

Draft Minutes

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

3 June 2009 - 10:00 AM to 4:30 PM PDT

Coeur d'Alene ID

The FC-BB-5 ad hoc work group of the Fibre Channel Protocol (T11.3) Task Group held a regular meeting at Coeur d'Alene ID on 3 June 2009, hosted by FCIA and Chris Lyon. Attendance was 32 people from 24 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, 3 June 2009 at 10:03 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, 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-5 ad hoc work group regular meeting 3 June 2009 has been posted as T11/09-305v0.

Dave Peterson requested to be shown as presenter of T11/09-277v1.

Claudio DeSanti (Cisco) moved and David Black (EMC) seconded to accept T11/09-305v0 with the changes noted above as the agenda for this regular meeting. Approved unanimously.

3.2 Review of Minutes

Minutes for the following FC-BB-5 ad hoc work group meetings have been posted:

- a) regular meeting 1 April 2009 as T11/09-232v1;
- b) teleconference 16 April 2009 as T11/09-245v3;
- c) teleconference 27 April 2009 as T11/09-257v1;
- d) teleconference 11 May 2009 as T11/09-267v1;
- e) teleconference 15 May 2009 as T11/09-273v1; and
- f) teleconference 26 May 2009 as T11/09-293v1.

Silvano Gai (Cisco) moved and Dave Peterson (Brocade) seconded to accept:

- a) ***T11/09-232v1 as the minutes of the FC-BB-5 ad hoc work group regular meeting 1 April 2009;***
- b) ***T11/09-245v3 as the minutes of the FC-BB-5 ad hoc work group teleconference 16 April 2009;***
- c) ***T11/09-257v1 as the minutes of the FC-BB-5 ad hoc work group teleconference 27 April 2009;***
- d) ***T11/09-267v1 as the minutes of the FC-BB-5 ad hoc work group teleconference 11 May 2009;***
- e) ***T11/09-273v1 as the minutes of the FC-BB-5 ad hoc work group teleconference 15 May 2009; and***
- f) ***T11/09-293v1 as the minutes of the FC-BB-5 ad hoc work group teleconference 26 May 2009.***

Approved unanimously.

4 Review of Old Action Items

- 090401-1 David Black to review Annex D of FC-BB-5 1.05..
(Completed by review and acceptance of T11/09-244v2)
- 090401-2 Claudio DeSanti to publish a new document reflecting T11/09-200v0 amended as agreed at the FC-BB-5 ad hoc work group regular meeting 1 April 2009.
(Completed by posting of T11/09-200v1)
- 090401-3 FC-BB-5 editor to check all uses of "FCoE frame" to assure that they do not exceed the scope of the definition of FCoE frame.
(Completed by posting of T11/09-251v0)
- 090401-4 Claudio DeSanti to publish T11/09-201v0, reflecting the unpublished draft developed at the FC-BB-5 ad hoc work group regular meeting 1 April 2009.
(Completed by posting of T11/09-201v0)
- 090401-5 FC-BB-5 chair to request T11.3 to request T11 to acquire a private enterprise number from IANA for use in standards developed by T11.
(Completed by posting of T11/09-250v0)
- 090401-6 FC-BB-5 secretary to send email to the T11.3 reflector advising that the FC-BB-5 work group expects to adopt specifications based on T11/09-204v0, which includes different definitions of the LESB counters in FCoE than those in FC-FS-3.
(Completed by email 21 April 2009, Nixon to T11.2 and T11.3 distributions)
- 090401-7 Silvano Gai to post a T11 proposal documenting the pre-FIP implementation.
(Completed by posting of T11/09-294v0)
- 090401-8 FC-BB-5 chair to schedule up to 5 teleconferences to discuss resolutions to open technical issues.
(Completed by postings on the T11 web site)
- 090427-1 Dave Peterson to prepare proposed text for incorporation of proposal T11/09-204v2, amended as agreed at the FC-BB-5 ad hoc work group teleconference 27 April 2009, and post that text for review at the FC-BB-5 teleconference 11 May 2009.
(Completed by posting of T11/09-262v0)
- 090427-2 FC-BB-5 Editor to incorporate T11/09-251v0, amended as agreed at the FC-BB-5 ad hoc work group teleconference 27 April 2009, into FC-BB-5.
(Completed by posting of FC-BB-5 draft revision 1.06, T11/09-056v2)
- 090427-3 FC-BB-5 Editor to prepare a new revision of FC-BB-5 and post it for review at the FC-BB-5 ad hoc work group teleconference 11 May 2009.
(Completed by posting of FC-BB-5 draft revision 1.06, T11/09-056v2)
- 090515-1 FC-BB-5 Editor to propose detailed text changes to specify the technical approach described in T11/09-264v0.
(Completed by posting of T11/09-274v0)

5 Old Business

No old business was presented.

6 Scheduled Business

6.1 FPMAs Requirements T11/09-329v0 DeSanti (Cisco)

The presentation brought for regular meeting confirmation an agreement from a scheduled conference call to make FPMA mandatory to implement and optional to enable. This assures that compliant implementations are able to be configured to interoperate.

Claudio DeSanti (Cisco) moved and Pat Thaler (Broadcom) seconded to incorporate T11/09-329v0 into FC-BB-5. The motion passed unanimously.

ACTION FC-BB-5 editor to incorporate T11/09-329v0 into FC-BB-5.

6.2 FC-BB-5: FKA_ADV_PERIOD=0 text T11/09-278v1 Peterson (Brocade)

This presentation proposes a means to allow an FCF to direct an ENode not to send periodic FIP Keep Alive.

Silvano Gai (Cisco) moved and Dave Peterson (Brocade) seconded to incorporate T11/09-278v1 into FC-BB-5. The motion passed unanimously.

ACTION FC-BB-5 editor to incorporate T11/09-278v0 into FC-BB-5.

6.3 FC-BB-5: Pre-FIP Informative Annex T11/09-277v1 Peterson (Brocade)

This presentation proposes an informative annex that documents certain behavior of pre-standard implementations that is divergent from the standard. Strong prior opponents of this proposal expressed tolerance of it in its current form.

Dave Peterson (Brocade) moved and Fred Knight (NetApp) seconded to incorporate into FC-BB-5. The motion passed unanimously.

ACTION FC-BB-5 editor to incorporate T11/09-277v1 into FC-BB-5.

6.4 Status of letter ballot comment resolution T11/09-010v9 Peterson (Brocade)

As a result of action today, the work group has agreed to resolutions to all letter ballot comments.

6.5 Status of dpANS FC-BB-5 T11/09-056v4 Peterson (Brocade)

Claudio DeSanti (Cisco) moved and Fred Knight (NetApp) seconded to request T11.3 to recommend to T11 to accept T11/09-010vA as the resolution of the letter ballot comments on FC-BB-5 and to forward FC-BB-5 revision 1.08 amended as agreed by the work group meeting 3 June 2009 to become revision 2.00 (T11/09-056v4 amended as agreed by the work group meeting 3 June 2009 to become T11/09-056v5), Project 1871-D, to INCITS for further processing including public review. The motion passed 20 Favoring, 0 Opposing, 1 Abstaining.

ACTION FC-BB-5 ad hoc work group chair to request T11.3 to recommend to T11 to accept T11/09-010vA as the resolution of the letter ballot comments on FC-BB-5 and to forward FC-BB-5 revision 1.08 amended as agreed by the work group meeting 3 June 2009 to become revision 2.00 (T11/09-056v4 amended as agreed by the work group meeting 3 June 2009 to become T11/09-056v5), Project 1871-D, to INCITS for further processing including public review.

In a T11 letter ballot that closed on 14 November 2008, member organizations Brocade, EMC, Emulex, and NetApp voted to oppose forwarding FC-BB-5 revision 1.03 to INCITS.

Based on the changes reflected in accepted letter ballot comment document T11/09-010v9 and further changes agreed by the work group meeting on 3 June 2009, Dave Peterson, alternate representative to T11 for Brocade, agreed to change the opposing vote of his organization to favoring.

Based on the changes reflected in accepted letter ballot comment document T11/09-010v9 and further changes agreed by the work group meeting on 3 June 2009, David Black, alternate representative to T11 for EMC, agreed to change the opposing vote of his organization to favoring.

Based on the changes reflected in accepted letter ballot comment document T11/09-010v9 and further changes agreed by the work group meeting on 3 June 2009, Bob Nixon, principal representative to T11 for Emulex, agreed to change the opposing vote of his organization to favoring.

Based on the changes reflected in accepted letter ballot comment document T11/09-010v9 and further changes agreed by the work group meeting on 3 June 2009, Fred Knight, principal representative to T11 for NetApp, agreed to change the opposing vote of his organization to favoring.

The chair requested that those who had changed opposing positions to favoring to reaffirm their changed position in correspondence to the chairs of the FC-BB-5 work group, T11.3, and T11.

6.6 Potential Topics for FC-BB-6 **T11/09-300v0** **Gai (Cisco)**

The presentation proposed and justified content for a project to develop a successor standard to FC-BB-5. Topics included VN_Port to VN_Port virtual links and enhanced error correction.

There was an interesting summary of requirements for reducing the rate of bit errors for storage access. This appeared to the presenter to conflict with the expectation that the market would require FCoE over Ethernet -BaseT media, raising a need to consider more capable error correction methods.

6.7 FC-BB-6 Project Proposal **T11/09-272v0** **DeSanti (Cisco)**

Claudio presented a draft project proposal for an FC-BB-6 project. Goals included VN_Port to VN_Port virtual links and methods of reducing experienced error rates,

The group agreed to minor adjustments in wording.

Claudio DeSanti (Cisco) moved and Roger Hathorn (IBM) seconded to request T11.3 to approve the project proposal for FC-BB-6 (T11/09-272v1) and to request T11 to forward the project proposal for FC-BB-6 (T11/09-272v1) to INCITS for further processing. The motion passed 20 Favoring, 0 Opposing, 0 Abstaining.

ACTION FC-BB-5 ad hoc work group chair to request T11.3 to request T11 to forward the project proposal for FC-BB-6 (T11/09-272v1) to INCITS for further processing.

7 Unscheduled Business

8 Project Schedule

Milestone	Expected date
Last Technical Input	June 2008 - complete
T11 letter Ballot	October 2008 - complete
Forward to INCITS	June 2009 - complete

9 Review of Action Items

- 090603-1 FC-BB-5 editor to incorporate T11/09-329v0 into FC-BB-5.
- 090603-2 FC-BB-5 editor to incorporate T11/09-278v1 into FC-BB-5.
- 090603-3 FC-BB-5 editor to incorporate T11/09-277v1 into FC-BB-5.
- 090603-4 FC-BB-5 ad hoc work group chair to request T11.3 to recommend to T11 to accept T11/09-010vA as the resolution of the letter ballot comments on FC-BB-5 and to forward FC-BB-5 revision 1.08 amended as agreed by the work group meeting 3 June 2009 to become revision 2.00 (T11/09-056v4 amended as agreed by the work group meeting 3 June 2009 to become T11/09-056v5), Project 1871-D, to INCITS for further processing including public review.
- 090603-5 FC-BB-5 ad hoc work group chair to request T11.3 to request T11 to forward the project proposal for FC-BB-6 (T11/09-272v1) to INCITS for further processing.

10 Meeting Schedule

Request 2 hours at the T11 plenary week for FC-BB-6, hosted by NetApp in Salt Lake City UT, 3-7 August 2009.

11 Adjournment

Landon Noll (Cisco) moved and Horst Truustedt (TrueFocus) seconded to adjourn. Approved unanimously.

The regular meeting was adjourned at 11:46 AM PDT on 3 June 2009.

12 Status of Open Proposals

Document Title	Number	Disposition	Author
Letter Ballot Comment database	T11/09-010	Close. Approved version was T11/09-010vA.	Peterson (Brocade)
FCoE Link Error Status Block	T11/09-204	Close, last presented version was T11/09-204v2. Replaced by T11/09-262.	Hathorn (IBM)
David Black's response to EMC-077	T11/09-244	Close, accepted version wasf T11/09-244v2.	Black EMC
FCoE frame or FCoE PDU?	T11/09-251	Close. Version accepted was T11/09-251v0 with a minor change.	DeSanti (Cisco)
Private Enterprise Number for FCoE MIB	T11/09-250	Close. Version accepted was T11/09-250v0.	DeSanti (Cisco)
LESB Text	T11/09-262	Close. Version accepted was T11/09-262v1 with a minor revision.	Peterson (Brocade)
FCoE Link Incidents	T11/09-264v0	Close, last version presented was T11/09-264v0. Replaced by T11/09-274v0.	Hathorn (IBM)
Link Incident Text	T11/09-274	Close, accepted version was T11/09-274v0 with changes.	Peterson (Brocade)
Pre-FIP Informative Annex	T11/09-277	Close. Approved version was T11/09-277v1.	Peterson (Brocade)
FKA_ADV_PERIOD=0 text	T11/09-278	Close. Approved version was T11/09-278v1.	Peterson (Brocade)
FIP VLAN discovery updates	T11/09-291	Close. Last version presented was T11/09-291v0. T11/09-329 captures one point deferred for regular meeting discusssion. Version presented was T11/09-291v0.	Thaler (Broadcom)
Cisco's PRE-FIP implementation	T11/09-294	Withdrawn before presentation. Posted version wasT11/09-294v0.	Gai (Cisco)
FC-BB-6 Project Proposal	T11/09-272	Close. Approved version was T11/09-272v1.	DeSanti (Cisco)
Potential Topics for FC-BB-6	T11/09-300	Close. This was a tutorial presentation. Version presented was T11/09-300v0.	Gai (Cisco)
FPMA's Requirements	T11/09-329	Close. Approved version was T11/09-329v0.	DeSanti (Cisco)

13 Attendance

Organization	Representative
BROADCOM	Pat Thaler
BROCADE	David Peterson
BROCADE	Steven L. Wilson
CIENA CORPORATION	Martin Hunt
CISCO	Silvano Gai
CISCO	Joe Pelissier
CISCO SYSTEMS	Landon Noll
CISCO SYSTEMS, INC.	Claudio DeSanti
DELL	Gaurav Chawla
EMC	David Black
EMC	Erik Smith
EMULEX	Bob Nixon
EMULEX	William R. Martin
ENDL TEXAS	Ralph Weber
FUJITSU COMPUTER PRODUCTS OF AMERICA	Mike Fitzpatrick
HEWLETT PACKARD	Sean Fitzpatrick
HITACHI DATA SYSTEMS	Eric Hibbard
HUFFERD ENTERPRISES	John Hufferd
IBM	Roger Hathorn
LSI CORP.	John Lohmeyer
MELLANOX TECHNOLOGIES	Diego Crupnicoff
MICROSOFT CORPORATION	Robert Griswold
NETAPP	Frederick Knight
PMC-SIERRA	Brian L'Ecuyer
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	Dustin Schoenbrun
UNIVERSITY OF NEW HAMPSHIRE INTEROPERABILITY LAB	Mikkel Hagen
VMWARE	Lawrence Lamers