

Accredited Standards Committee^{*}
INCITS, Information Technology

Doc. Number: 06-225v0
Date: 03/16/06
Project: FC-BaseT
Reply to: Claudio DeSanti

TO: MEMBERSHIP of T11.2
FROM: Claudio DeSanti, Chair
SUBJECT: Draft minutes from FC-BaseT WG call

AGENDA

- | | | |
|-----|---------------------------------------|------------------------|
| 1. | Opening remarks and introductions | DeSanti (Cisco) |
| 2. | Administrivia | |
| 3. | Meeting Policies | DeSanti (Cisco) |
| 4. | Review of old FC-BaseT action items | DeSanti (Cisco) |
| 5. | Scheduled FC-BaseT business | |
| 5.1 | PMA Training for FC-BaseT
06-214v0 | McClellan (Solarflare) |
| 5.2 | FC-BaseT Scrambling
06-217v0 | DeSanti (Cisco) |
| 6. | Unscheduled FC-BaseT business | |
| 7. | Review of FC-BaseT action items | DeSanti (Cisco) |
| 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 conference call. He started the meeting at 12:35 PM. He led a round of introductions.

2. Administrivia

No formal agenda was posted. Two presentations were reviewed.

3. Meeting Policies

3.1 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).

3.2 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

3.3 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 chairperson's responsibility to terminate the meeting. The INCITS Antitrust Guidelines are available at <http://www.incits.org/inatrust.htm>

4. Review of old FC-BaseT action items

AI-12: Scott Powell will define self synchronizing scrambler for next time. (carryover)

AI-13: Schelto Van Doorn will work on Port Management, section 9. (carryover)

AI-14: Scott Powell will work on section 6. (carryover)

AI-15: Ali Ghiasi will work on section 7 and 8. (carryover)

AI-16: Brett McClellan to look at training issues for pairs alignment. (closed by 06-214v0)

5. Scheduled FC-BaseT business

5.1 PMA Training for FC-BaseT, 06-214v0, Brett McClellan

Brett presented a proposal on how to perform PMA training for FC-BaseT, based on the 10GBASE-T PMA training. During PMA training each PHY identifies the pair assignments at its receiver, correcting for crossovers and inverted pairs. In addition each PHY compensates for the differential delay variation across the 4 wire pairs. The training uses a special sequence of PAM-2 signals, rather than PAM-8, and the 1000Base-T side-stream scrambler to generate uncorrelated symbols. Master and Slave sequences are reversed in time. The group discussed the levels to use for FC-BaseT: +/- 5 seem the right choice, but the resulting signal has a slightly higher transmit power (0.76dB) than uniform PAM-8. The group decided to go with +/- 5, because the difference in transmit power is small. Additional discussion happened on if some 10GBASE-T Infields are needed. The only reason to have them would be to perform the power backoff negotiation.

Action: Brett McClellan to look at power backoff options for FC-BaseT.

5.2 FC-BaseT Scrambling, 06-217v0, Claudio DeSanti

Claudio presented the result of an investigation on scrambling for FC-BaseT. There are two possibilities:

- Side-stream scrambling. The advantages are that transmission errors are not multiplied at the receiver and that the 1000Base-T side-stream scrambler may be reused. Errors are detected at the receiver thank to the Error Detecting Code in Control Words. The disadvantage is that a PCS retraining is needed to recover from a situation in which the transmitting and receiving scramblers loose synchronization.
- Self-synchronizing scrambling. The main advantage is that synchronization is automatic and does not require any special training. The disadvantages are the transmission errors are multiplied three times at the receiver and the 10GBASE-T scrambler is needed. The error multiplication may potentially affect also the frame CRC capability to catch errors.

After some discussion the group decided to go with side-stream scrambling, because it does not multiply errors. At the end of the discussion, the need for some channel specifications emerged.

Action: Terry Cobb to look at channel specifications for FC-BaseT.

6. Unscheduled FC-BaseT business

None.

7. Review of FC-BaseT action items

AI-12: Scott Powell will define self synchronizing scrambler for next time. (overtaken by events)

AI-13: Schelto Van Doorn will work on Port Management, section 9.

AI-14: Scott Powell will work on section 6.

AI-15: Ali Ghiasi will work on section 7 and 8.

AI-17: Brett McClellan to look at power backoff options for FC-BaseT.

AI-18: Terry Cobb to look at channel specifications for FC-BaseT.

8. Next meeting schedule

Next meeting is on April 3rd, 4pm to 7pm, during the T11 Plenary in Santa Fe, NM.

9. Motion to adjourn

Adjourned at 2:02 PM.

10. Attendance

The following 7 people attended this meeting:

Company	Name
AGERE	Adam Healey
BROADCOM	Scott Powell
BROCADE COMMUNICATIONS	Robert Snively
CISCO SYSTEMS	Claudio DeSanti
MCDATA	Scott Kipp
SOLARFLARE	Brett McClellan
SYSTIMAX SOLUTIONS	Terry Cobb