

Draft Minutes

T11.3 FC-BB-6 ad hoc work group regular meeting 8 December 2010 - 9:00 AM to 5:30 PM EST Amelia Island FL

The FC-BB-6 ad hoc work group of the Fibre Channel Protocol (T11.3) Task Group held a regular meeting at Amelia Island FL on 8 December 2010, hosted by FCIA and Chris Lyon. Attendance was 25 people from 16 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, 8 December 2010 at 9:02 AM EST. 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, 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. 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 8 December 2010 has been posted as T11/10-540v0.

Dave Peterson (Brocade) initiated a discussion of the persistently late posting of presentations (i.e., often less than 12 hours before the meeting).

The TG chair confirmed that the "Two-Week Rule" can be called by any member to unconditionally block a vote.

The chair will not place on the agenda any presentation that is requested after the deadline he declares in his request for presentations.

Landon Noll (Cisco) moved and Dave Peterson (Brocade) seconded to accept T11/10-540v0 as the agenda for this regular meeting. Approved by acclamation.

3.2 Review of Minutes

Minutes for the FC-BB-6 ad hoc work group regular meeting 20/10/2010 have been posted as T11/10-447v0.

Dave Peterson (Brocade) moved and Lou Ricci (IBM) seconded to accept T11/10-447v0 as the minutes of the FC-BB-6 ad hoc work group meeting on 20/10/2010. Approved by acclamation.

4 Review of Old Action Items

- 101020-1 Claudio DeSanti to post a presentation detailing the extension of the routing method described in T11/10-465v0 to multilevel FDF hierarchies.
(Completed by posting of T11/10-555v0, about half-way through this meeting)

5 Old Business

No old business was reconsidered.

6 Scheduled Business

6.1 Virtual Domain, Virtual Domain text T11/10-345v2, T11/10-517v0 Peterson (Brocade)

The presenter described T11/10-345v2 as the final overview presentation of his approach to virtual domains; and T11/10-517v0 as text changes in support of Virtual Domains, to the extent that he believes consensus has been established.

Significant features of the approach were

- leveraging the FSPF protocol for autonomous routing determination by FDFs; and
- resulting inherent support for complex and cascaded FDF topologies beneath a controlling FCF(s).

T11/10-517v0 was not available at this meeting.

6.2 FCoE Topologies T11/10-130v2 Gai (Cisco), Smith (EMC)

Silvano Gai presented. The presentation introduced several topologies based on blade/rack/row/SAN architectures, and differing in where shared storage resides. It proposed differing requirements for the switching elements at each switching point in the different topologies in order to provide optimal routing from servers to storage.

Certain cases were introduced that relied on “cascading” FDFs (i.e., FDFs in the configuration that need to route through another FDF to reach the controlling FCF).

6.3 Cascading FDFs T11/10-555v0 DeSanti (Cisco)

The presentation detailed an extension of the routing method described in T11/10-465v0 to support cascading FDF hierarchies (i.e., FDFs in the configuration need to route through another FDF to reach the controlling FCF).

At 12:23, the chair called for a recess until 2:00 PM for lunch.

The meeting resumed at 2:00 PM.

6.4 VA_Ports: FDF / Controlling FCF Protocols T11/10-271v4 DeSanti (Cisco)

This presentation has been updated to include proposed resolutions to issues raised at the prior meeting, including:

- configuration in LANs including several potential controlling FCFs: administrative configuration is an obvious method, and probably unavoidable. Use of the priority field in the E_Port discovery FIP seemed like an inappropriate overload of the field;
- extensions to support cascaded FDFs, as discussed in T11/10-555v0; and
- allowing for operation in a native FC SAN (i.e., no FIP discovery exchange of information).

6.5 FCoE: Flow Control Enforcement

T11/10-552v0

Pelissier (Cisco)

The presentation reported on work in the IEEE 802.1 committee on priority flow control; especially its relationship to FCoE. It has been observed that, of known application protocols, only FCoE is believed to be inoperable without priority flow control, though other protocols may be operationally improved by it.

One of the issues that was of concern was behavior in the presence of inconsistently configured priority flow control. Since IEEE considered this as critical only to FCoE, it delegated the resolution to T11.

The presentation concluded by recommending enforcing consistent priority assignment based on ACLs, similar to those already specified in FC-BB-6 annex C for "Increasing FCoE Robustness".

It was agreed to be desirable to enforce the proper priority for FIP as well, so that inconsistencies may be discovered earlier.

There was animated discussion of whether FIP and FCoE should be allowed to be assigned to separate priorities.

Observation from an astute member: assuring a consistent priority does not necessarily assure that the priority is flow controlled (i.e., lossless).

- Answer: True; unfortunately, no resolutions have been developed for this issue yet in IEEE, either.
- Question: given that, why is this issue worth resolving?
- Answer: because it is low-hanging fruit, and because it resolves a negative vote on a critical IEEE standard.
- Expert authority contribution: A FIP-aware bridge could automatically discard FIP/FCoE traffic that was assigned to a lossy priority. (This may be left as a value-add enhancement, rather than a standard specification.)

7 Unscheduled Business

An unscheduled and scarcely authorized discussion ensued on how to proceed to resolve certain remaining major disagreements on technical approach. With some effort, it was constrained to compliance with the antitrust policies. It did not appear to have resolved the core issue.

8 Review of Action Items

There are no open action items.

9 Meeting Schedule

Request 8 hours at the T11 plenary week hosted by FCIA and Chris Lyon in Charleston SC, 7-11 February 2011.

10 Adjournment

Lou Ricci (IBM) moved and Joe Pelissier (Cisco) seconded to adjourn. Approved by acclamation.

The regular meeting was adjourned at 3:40 PM EST on 8 December 2010.

11 Status of Open Proposals

Document Title	Number	Disposition	Author
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)
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)
FCoE Topologies	T11/10-130	Carry. Most recent version presented was T11/10-130v2.	Gai (Cisco)
The sFCF	T11/10-131	Carry for further development. Most recent version presented was T11/10-131v0.	Hufferd (Hufferd Ent.)
Harmonized (Direct Mode) Adapter Based Shortcut	T11/10-133	Carry for further development. Most recent version presented was T11/10-133v0.	Hufferd (Hufferd Ent.)
VN_Port WWPN to Fabric association	T11/10-224	Carry for further development. Version presented was T11/10-224v1	Smith (EMC)
VA_Ports: FDF / Controlling FCF Protocols	T11/10-271	Carry for further development. Version presented was T11/10-271v4	DeSanti (Cisco)
FC-BB-6 FDF Requirements	T11/10-343	Carry for further development. Version presented was T11/10-343v0.	Hathorn (IBM)
Virtual Domain	T11/10-345	Close. Tutorial purpose has been accomplished. Version presented was T11/10-345v2.	Peterson (Brocade)
Flow Control Enforcement	T11/10-552	Carry for further development. Version presented was T11/10-552v0	Pelissier (Cisco)
Cascading FDFs	T11/10-555	Close. Tutorial purpose has been accomplished. Version presented was T11/10-555v0.	DeSanti (Cisco)

12 Attendance

Organization	Representative
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
EMC	David Black
EMC	Erik Smith
EMULEX	Bob Nixon
EMULEX	William R. Martin
ENDL TEXAS	Ralph Weber
HEWLETT-PACKARD COMPANY	Barry Maskas
HUFFERD ENTERPRISES	John Hufferd
IBM	Louis Ricci
IBM	Roger Hathorn
IBM	Scott Carlson
INTEL CORPORATION	Prafulla Deuskar
JDSU	Jason Rusch
LSI CORP.	John Lohmeyer
MELLANOX TECHNOLOGIES	Diego Crupnicoff
NETAPP	Frederick Knight
ORACLE	Matt Gaffney
ORACLE	Michael Roy
QLOGIC CORP.	Craig W. Carlson