Project Proposal for a New Standard

1 Source of the Proposed Project

1.1 Title

Host Bus Adapter (HBA) - 2

1.2 Date Submitted

June 10, 2005

1.3 Proposer(s)

T13

2 Process Description for the Proposed Project

1.4 Project Type (Development or Revision)

D

1.5 Type of Document

Standard

1.6 Definitions of Concepts and Special Terms

The terms are industry standard.

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

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

1.8 Recommended INCITS Development Technical Committee

T13

1.9 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 standard among the other agenda items for these meetings.

1.10 Target Date for Initial Public Review (Milestone 4)

December 2006

1.11 Estimated Useful Life of Standard or Technical Report

5 years or more

3 Business Case for Developing the Proposed Standard

1.12 Description

This proposal would extend the existing standard to cover host bus adapter technologies for Serial ATA buses using methods documented in the existing HBA and ATA/ATAPI-7 standards. The necessary

information to implement a “parallel emulation” type host bus adapter is currently scattered through ATA/ATAPI-7, HBA, and general industry knowledge. This project would consolidate that information into one standard that companies can develop against to ensure that the T13 goals of maximum compatibility and reliability are achieved. In addition, this project would incorporate proposed and existing errata against the original HBA standard.

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

As stated in 3.1, information to manufacture such a device and have proper interoperability with existing software, firmware, and other infrastructure components is currently scattered between multiple documents and also relies on general industry and technology undocumented knowledge. This standard would provide a comprehensive document to allow for maximum interoperability between devices that comply with ATA/ATAPI-7 and hosts for serial technology as documented in ATA/ATAPI-7. Such a standard would also allow the ATA/ATAPI-8 serial transport document to remain clear of host interpretations and focus on the serial transport, not host emulation behavior.

1.14 Implementation Impacts of the Proposed Standard or Technical Report

3.1.1 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. Although the members consider the cost details to be confidential, they also consider the ultimate costs to be reduced by the benefits of the standard.

3.1.2 Impact on Existing or Potential Markets

The standard proposed for the host bus adapter will not impact in a negative manner the existing legacy base of host controllers. However, it will provide a growth vehicle for software and hardware development of host controllers. In addition, it will provide a forward looking standard that can incorporate growth of the serial storage markets through new features or procedures.

3.1.3 Costs and Methods for Conformity Assessment

No formal conformity assessment is undertaken. However each hardware vendor and customer(s) have extensive qualification testing that the methods are exhaustively tested in the industry. In addition the standard will provide a basis for other industry conformance activities by various market vendors (hardware and software). The incremental cost is expected to be negligible to modest as much of the conformity infrastructure is already in place for many of the hardware / silicon designers.

3.1.4 Return on Investment

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

1.15 Legal Considerations

3.1.5 Patent Assertions

T13 will make regular calls for patents in the meetings addressing the standard.

3.1.6 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

1.16 Existing Standards

INCITS 397-2005 ATA/ATAPI-7
INCITS 370-2004 Host Adapter Standards

1.17 Related Standards Activity

ATA/ATAPI-8 Serial Transport (D1697)

1.18 Recommendations for Coordinating Liaison

None

1.19 Recommendations for Close Liaison

None

5 Units of Measurement used in the Standard

The standard is not measurement sensitive.