

Proposal for A New INCITS Standard Fibre Channel - Physical Interfaces – 6P 128GFC four lane parallel (FC-PI-6P) T11/13-157v3

1 Source of the Proposed Project

1.1 Title: Fibre Channel - Physical Interfaces – 6P (FC-PI-6P)

1.2 Date Submitted:

April 11, 2013

1.3 Proposer:

INCITS TC T11

2 Process description for the Proposed Project:

2.1 Project Type:

Type D (Development done by INCITS TG T11.2 within INCITS TC T11).

2.2 Type of Document:

Standard

2.3 Definitions of Concepts and Special Terms:

None

2.4 Expected Relationships 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 (Existing or New):

It is recommended that this project be assigned to TC T11. Development will be done within TG T11.2. It is expected that this project will impose new requirements on T11.3.

2.6 Anticipated Frequency and Duration of Meetings:

This project will make use of the regularly-scheduled bimonthly T11 and T11.2 meeting sessions. Informal Working Groups will be organized on an ad-hoc basis.

2.7 Target Date for Initial Public Review (Milestone 4):

December 2014

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

The FC-PI-6P standard will define the requirements for new physical layer variants that operate at FC-PI-6 line rate on a four lane physical variant. It is desirable that new variants operate at similar distances as those of the corresponding variants specified in FC-PI-6. The FC-PI-6P standard will consider all aspects of transmit, receive and cable-plant performance requirements for optical and electrical links. The standard will enable interoperability of transmitter devices, receiver devices, interconnects, and components among different manufacturers.

It is desirable that new variants in this standard be specified such that they can be made interoperable with variants defined in the FC-PI-6 standard.

Additional sub-projects may be proposed within the scope of this project. Each will include appropriate signal specifications as well as information about the methodologies required to measure those signals.

It will include new variants to support a 12800 MB/s data rate FC-PI-6P is intended to be a standalone document for a four lane interface and is not intended to be a replacement for FC-PI-6. This proposed standard is not intended to address areas above the physical level.

3.2 Existing Practice and the Need for a Standard:

The proposed project involves a compatible evolution of the present Fibre Channel physical layer.

Such evolutionary improvements may include:

Increase the data rate of optical and electrical links in:

- o Backplanes
- o Horizontal and vertical wiring.
- o Inter- and intra-building connections.
- o Server room channels.

Link equalization may be used to improve the performance of some variants.

Other information and variants approved by T11.

3.3 Implementation Impacts of the Proposed Standard

3.3.1 Development Costs

Resources are provided by the members of T11 and T11.2. The members host the required meetings for development, provide for the necessary lab experiments and silicon technology development and provide the Technical Editor for the project.

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 and protects backward compatibility wherever possible. The proposed standard will result in expanded applications for existing and conceived products in backplane, channel and network markets.

3.3.3 Costs and Methods for Conformity Assessment

The committee will consider the results of testing as may be available to the committee through the voluntary efforts of the various participants in T11 and T11.2. 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-PI-6P will be preserved by providing additional throughput or margin to existing physical variants

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 not aware of any patent assertions that may be made.

3.4.2 Dissemination of the Standard or Technical Report

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

4 Related Standards Activities:

4.1 Existing Standards

This project extends INCITS Project 2221-D, FC-PI-6.

4.2 Related Standards Activity:

INCITS Project 2235-DT (FC-MSQS-2)

IS 14165-118, (FC-MSQS)

IS 1316-DT, (FC-MJSQ)

4.4 Recommendations for Close Liaison:

IEEE 802.3

OIF

ISO/IEC JTC1 SC25 WG3

SFF committee

TIA FO-4.1/4.2, TR-42

FCIA

5 Units of Measurement used in the Standard:

The units of measurement used in the Standard shall be the International System of Units (SI)