

Project Proposal for A New Standard

1 Source of the Proposed Project

1.1 Title

BIOS Enhanced Disk Drive Services 3 (EDD-3)

1.2 Date Submitted

April 12, 2002

1.3 Proposer(s)

T13

2 Process Description for the Proposed Project

2.1 Project Type (Development or Revision)

D

2.2 Type of Document

Standard

2.3 Definitions of Concepts and Special Terms

The terms are industry standard.

2.4 Expected Relationship with Approved Reference Models, Frameworks, Architectures, etc.

The standard addresses closed systems and has no relationship to INCITS Reference Models.

2.5 Recommended INCITS Development Technical Committee

T13

2.6 Anticipated Frequency and Duration of Meetings

T13 presently meets up to six times per year and authorizes ad hoc meetings as warranted for the needs of the projects. It is anticipated that these meetings are adequate to address this technical report among the other agenda items for these meetings.

2.7 Target Date for Initial Public Review (Milestone 4)

February 2003

2.8 Estimated Useful Life of Standard or Technical Report

15 years or more

3 Business Case for Developing the Proposed Standard

3.1 Description

This specification builds on EDD-2 to address the following:

- o Infiniband
- o PCI Express
- o HyperTransport
- o Serial ATA
- o CD-ROM Boot
- o INT 13 Functions 0-39h.

3.2 Existing Practice and the Need for a Standard or Technical Report

The scope of this standard is to provide a BIOS interface that operating system can use to access mass storage devices. Important features for this interface include:

- o accessing devices where the host has up to 64 bits of address space and the device has more than 28 bits of address space
- o providing data read and write capability
- o documentation for cylinder-head-sector (CHS) BIOS interfaces
- o documentation for logical-block address (LBA) BIOS interfaces
- o support for ATA and ATAPI on several host buses

The developers of this standard may also identify other interface requirements.

3.3 Implementation Impacts of the Proposed Standard or Technical Report

3.3.1 Development Costs

Implementation costs are born on a voluntary basis by industry. Members of T13 have informed us that their companies consider the detailed costs to be confidential information. But the cost is considered to be fairly modest as the standard describes existing BIOS practices. Logistical costs for T13 are negligible since the technical report represents about 5% of the T13 meeting agenda. Although the members consider the cost details to be confidential, they also consider the ultimate costs to be reduced by the benefits of the technical report.

3.3.2 Impact on Existing or Potential Markets

The proposed EDD-3 standard will provide an evolutionary growth path 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.

The target market for the specification is all personal computer systems utilizing ATA/ATAPI, SCSI, Fibre Channel, 1394, Infiniband, PCI Express, USB, Serial ATA, and other buses to which disc drives can be attached. Obviously this is an extremely large market.

3.3.3 Costs and Methods for Conformity Assessment

No formal conformity assessment is undertaken. However each of the personal computer systems manufacturers have extensive qualification testing which on a voluntary basis assures the methods are exhaustively tested in the industry. The incremental cost is modest.

3.3.4 Return on Investment

The estimated ROI for development of this technical report and the conformity assessment costs associated with it greatly exceeds 1000 to 1.

3.4 Legal Considerations

3.4.1 Patent Assertions

T13 will make regular calls for patents in the meetings addressing the technical report. There are none at this time

3.4.2 Dissemination of the Standard

Drafts of this document will be disseminated electronically. Dissemination of the final standard will be restricted, as the document becomes the property of INCITS, ANSI, or ISO/IEC.

4 Related Standards Activities

4.1 Existing Standards

NCITS TR-21 (EDD)
ANSI NCITS 347-2001 (EDD)
ANSI NCITS 346-2001 (PARTIES)
ANSI NCITS 340-2000 (ATA/ATAPI-5)
ANSI INCITS 361-2nnn (ATA/ATAPI-6)
ANSI INCITS 363-2nnn (EDD-2)

4.2 Related Standards Activity

4.3 Recommendations for Coordinating Liaison

None

4.4 Recommendations for Close Liaison

T10, T11, IEEE, Infiniband TA, USB-IF, 1394 TA, HyperTransport TA, PCI SIG, Serial ATA II Working Group