

Accredited Standards Committee^{*}
INCITS, Information Technology

Doc. Number: 06-486v0
Date: 06/12/06
Project: FC-BaseT
Reply to: Claudio DeSanti
Dean Wallace

TO: MEMBERSHIP of T11.2
FROM: Dean Wallace, secretary
SUBJECT: Draft minutes from FC-BaseT WG Ad Hoc meeting

AGENDA

- | | | |
|-----|---|-------------------|
| 1. | Opening remarks and introductions | DeSanti (Cisco) |
| 2. | Meeting Policies | DeSanti (Cisco) |
| 3. | Administrivia | |
| 4. | Review of old FC-BaseT action items | Wallace (QLogic) |
| 5. | Scheduled FC-BaseT business | |
| 5.1 | Proposed FC-BaseT PMA Electrical Specification
06-414v0 | Powell (Broadcom) |
| 5.2 | FC-BaseT Auto-Negotiation
06-437v0 | DeSanti (Cisco) |
| 5.3 | Proposed FC-BaseT Port Management
06-440v0 | DeSanti (Cisco) |
| 5.4 | Proposed Text for FC-BaseT E-FIFO
06-418v0 | Ghiasi (Broadcom) |
| 5.5 | Proposed Text for FC-BaseT PHY Startup Procedures
06-417v0 | Ghiasi (Broadcom) |
| 5.6 | Proposed PMA Training
06-444v0 | DeSanti (Cisco) |
| 6. | Unscheduled FC-BaseT business | |
| 7. | Review of FC-BaseT action items | Wallace (QLogic) |
| 8. | Next meeting schedule | DeSanti (Cisco) |
| 9. | Adjournment | |

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RESULTS OF MEETING

1. Opening remarks and introductions

Chairperson Claudio DeSanti led the meeting. He started the meeting at 9:15am, thanked Emulex for hosting the meeting and lead a round of introductions.

2. Meeting Policies

2.1 Attendance and Membership

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. 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).

2.2 Patents

Claudio DeSanti indicated that among the rules and policies under which this working group operates are the INCITS patent policies. He requested persons wishing to make statements or ask questions relevant to this policy not to do so at this work group meeting, but instead to do so at the T11.3 or T11 plenary meeting. The INCITS patent policies are specified in subclause 8.4 of RD-1, "Policies and Guidelines", available at http://www.incits.org/sd9_rev1c.htm#p8-4

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. If such discussion is not immediately terminated, it is the charperson's responsibility to terminate the meeting. The INCITS Antitrust Guidelines are available at <http://www.incits.org/inatrust.htm>

3. Administrivia

Vit Novak moved to approve the agenda as written, Claudio DeSanti seconded. Motion approved by acclamation. Claudio DeSanti moved to approve the minutes of the past two meetings, documents 06-333v0 and 06-374v0, Vit Novak seconded. Motion approved by acclamation.

4. Review of old FC-BaseT action items

AI-13: Schelto Van Doorn to work on Port Management, section 9. (closed by 06-440v0)

AI-14: Scott Powell to work on section 6. (closed by 06-414v0)

AI-19: Claudio DeSanti to address copyright approval from IEEE-SA. (carryover)

AI-20: Scott Powell to prepare PBO data related to shorter (less than 50m) links. (carryover)

5. Scheduled FC-BaseT business

5.1 Proposed FC-BaseT PMA Electrical Specification, 06-414v0, Scott Powell

Scott reviewed draft V0.9. Isolation and EMC requirements came directly from 1000BASE-T. Scott reviewed the test measurements. The transmitter needs to be AC coupled, primarily using a transformer. Transmitter timing jitter was reviewed. On the receiver side the BER is less than 10^{-12} but we need to design to reach 10^{-15} . Alien crosstalk is an additional specification that the receiver needs to tolerate. Scott needs to make a couple of editorial changes.

Motion to incorporate 06-414v0 as modified by the meeting in the FC-BaseT draft. Scott Powell moved, Claudio DeSanti seconded. Motion approved by acclamation.

5.2 FC-BaseT Auto-Negotiation, 06-437v0, Claudio DeSanti

Claudio reviewed the Auto-Negotiation process as defined by IEEE 802.3 clause 28. The Base Page encoding was reviewed. Selector field value 5 will be likely reserved for ANSI INCITS. It has not been assigned yet it but should be assigned by the next plenary. Claudio reviewed the proposed FC-BaseT auto negotiation scheme. Proposed three 16-bit pages and reviewed the Base Page structure. The technology ability field bit assignments will be administered by INCITS.

Claudio went through an example of Auto-Negotiation between two FC-BaseT PHYs carrying FC. Reviewed a FC-BaseT PHY and an IEEE 802.3 PHY. Reviewed FC-BaseT PHYs carrying other data also. This will be the initial version of how Auto-Negotiation is performed in FC-BaseT

5.3 Proposed FC-BaseT Port Management, 06-440v0, Claudio DeSanti

Claudio presented an initial proposal for the FC-BaseT management registers needed to support the previously presented Auto-Negotiation scheme. The group agreed that it make sense to have three registers for what the PHY sends and three for what the PHY receives. Claudio went through a review of the chapter.

Motion to incorporate 06-440v0 as modified by the meeting into the FC-BaseT draft. Claudio DeSanti moved, Scott Powell seconded. Motion approved by acclamation.

5.4 Proposed Text for FC-BaseT E-FIFO, 06-418v0, Ali Ghiasi

Ali reviewed the proposed text to define the FC-BaseT E-FIFO operations. Section 7.3 was added, an example of E-FIFO implementation.

Motion to incorporate 06-418v0 as modified by the meeting in the FC-BaseT draft. Ali Ghiasi moved, Claudio DeSanti seconded. Motion approved by acclamation.

5.5 Proposed Text for FC-BaseT PHY Startup Procedures, 06-417v0, Ali Ghiasi

Ali presented the proposed FC-BaseT section 8. A very basic speed negotiation state diagram in section 8.2 was reviewed. Ali walked through the negotiation step by step. Ali and Claudio need to work together to harmonize this proposal with the Auto-Negotiation proposal.

5.6 Proposed PMA Training, 06-444v0, Claudio DeSanti

Claudio discussed a possible PMA training procedure for FC-BaseT. The scheme is similar to the one defined for 10GBASE-T. The normal PMA training sequence is not periodic, an option for a periodic PMA training sequence is provided. There was a discussion about whether to use the 22 low order bits or the 22 high order bits of the number 39A422h to establish initial scrambler synchronization when performing the periodic PMA training. The document captures the previous discussions on PMA training.

Motion to incorporate 06-444v0 in the FC-BaseT draft. Claudio DeSanti moved, Scott Powell seconded. Motion approved by acclamation.

6. Unscheduled FC-BaseT business

None.

7. Review of FC-BaseT action items

AI-19: Claudio DeSanti to address copyright approval from IEEE-SA.

AI-20: Scott Powell to prepare PBO data related to shorter (less than 50m) links.

8. Next meeting schedule

Authorization for two conference calls will be requested. The next meeting is in the second week of August in Calgary, AB. We will ask for four hours, possibly on Monday morning.

9. Motion to adjourn

Brett Clark moved to adjourn at 11:45am, Frank Barber seconded. Motion approved by acclamation.

10. Attendance

The following 18 people attended this meeting:

Company	Name
AGERE	Carl Murray
AGERE	Adam Healey
BROADCOM	Ali Ghiasi
BROADCOM	Kevin Brown
BROADCOM	Scott Powell
CISCO SYSTEMS	Claudio DeSanti
ESILICON CORPORATION	Frank Barber
FINISAR INC.	Tim Beyers
INTEL CORPORATION	Judy Chen
MCDATA	Scott Kipp
MCDATA	Joe Pelissier
PMC-SIERRA	Brett Clark
QLOGIC	Dean Wallace
SMITHS AEROSPACE	John Schroeder
SUN MICROSYSTEMS	Michael Roy
SUN MICROSYSTEMS	Vit Novak
SYSTEMAX SOLUTIONS	Terry Cobb
TYCO ELECTRONICS	Michael Fogg