

# Draft Minutes

## T11.3 FC-BB-5 ad hoc work group interim meeting

### 8 May 2008 - 4 PM to 7 PM PDT

### Santa Clara CA

The FC-BB-5 ad hoc work group of the Fibre Channel Protocol (T11.3) Task Group held a interim meeting at Santa Clara CA on 8 May 2008, hosted by nVidia. Attendance was 27 people from 17 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

Claudio DeSanti opened the interim meeting Thursday, 8 May 2008 at 4:01 PM PDT. He thanked our host organization, nVidia, and led a round of introductions.

## 2 Meeting Policy

### 2.1 Attendance and Membership

Claudio DeSanti 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).

Claudio DeSanti 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, T11 encourages organizations that are regularly represented at T11 work group activities to become members of T11.

### 2.2 Patents

Claudio DeSanti indicated that among the rules and policies under which this working group operates are the INCITS intellectual property policies. He requested persons wishing to make statements or ask questions relevant to this policy not to pursue discussion at this work group meeting, but instead to do so with an officer of T11.3 or T11.

The INCITS intellectual property policies are specified in INCITS Policies and Guidelines (<http://www.incits.org/rd1/in071686.pdf>) subclause 8.4.

A summary of the INCITS intellectual property policies as applicable to the work of this meeting is given in document T11/06-739v0, which is available on [www.t11.org](http://www.t11.org).

### 2.3 Antitrust

Claudio DeSanti 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-5 ad hoc work group interim meeting 8 May 2008 has been posted as T11/08-261v0.

It was requested to add an agenda item for a review of the goals of the Threat Model subgroup.

***Landon Noll (Cisco) moved and Silvano Gai (Nuova) seconded to accept T11/08-261v0 with the changes noted above as the agenda for this interim meeting. Approved unanimously.***

#### **3.2 Review of Minutes**

Minutes for the FC-BB-5 ad hoc work group interim meeting 16 April 2008 have been posted as T11/08-248v0. As this meeting is an interim meeting, minutes review and approval were deferred to the next regular meeting of the work group on June 4 2008.

### **4 Review of Old Action Items**

- A1 Further clarification to be provided on the need for and requirements for timeouts relating to advertisements and solicitations: Cisco, Brocade, Nuova, QLogic and Emulex.  
(Carry for a final report)
- A2 Landon Noll (Cisco) to lead a group of interested parties, via the email exploder, to work up a set of criteria for FCoE threat models for consideration by the FC-BB-5 ad hoc.  
(Completed. See agenda item 7.1)
- A3 Dave Peterson to integrate the current FC-BB-5 text and new texts in T11/08-172v2 and 08-209v1 in time for the interim meeting.  
(Carry for the regular meeting)

## 5 Old Business

No old business was presented.

## 6 Scheduled Business

### 6.1 Additional FIP Functions

T11/08-263v0

DeSanti (Cisco)

The presentation summarized the current operation of FIP discovery, and then proposed some additional FIP protocol options to deal with certain loss of connectivity cases.

One contentious proposal was that FCFs that are temporarily unable to accept FLOGI would continue to send multicast advertisements, but with an indication of unavailability.

It was noted that giving a priority in both a multicast FCF advertisement and in a following unicast FCF advertisement could cause pathological behavior. It was recommended to consider eliminating it in one place or the other.

The proposal developed an alternative approach to ENode discovery of FCFs, trading reduced broadcast traffic for quick completion. In this approach, the ENode that did not urgently need to discover would wait for the periodic advertisements from FCFs to discover them, rather than initiate a broadcast solicitation.

The proposal developed another alternate approach to ENode discovery of FCFs, in which responses to multicasts are randomized over a small number of seconds. This was expected to help reduce boot discovery storms on rack powerups.

A new protocol was proposed in concept to emulate the functions of Fibre Channel link initialization.

These new protocols may be developed in more detail in future proposals.

### 6.2 FC-MAP - Default Value

T11/08-262v0

Gai (Nuova)

FCoE needs to specify a default FC-MAP prefix for generated MAC addresses.

It was noted that although the IEEE does not allocate "vanity" values, the values used for locally assigned MAC addresses need not be allocated. Unfortunately, the address prefix FC0E sets a bit that is reserved to indicate a multicast address, which is wrong.

Silvano pointed out that because most debuggers reverse byte ordering from Ethernet standard transmission order, the prefix 0EFC would display as FC0E. 0EFC not only clears the multicast flag, it sets the required local flag. Bravo!

***Silvano Gai (Nuova) moved and Landon Noll (Cisco) seconded that 0EFC00h be the default FC-MAP value. The motion was approved unanimously.***

**ACTION** FC-BB-5 editor to capture in the specification that 0EFC00h is the default FC-MAP value.

### 6.3 Initialization Protocol (FIP) Text Proposal

T11/08-172v2

DeSanti (Cisco)

The group briefly reviewed the text proposed for the FIP specification. Claudio had incorporated changes requested by the previous work group meeting. The presenter captured a few comments from this meeting. This proposal is the basis for the FIP protocol specification in the FC-BB\_E clause of the FC-BB-5 draft.

**6.4 Functional Models** **T11/08-209v2** **DeSanti (Cisco)**

A single correction had been made to one diagram. This proposal is the basis for the functional overview in the FC-BB\_E clause of the FC-BB-5 draft.

**6.5 Clause 7 proposed text** **T11/08-258v0** **Peterson (Brocade)**

Dave reviewed the general structure of the FCoE clause in FC-BB-5, into which the prior two proposals are being incorporated in a common editorial style.

**ACTION** Dave Peterson to propose an introductory advisory that data structures in this standard are displayed in Fibre Channel (i.e., “big-endian”) format, while specifications originating in the Ethernet community may display data structures in Ethernet (i.e., “little-endian”) format.

**6.6 ... Robustness using FIP Snooping and FPMA** **T11/08-264v0** **DeSanti (Cisco)**

A new revision has been posted. Those present were requested to review it before the next meeting.

**7 Unscheduled Business**

**7.1 Discussion on FCoE Threat Model subgroup**

David Black and Landon Noll introduced the goals of the threat model to be developed for FCoE. It was emphasized that non-goals are as important as goals, e.g., FCoE will not attempt to resolve more threats than native FC SANs do.

**8 Project Schedule**

Milestone	Expected date
Last Technical Input	June 2008
T11 letter Ballot	August 2008
Forward to INCITS	Month yyyy

**9 Review of Action Items**

- A1 Further clarification to be provided on the need for and requirements for timeouts relating to advertisements and solicitations: Cisco, Brocade, Nuova, QLogic and Emulex.  
(Carry for a final report)
- A3 Dave Peterson to integrate the current FC-BB-5 text and new texts in T11/08-172v2 and 08-209v1 in time for the interim meeting.  
(Carry for the regular meeting)

- A4 FC-BB-5 editor to capture in the specification that 0EFC00h is the default FC-MAP value.  
(Opened 8 May 2008)
- A5 Dave Peterson to propose an introductory advisory that data structures in this standard are displayed in Fibre Channel (i.e., "big-endian") format, while specifications originating in the Ethernet community may display data structures in Ethernet (i.e., "little-endian") format.  
(Opened 8 May 2008)

## **10 Meeting Schedule**

### **10.1 Next Plenary Week**

7 hours are scheduled on Wednesday June 4 at the T11 plenary week hosted by FCIA in Coeur d'Alene ID, 2-5 June 2008.

## **11 Adjournment**

***It was moved by Bob Snively (Brocade) and seconded by Roger Hathorn (IBM) to adjourn. Approved unanimously.***

The interim meeting was adjourned at 7:02 AM PDT on 8 May 2008.

## 12 Attendance

Organization	Representative
BROADCOM	Pat Thaler
BROADCOM	Uri Elzur
BROADCOM	Andrew Li
BROCADE	Anoop Ghanwani
BROCADE	David Peterson
BROCADE	Ezio Valdevit
BROCADE	John Hufferd
BROCADE	Robert Snively
CISCO SYSTEMS	Fabrizio Corno
CISCO SYSTEMS	Landon Noll
CISCO SYSTEMS	Claudio DeSanti
EMC	David Black
EMULEX	Bob Nixon
EMULEX	Parag Bhide
ENDL TEXAS	Ralph Weber
FINISAR	Paul Gentieu
HITACHI GLOBAL STORAGE TECHNOLOGIES	Dan Colegrove
IBM	Roger Hathorn
INTEL	Gary Tsao
LSI	Curtis Ridgeway
MICROSOFT	Robert Griswold
NETAPP	Frederick Knight
NUOVA SYSTEMS	Silvano Gai
QLOGIC	Alan Spalding
QLOGIC	Craig W. Carlson
SCHELTO	Schelto Van Doorn
SPIRENT COMMUNICATIONS	John McLendon