

# Draft Minutes

## T11.3 FC-BB-6 ad hoc work group regular meeting

### 31 March 2010 - 9:00 AM to 5:30 PM PDT

### Pasadena CA

The FC-BB-6 ad hoc work group of the Fibre Channel Protocol (T11.3) Task Group held a regular meeting at Pasadena CA on 31 March 2010, hosted by FCIA and Chris Lyon. Attendance was 35 people from 26 organizations and is tabulated at the end of this document.

Minutes were taken by Bob Nixon (Emulex) (bob.nixon@emulex.com). Please report any corrections by email to the T11.3 reflector at T11\_3@mail.T11.org.

## 1 Opening remarks

### 1.1 Introductions

Chairperson Claudio DeSanti (Cisco) opened the regular meeting Wednesday, 31 March 2010 at 9:03 AM PDT. He thanked our hosts, FCIA and Chris Lyon, and led a round of introductions.

## 2 Meeting Policy

### 2.1 Attendance and Membership

The chair explained that attendance is recorded electronically at [www.t11.org/att](http://www.t11.org/att), and explained the procedure. Attendance at this meeting does not count toward attendance at the plenaries of T11 and its task groups (i.e., being here will not get you out or keep you out of membership jeopardy).

The chair stated that all persons present are considered members of this meeting and may vote on questions, limited to one vote per company present. He advised that although T11 does not limit participation in the activities of its work groups to representatives of T11 member organizations, it requires nonmembers to identify themselves as such. Nonmembers that expect they may participate in the activities of T11 regularly were encouraged to become members.

Those responding are included in the attendance record. They were advised that by remaining in this meeting, they submit themselves and their organizations to INCITS policy for intellectual property, antitrust, and guest membership policy.

### 2.2 Patents

The chair indicated that among the rules and policies under which this working group operates are the ANSI intellectual property policies as specified in pages 1-3 of [http://www.incits.org/pat\\_slides.pdf](http://www.incits.org/pat_slides.pdf). He displayed these pages without comment or explanation, and directed that questions about the policy should be referred to the questioner's legal counsel or the ANSI General Counsel.

### 2.3 Antitrust

The chair indicated that among the rules and policies under which this working group operates are the INCITS Antitrust Guidelines. Any member of the meeting is responsible for objecting if he believes discussion in the meeting violates those guidelines. As examples, there should never be discussion of the following topics at any INCITS or INCITS subgroup meeting:

- Any company's prices or pricing policies;
- Specific R&D, sales and marketing plans;
- Any company's confidential product, product development or production strategies;
- Whether certain suppliers or customers will be served;
- Prices paid to input sources; or
- Complaints about individual firms or other actions that might tend to hinder a competitor in any market.

If such discussion is not immediately terminated, it is the chairperson's responsibility to terminate the meeting. The INCITS Antitrust Guidelines are available at

<http://www.incits.org/inatrust.htm>

### 3 Administrivia

#### 3.1 Approval of Agenda

An agenda for the FC-BB-6 ad hoc work group regular meeting 31 March 2010 has been posted as 10-142v0.

***Lou Ricci (IBM) moved and Silvano Gai (Cisco) seconded to accept 10-142v0 as the agenda for this regular meeting. Approved unanimously.***

#### 3.2 Review of Minutes

Minutes for the FC-BB-6 ad hoc work group regular meeting 3 February 2010 have been posted as T11/10-055v1.

In email to the secretary, Ralph Weber pointed out that the document reference for 6.7 should be 10-037v0, not the 09-637v0 shown. Corresponding changes are needed in clause 11, Status of Open Proposals.

***Ralph Weber (co) moved and Silvano Gai (Cisco) seconded to accept T11/10-055v1 with the changes noted above as the minutes of the FC-BB-6 ad hoc work group meeting on 3 February 2010. Approved unanimously.***

**ACTION Bob Nixon (Emulex) to publish a new document reflecting T11/10-055v1 and the agreements at the FC-BB-6 ad hoc work group regular meeting 31 March 2010.**

### 4 Review of Old Action Items

091209-1 FC-BB-6 editor to incorporate T11/09-514v1 into FC-BB-6.  
(Carry)

### 5 Old Business

No old business was presented.

## 6 Scheduled Business

### 6.1 Jet Assist for FCoE P2P N\_Port\_ID Selection T11/10-119v0 Weber/ENDL Texas

The presentation introduced a method of extending the VN2VN proposal to accelerate completion of the address selection phase. It involved one or more “special” nodes that maintain a table of assigned addresses, either (or both) by collecting responses or by preconfiguration.

### 6.2 FC-BB-6 Living in a MainFrame World T11/10-123v0 Ricci/IBM

The presentation offered justification for the position that rapid completion of address selection was essential to certain well-established Fibre Channel (and possibly FCoE) use cases, particularly those involving FC-SB-x. In summary, expensive things happen if a link takes more than a second or so to come up.

### 6.3 FCoE End-to-End Connection T11/10-132v0 Ko (Huawei)

The presentation described a way to leverage the FCF for N\_Port\_ID assignment, and subsequently bypass the FCF for data traffic between mutually accessible FCoE devices. It depends on constructing the remote device’s MAC address by use of its FC\_ID (from a name server) and the FC-MAP.

The issue of determining mutual accessibility was raised. A later part of the presentation offered alternate means of resolving this.

Another issue was raised with sending an FLOGI to another end device that may, or will, also have an FLOGI to a Fibre Channel switch. The presenter was advised to reconsider if the “point-to-point” FLOGI was necessary.

The presenter was asked what advantages he saw over more mature proposals. He explained that his proposal only required a “lightweight” FCF, not a full capability FCF. At minimum it needed to provide only FLOGI (N\_Port\_ID assignment) and Name Server-based discovery. It would retain the responsiveness of FCF topologies. It would leverage a full FCF if one were present, or if additional FCF-like functions were needed. Some were concerned whether a reduced set of generic services would require substantial changes to existing end devices.

Several questions were raised about how much the FCF functionality could be reduced versus an FCF that met minimal current FCF requirements.

### 6.4 Harmonized (Direct Mode) Adapter Based Shortcut T11/10-133v0 Hufferd (Hufferd Ent.)

The presentation revised an earlier proposal to leverage techniques introduced in the VN2VN proposal. Several possible improvements were described, and some opportunities for ACL-based security were introduced.

An issue was raised with a recommendation to revise the FC-LS-2 point-to-point login protocol between end devices that support SCSI.

### 6.5 VN2VN Multi-Point and Point-to-Point T11/10-156v0 DeSanti (Cisco)

This presentation gave an overview of a protocol that supports both point to point and multipoint connectivity, in a manner that satisfies the main proponents of the two formerly separate solutions.

### 6.6 Generating pseudo-random N\_Port\_IDs T11/10-137v0 Noll (Cisco)

This presentation used a detailed example to demonstrate the properties of the VN2VN “random” N\_Port\_ID generation proposal. It included a working code implementation, serving to demonstrate the low resource cost of the method.

It was asked if an algorithm should be standardized. Expert advice was that an informative annex may be of value, but a standard probably was not.

## **6.7 The sFCF**

**T11/10-131v0 Hufferd (Hufferd Ent.)**

The presentation reviewed the need for improvements in scalability of Fabrics to larger numbers of switches. It then described an evolution from prior presentations toward the same issue, specifically those that involved a “reduced functionality” FCF, or FPP.

It introduced the term “sFCF” for “subordinate FCF”, more familiarly called “small FCF”. This replaces the term FPP, with slightly different functionality.

It expressed a goal of being applicable to native FC as well. Some difficulties were identified that may be relevant to an FC implementation but not to an FCoE implementations.

## **6.8 FCoE Topologies**

**T11/10-130v0**

**Gai (Cisco)**

The presentation provided added details on the sFCF concept, as well as pointing out missing details that need to be worked out. It showed various FCF-centric topology cases, indicating how various switching elements would be installed for best path routing.

## **7 Unscheduled Business**

Then the terminology debates began...

When the noise abated, this was the majority opinion:

- The lesser device with the purpose of optimal routing of data traffic: FDF (Fibre channel Data Forwarder); and
- The greater device with the purpose of tying it all together: Controlling FCF (Fibre Channel Facility).

## **8 Review of Action Items**

091209-1 FC-BB-6 editor to incorporate T11/09-514v1 into FC-BB-6.  
(Carry)

100331-1 Bob Nixon (Emulex) to publish a new document reflecting T11/10-055v1 and the agreements at the FC-BB-6 ad hoc work group regular meeting 31 March 2010.

## **9 Meeting Schedule**

Request 8 hours at the T11 plenary week hosted by FCIA in Minneapolis MN, 7-11 June 2010.

## **10 Adjournment**

***Silvano Gai (Cisco) moved and Eric Smith (EMC) seconded to adjourn. Approved unanimously.***

The regular meeting was adjourned at 4:44 PM PDT on 31 March 2010.

## 11 Status of Open Proposals

Document Title	Number	Disposition	Author
Filling the Virtualization Swamp	T11/09-412	Close, tutorial. Most recent version presented was T11/09-412v1	Crandall (Brocade)
Proxy Based Shortcuts text	T11/09-517	Close, withdrawn by presenter. Most recent version presented was T11/09-517v0	Hufferd (Hufferd Ent.)
Proxy Based Shortcuts presentation	T11/09-518	Close, withdrawn by presenter. Most recent version presented was T11/09-518v0	Hufferd (Hufferd Ent.)
VN_Port to VN_Port Virtual Links	T11/09-637	Close, replaced by T11/10-037. Most recent version presented was T11/09-637v0.	Peterson (Brocade)
Locally Unique N_Port_IDs	T11/10-019	Close, replaced by T11/10-060v0. Most recent version presented was T11/10-019v1	DeSanti (Cisco)
Distributed FCF functionality	T11/10-028	Carry. Most recent version presented was T11/10-028v0	Gai (Cisco)
VN_Port to VN_Port Virtual Links	T11/10-037	Carry. Most recent version presented was T11/10-037v0	Peterson (Brocade)
FCoE Point to Point	T11/10-039	Close, replaced by T11/10-156. Most recent version presented was T11/10-039v0	Hathorn (IBM)
Adapter Based Shortcuts presentation	T11/10-040	Close, withdrawn by presenter. Most recent version presented was T11/10-040v0	Hufferd (Hufferd Ent.)
(Direct Mode) Adapter Based Shortcuts	T11/10-041	Close, replaced by T11/10-133. Most recent version presented was T11/10-041v0	Hufferd (Hufferd Ent.)
Locally Unique N_Port_IDs	T11/10-060	Close, replaced by T11/10-156. Most recent version presented was T11/10-060v1	DeSanti (Cisco)
Jet Assist for FCoE P2P N_Port_ID Selection	T11/10-119	Carry for further consideration. Most recent version presented was T11/10-119v0	Weber (ENDL Texas)
FC-BB-6 Living in a MainFrame World	T11/10-123	Close, tutorial. Most recent version presented was T11/10-123v0	Ricci (IBM)
FCoE End-to-End Connection	T11/10-132	Close, tutorial. Most recent version presented was T11/10-132v0.	Ko (Huawei)

Document Title	Number	Disposition	Author
Harmonized (Direct Mode) Adapter Based Shortcut	T11/10-133	Carry for further development. Most recent version presented was T11/10-133v0.	Hufferd (Hufferd Ent.)
VN2VN Multi-Point and Point-to-Point	T11/10-156	Carry for further development. Most recent version presented was T11/10-156v0.	DeSanti (Cisco)
Generating pseudo-random N_Port_IDs	T11/10-137	Close, tutorial. Most recent version presented was T11/10-137v0.	Noll (Cisco)
The sFCF	T11/10-131	Carry for further development. Most recent version presented was T11/10-131v0.	Hufferd (Hufferd Ent.)
FCoE Topologies	T11/10-130	Carry for further development. Most recent version presented was T11/10-130v0.	Gai (Cisco)

## 12 Attendance

Organization	Representative
BLADE NETWORK TECHNOLOGIES	Chetan Yaliwal
BROADCOM	Pat Thaler
BROCADE	David Peterson
BROCADE	Steven L. Wilson
CISCO	Joe Pelissier
CISCO SYSTEMS	Landon Noll
CISCO SYSTEMS	Silvano Gai
CISCO SYSTEMS, INC.	Claudio DeSanti
DELL	Gaurav Chawla
DELL, INC.	Glenn Virball
EMC	Erik Smith
EMC	Gary S. Robinson
EMULEX	Bob Nixon
EMULEX	William R. Martin
ENDL TEXAS	Ralph Weber
FUJITSU AMERICA, INC.	Sandy Wilson
HEWLETT PACKARD CO.	Krishna Babu Puttagunta

<b>Organization</b>	<b>Representative</b>
HUAWEI SYMANTEC	Michael Ko
HUFFERD ENTERPRISES	John Hufferd
IBM	Louis Ricci
IBM	Roger Hathorn
INTEL CORPORATION	Prafulla Deuskar
JDS UNIPHASE	George Bullis
JUNIPER	Joseph White
LSI CORP.	John Lohmeyer
MELLANOX TECHNOLOGIES	Diego Crupnicoff
NETAPP	Frederick Knight
ORACLE	Roger Dickerson
QLOGIC CORP	Alan Spalding
QLOGIC CORP.	Craig W. Carlson
SOLUTION TECHNOLOGY	Robert Kembel
SUN MICROSYSTEMS	Michael Roy
TRUE FOCUS, INC	Horst Truestedt
UNIVERSITY OF NEW HAMPSHIRE INTEROPERABILITY LAB	Mikkel Hagen
VMWARE	Lawrence Lamers