

X3T10/95-298R1

**Project Proposal
For a New
X3 Technical Report**

**Boot Considerations For Devices
Greater than 8 GByte**

September 14, 1995

1. IDENTIFICATION OF PROPOSED PROJECT

1.1 TITLE: Boot Considerations for Devices Greater than 8GByte

1.2 PROPOSER: X3T10.

1.3 DATE SUBMITTED: September 14, 1995.

1.4 PROJECT TYPE: DT - Development of a Technical Report within an X3 TC.

2. JUSTIFICATION OF PROPOSED TECHNICAL REPORT

2.1 NEEDS:

The traditional personal computer firmware mechanism for accessing files on a hard disk has an intrinsic limit of 8 GByte total disk capacity. SCSI disks are now available that exceed 8GByte, and similar ATA drives will be available in the near future. There has been considerable confusion over how to deal with this situation. X3T10 has addressed this question and feels that the industry would be well served by a document describing the current limitation and a recommended solution.

2.2 RECOMMENDED SCOPE OF TECHNICAL REPORT:

This project will prepare a technical report on hard disk addressing mechanisms on PC/AT compatible computers.

2.3 EXISTING PRACTICE IN AREA OF PROPOSED TECHNICAL REPORT:

The proposed project involves evolutionary expansion of existing BIOS and OS designs for hard disk access.

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

The recommended enhancement to the mechanism for host access to hard disks exceeds the maximum capability of both the ATA and SCSI interfaces as they are defined today. This should support several years of growth in individual disk capacity.

3. DESCRIPTION OF PROPOSED PROJECT:

3.1 TYPE OF DOCUMENT: Technical Report.

3.2 DEFINITION OF CONCEPTS AND SPECIAL TERMS: None.

3.3 EXPECTED RELATIONSHIP WITH APPROVED X3 REFERENCE MODELS:

This Technical Report is for use in closed systems.

3.4 RECOMMENDED PROGRAM OF WORK:

The following program of work is planned for this technical report:

- 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 this technical report.
- 2) Prepare a draft technical report based on proposals submitted and other information gathered during the initial investigation.
- 3) Consider the results of any testing as may be available to the committee through the voluntary efforts of the X3T10 membership.
- 4) Submit the draft technical report 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 technical report.

There are sufficient resources to complete the development of this technical report without delaying work on other projects of X3T10.

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 and SCSI interface standards.

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 dpANTR TO X3: March 1996

3.9 ESTIMATED USEFUL LIFE OF TECHNICAL REPORT:

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

4. IMPLEMENTATION IMPACTS

4.1 IMPACT ON EXISTING USER PRACTICES AND INVESTMENTS:

The proposed technical report will aid in the smooth migration of the industry to larger capacity ATA and SCSI disks. 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 technical report will aid in the smooth migration of the industry to larger capacity ATA and SCSI disks. 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:

Not applicable.

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: None.

5.3 X3 STUDY GROUPS: None.

5.4 OTHER RELATED DOMESTIC STANDARDS EFFORTS: None.

5.5 ISO/IEC JTC 1 STANDARDS DEVELOPMENT PROJECTS: None.

5.6 OTHER RELATED INTERNATIONAL STANDARDS DEVELOPMENT PROJECTS:

None.

5.7 RECOMMENDATIONS FOR COORDINATING LIAISON: None.

5.8 RECOMMENDATIONS FOR CLOSE LIAISON: None.