Project Proposal for a new INCITS Standard

Fibre Channel - Generic Services - 7 (FC-GS-7)

T11/09-624v1

1   Source of Proposed Project

1.1 Title

Fibre Channel - Generic Services - 7.

1.2 Date Submitted

November 19, 2009.

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)

June 2011

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 additional and enhanced services that will be used to support the management and control of Fibre Channel configurations.
Included within this scope are services such as:

    a) Management entities and functions associated with virtualization (e.g., updated FC Port models);
    b) Management entities and functions associated with FCoE environments;
    c) Other services or features identified during the development of this standard.

Where they exist, the protocols, formats and definitions contained in existing directory and management standards will be considered for use in FC-GS-7.

3.2 Existing Practice and the Need for a Standard

The FC-GS-7 project will continue extending the Fabric services to address new developments in Fibre Channel. Examples are updated port models to support virtualization, FCoE environments, and new speeds and operational characteristics associated with Fibre Channel. The topology and discovery services will be updated to include new Fibre Channel entities and their connectivity options.

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-GS-7 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 424-2007 Fibre Channel - Framing and Signaling - 2 (FC-FS-2)

(2) INCITS 332:1999, Fibre Channel Arbitrated Loop (FC-AL-2).

(3) INCITS 416:2006, Fibre Channel Protocol for SCSI - 3 (FCP-3).

(4) INCITS 427:2007, Fibre Channel Generic Services - 5 (FC-GS-5).

(5) INCITS 418:200x, Fibre Channel Switch Fabric - 4 (FC-SW-4).

(6) INCITS 374:2003, Fibre Channel Single-Byte Command Sets Mapping Protocol - 3 (FC-SB-3).

(7) INCITS 419-2008, Fibre Channel - Backbone (FC-BB-4).

(8) INCITS TR:36:2004, Fibre Channel - Device Attach (FC-DA)

(9) INCITS TR:39:2005, Fibre Channel Methodologies for Interconnects - 2 (FC-MI-2).

(10) INCITS 433-2006, Fibre Channel Link Services (FC-LS)

(11) INCITS 426-2007, Fibre Channel Security Protocols (FC-SP).

(12) IEEE 802.3:2008, Carrier sense multiple access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications (Ethernet)

(13) IETF RFC 4338, Transmission of IPv6, IPv4, and Address Resolution Protocol (ARP) Packets over Fibre Channel

(14) IETF RFC 4936, Storage Management - Zone Server MIB (SM-ZSM)

(15) INCITS 428:2007, Storage Management Host Bus Adapter Application Programming Interface (SM-HBA)

4.2 Related Standards Activity

ID Number   Title

(1) Project 1833D Fibre Channel - Generic Services-6 (FC-GS-6)

(2) Project 1822D, Fibre Channel Switch Fabric - 5 (FC-SW-5).

(3) Project 1861D, Fibre Channel Framing and Signaling - 3 (FC-FS-3).

(4) Project 2103D, Fibre Channel Link Services - 2 (FC-LS-2).

(5) Project 1745D, Fibre Channel - Inter-Fabric Routing (FC-IFR)

(6) Project 1841D, Host Bus Adapter Application Programming Interface - 2 (SM-HBA-2)

(7) Project 1871D, Fibre Channel - Backbone (FC-BB-5).

(8) Project 2122D, Fibre Channel Single-Byte Command Sets Mapping Protocol - 4 (FC-SB-4).

4.3 Recommendations for Close Liaison

IETF - IP STORage Maintenance
SNIA - Fibre Channel Technical Work Group

5   Units of Measurement used in this Standard

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