

**Project Proposal
For a New
X3 Standard**

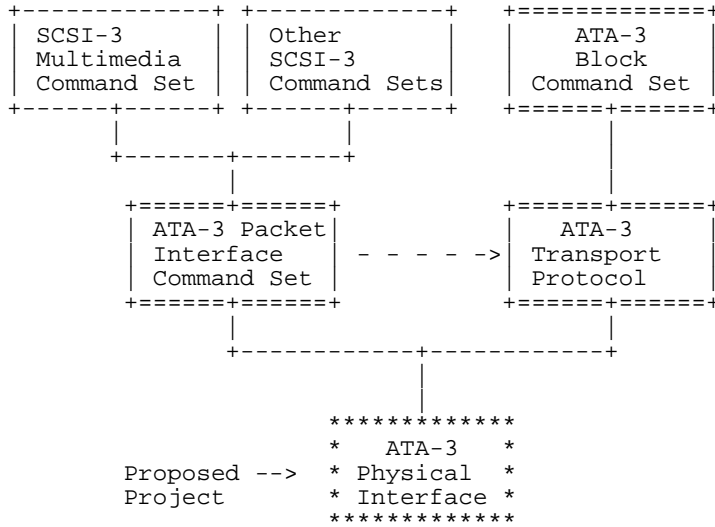
**ATA-3 Physical Interface
(ATA3-PH)**

March 30, 1994

1 IDENTIFICATION OF PROPOSED PROJECT**1.1 TITLE:** ATA-3 Physical Interface (ATA3-PH)**1.2 PROPOSER:** X3T10**1.3 DATE SUBMITTED:** May 19, 1994**1.4 PROJECT TYPE:** D - Development of standards within X3 TC.**2 JUSTIFICATION OF PROPOSED STANDARD****2.1 NEEDS:**

The draft standard for AT Attachment has been completed and the draft for the ATA Extensions (ATA-2) is near completion, but as the popularity of the interface has increased, its application area has grown outside the originally intended purpose of direct attachment of small disk drives to desktop computers.

ATA-3 is needed to continue to broaden the scope and application area of the ATA interface and to take advantage of the huge installed BIOS (Basic Input/Output System) base, and software. Support is needed for traditional HDD devices plus additional devices such as CD-ROM and tape devices. It is expected that the SCSI-3 command sets can be used for these new device types. In addition, support is also needed for removable media devices and expanded number of cabling options. The resulting increase in complexity has made it desirable to divide the ATA standard into a hierarchical set of standards, of which the ATA-3 Physical Interface is one.



2.2 RECOMMENDED SCOPE OF STANDARD:

The proposed ATA-3 Physical Interface standard shall maintain a high degree of compatibility with the physical layer of the AT Attachment while layering the ATA documentation and providing documentation for new capabilities including the following candidates:

- a) Separate the ATA physical interface from the protocol and the command sets.
- b) Provide additional physical interface alternatives to support the AT Attachment protocol on a variety of physical interfaces.
- c) Provide improved definition and documentation on the physical interface characteristics.
- d) Higher transfers than available in ATA Extensions (ATA-2).
- e) Other capabilities which fit within the general scope of implementing the AT Attachment physical interface on a broader range of physical environments.

This proposed standard is not intended to require changes to presently installed devices or existing software. It is intended that this proposed standard would be used to provide additional capabilities.

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 insure that the AT Attachment has an upward, highly compatible growth path. This will insure 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 ATA-3 Physical Interface standard is for use in closed systems.

3.4 RECOMMENDED PROGRAM OF WORK:

The following program of work is planned for the ATA-3 Physical Interface standard:

- (1) Solicit continuing participation by the present AT Attachment participants and new participants through X3T10 procedures. Invite comments by end-user organizations and invite proposals from organizations that may have a contribution to a viable ATA-3 Physical Interface standard.
- (2) Establish functional requirements for ATA-3 Physical Interface functional additions along with downward compatibility requirements.
- (3) Prepare a draft standard based on proposals submitted and other information gathered during the initial investigation.
- (4) Consider the results of ATA3-Physical Interface 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 developing the draft ATA Extensions standard.

3.7 ANTICIPATED FREQUENCY AND DURATION OF MEETINGS:

Technical Committee X3T10 meets for two days 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 10 years.

4 IMPLEMENTATION IMPACTS**4.1 IMPACT ON EXISTING USER PRACTICES AND INVESTMENTS:**

The proposed ATA-3 Physical Interface 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 ATA-3 Physical Interface 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 ATA-3 Physical Interface 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 -- Project 791-D
ATA Extensions -- Project 948-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.