROPOSED STANDARD:

The proposed project involves evolutionary expansion of the draft AT Attachment standards to provide additional capabilities.

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

The nature of the proposed project is to ensure that the AT Attachment has a compatible growth path. This will ensure that current investments in AT Attachment 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 ATAPI standard is for use in closed systems.

**3.4.    RECOMMENDED PROGRAM OF WORK:**

The following program of work is planned for the ATAPI standard:

1)  Solicit continuing participation by the present AT Attachment participants through X3T10 procedures and new participants through press releases.  Invite comments by end-user organizations and invite proposals from organizations that may have a contribution to a viable ATAPI standard.
2)  Establish functional requirements for ATAPI functional additions along with downward compatibility requirements.
3)  Prepare a draft proposed standard based on proposals submitted and other information gathered during the initial investigation.
4)  Consider the results of ATAPI 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 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 which is responsible for the ATA Extensions project.

**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):  December 1995**

**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 ATAPI standard will provide an upward growth path complementary 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 ATAPI standard will provide an upward growth path complementary 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 ATAPI 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 under Milestone 7 of the SD-2.

## 5.    CLOSELY RELATED STANDARDS ACTIVITIES

### 5.1.    EXISTING STANDARDS:  None.

### 5.2.    X3 STANDARDS DEVELOPMENT PROJECTS:

AT Attachment Interface (ATA)-- Project 791-D
ATA Extensions (ATA-2)-- Project 948-D
AT Attachment -3 (ATA-3)

### 5.3.    X3 STUDY GROUPS:  None.

### 5.4.    OTHER RELATED DOMESTIC STANDARDS EFFORTS:  None.

### 5.5.    ISO/IEC JTC 1 STANDARDS DEVELOPMENT PROJECTS:

This standard will be considered for proposal 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.