Project Proposal for a new INCITS Standard

Fibre Channel - Single-Byte Command Code Sets - 6 (FC-SB-6)

T11/14-366v0

1   Source of Proposed Project

1.1   Title

Fibre Channel Single-Byte Command Code Sets-6 Mapping Protocol (FC-SB-6).

1.2   Date Submitted

December 04, 2014.

1.3   Proposer(s)

INCITS Technical Committee T11.

2   Process Description for the Proposed Project

2.1   Project Type (Development or Revision)

Type D (Development done within INCITS TC T11).

2.2   Type of Document

Standard.

2.3   Definition of Concepts and Special Terms

None.

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

All Fibre Channel standards are intended for use in closed systems.

2.5   Recommended INCITS Development Technical Committee

It is recommended that this project be assigned to TC T11, in order that the project be coordinated with work on other Fibre Channel standards.

2.6 Anticipated Frequency and Duration of Meetings

This project will make use of the regularly-scheduled bimonthly T11 plenary meetings. Informal Working Groups will be organized on an ad-hoc basis to discuss specific subjects where appropriate.

2.7 Target Date for Initial Public Review (Milestone 4)

December 2015

2.8 Estimated Useful Life of Standard or Technical Report

It is anticipated that this standard will have a useful life of over 10 years.

3 Business Case for Developing the Proposed Standard or Technical Report

3.1 Description

This project proposal recommends the development of a set of technical additions and clarifications to INCITS 485-2014, Fibre Channel - Single-Byte Command Code Sets - 5 Mapping Protocol (FC-SB-5) to define enhancements to the transport mode controls to expand the capabilities and increase the efficiency of transport-mode operations.

The specific goals of the standard are:

a) Enable new applications to use transport-mode operations through the definition of transport-mode protocol enhancements that enable the protocol to match the performance obtainable using the command-mode protocol over long distances.

b) Include changes required, technical or otherwise, for issues related to the current FC-SB-5 protocol as deemed necessary by the working group.

3.2 Existing Practice and the Need for a Standard

The existing FC-SB-5 protocol supports link-control, command-mode and transport-mode operations. Transport mode operations were recently enhanced in the FC-SB-5 standard. Further enhancements to the device-level protocols enable new applications to exploit the transport-mode protocol and further advance use of the standard. Enhancements to the transport-mode protocols are need to achieve better performance at long distances. Additional clarifications to the standard are also required in order to ensure consistent operation across implementations that exploit transport-mode operations.

An FC-SB-6 standard will allow for the adoption of these necessary changes.

3.3 Implementation Impacts of the Proposed Standard

3.3.1 Development Costs

This standard will be developed through the voluntary and cooperative efforts of T11 Task Committee members. No significant development costs are anticipated.

3.3.2 Impact on Existing or Potential Markets

The proposed standard will provide an upward growth path that complements and enhances existing supplier products and support schemes. The proposed standard will result in expanded applications for existing and conceived products in both the channel and network markets. It is likely that isolated adverse effects would occur in any case through non-standard evolution or revolution.

3.3.3   Costs and Methods for Conformity Assessment

The committee will consider the results of testing provided to the committee through the voluntary efforts of the participants in T11. 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.

3.3.4   Return on Investment

The return on investment for this development is expected to be high, due to the commonality of effort directed to a singular method of providing the services covered by the proposed standard. Additionally, the investment made in products developed under FC-SB-6 will be preserved by providing services within the existing infrastructure.

3.4 Legal Considerations

3.4.1   Patent Assertions

Calls will be made to identify assertions of patent rights in accordance with the relevant INCITS, ANSI and ISO/IEC policies and procedures. T11 is aware of patent assertions that have been made and letters indicating compliance with INCITS policies have been received.

3.4.2   Dissemination of the Standard or Technical Report

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

ID Number   **Title**

(1) INCITS 470-2011, Fibre Channel - Framing and Signaling - 3 (FC-FS-3)

(2) ANSI X3.296-1997, Single-Byte Command Code Sets Connection Architecture (SBCON)

(3) INCITS 481-2012, Fibre Channel Protocol for SCSI - 4 (FCP-4)

(4) INCITS 461-2010, Fibre Channel Switch Fabric - 5 (FC-SW-5)

(5) INCITS 485-2014, Fibre Channel Single-Byte Command Sets Mapping Protocol - 5 (FC-SB-5)

(6) INCITS 462-2010, Fibre Channel - Backbone - 5 (FC-BB-5)

(7) ISO/IEC 9314-2:1989, Fibre Distributed Data Interface - Media Access Control (FDDI-MAC)

(8) INCITS 477-2011, Fibre Channel Link Services - 2 (FC-LS-2)

(9) INCITS 496-2012, Fibre Channel Security Protocols - 2 (FC-SP-2)

(10) INCITS 479-2011, Fibre Channel Physical Interfaces - 5 (FC-PI-5)

4.2 Related Standards Activity

ID Number   **Title**

(1) Project 2220-D, Fibre Channel Switch Fabric - 6 (FC-SW-6)

(2) Project 2238D, Fibre Channel Framing and Signaling - 4 (FC-FS-4)

(3) Project 2237D, Fibre Channel Link Services - 3 (FC-LS-3)

(4) Project 32GFC, Fibre Channel - Physical Interface - 6 (FC-PI-6)

(5) Project 2159D, Fibre Channel - Backbone - 6 (FC-BB-6)

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4.3 Recommendations for Close Liaison

None

5   Units of Measurement used in this Standard

Système Internationale d'Unités (International System of Units).