

Accredited Standards Committee
INCITS, Information Technology

Doc. Number:
Date: 6/4/08
Project:
Reply to: Mike Jenkins
Dean Wallace

TO: MEMBERSHIP of T11.2

FROM: Mike Jenkins Chair Electrical Working Group
Dean Wallace Vice-chair Electrical Working Group
Dean Wallace Secretary Electrical Working Group

Subject: Approved minutes of electrical working group 6/4/08

AGENDA

1. Opening remarks and introductions
2. Attendance and membership
3. Approve agenda
4. Document Distribution
5. Review minutes of previous meeting and review of minutes from interim meeting.
6. Review old action items
7. Call for patents
8. Presentations
 - 8.1 16GFC Reference Channel Proposal and the 8b/10b coding question, Mike Jenkins, Pervez Aziz, Adam Healey, LSI, 08-329v0
 - 8.2 Possible 16GBPS bladeserver channel, Pravin Patel, IBM, 08-329v0
9. Project review
 - 9.1 FC-PI-3
 - 9.2 FC-PI-4
 - 9.3 MSQS
10. Old business/presentations
11. New business
12. Review action items
13. Next meeting schedule
14. Adjourn

RESULTS OF MEETING

1. Opening remarks and introductions

Mike Jenkins, chair, led the meeting. He opened the meeting at 2:00pm on Wednesday. Mike thanked the host FCIA. He then led a round of introductions.

2. Attendance and Membership

Attendance at plenary meetings does count toward minimum attendance requirements for T11.2 membership. Working group meetings are open to any person or organization directly and materially affected by T11.2's scope of work but do not count toward minimum attendance for T11.2 membership.

The following people attended this meeting:

NAME	COMPANY	TELEPHONE NUMBER
Neal O'Gorman	Agilent	7031 4641319
Greg McSorley	Amphenol	508-829-6523
David Cunningham	Avago	1728-638-539
Jason Pritchard	EMC	508-435-1000
Hossein Hashemi	Emulex	714-885-3609
Frank Barber	eSilicon	610-439-6850
Doug Wagner	FCI	805-498-0325
Jim Tatum	Finisar	972-342-0870
Richard Johnson	Finisar	408-400-1093
Mike Fitzpatrick	Fujitsu	405-820-5809
Dave Stauffer	IBM	802-769-6914
Mike Dudek	JDSU	303-530-3189
Mike Jenkins	LSI Logic	408-433-7901
Rob Elliot	Panduit	708-444-6925
Al Kramer	Seagate	952-402-2624
Rajeev Jain	TI	214 480-2778
George Noh	VITESSE	805-445-2247
Tom Palkert	XILINX	952 200 8542
Mark Marlett	XILINX	408-869-2769
Dean Wallace	Qlogic	949-389-6480
Paul Levin	XYRATEX	310-372-7352

3. Approval of Agenda

The motion was approved by acclimation. There were no objections.

4. Document distribution

Operating under the procedures of the American National Standards Institute. INCITS SECRETARIAT, Information Technology Industry Council (ITI), 1250 Eye street NW, Suite 200, Washington DC, 20005-3922, Email: incits@itic.org Telephone 202-737-8888, FAX 202-638-4922

This section describes the availability of draft documents that are intended to be published as a result of work by the electrical working group.

Document distribution is now being done over the web. Documents relating to the electrical working group work can be found on the T11 website (www.t11.org) by going to “documents” and searching on the key word electrical.

A summary of the presently active policy to document distribution is included for reference.

All presentations are posted electronically at the approved ftp within two weeks after the meeting. Format must be an approved electronic file format.

Presentations are defined as material shown publicly in the plenary or authorized working group meetings.

Submission of documents for T11 document numbers: An online system is now available to provide document numbers and accept the submission of documents. The system is accessed via the T11 web page at <http://www.t11.org>. Follow the “docs” link in the left hand frame, or at the bottom, and fill in a form giving details of the document. In order to complete the form, it will be necessary to enter a password. The password is given out at T11 meetings, or can be obtained from the T11 chair. Instructions will then be given about uploading the file to the ftp site.

We now use all electronic document distribution.

A T11.2 reflector is operational over the T11 site.

The committee forms its agenda by the following:

1. A call (reminder) for presentations by the chair three weeks in advance.
2. Those wanting to be on the agenda submit request including; title, presenter, time required, abstract.
3. Chair creates an agenda and posts two weeks before the meeting.
4. At the meeting it is the chair’s discretion to allow additional presentations.

5. Review minutes of previous meeting and review of minutes from interim meeting

Motion to approve minutes from previous meeting Mark Marlett (Xilinx), Mike Jenkins (LSI).

6. Review old action items

There were no old action items.

7. Call for patents

The chair noted that the formal call for patents is issued at the T11.2 and T11 plenary meetings. Companies with patents that may bear on the subject of this ad hoc are advised to consider this call for patents. There was no response for this call for patents.

8. New discussions/presentations

8.1 16GFC Reference Channel, Mike Jenkins, LSI, 08-317v0

Mike Jenkins gave the presentation. Stated a 16GFC reference channel is needed. The reference channel model was reviewed. A channel without connectors was reviewed and then a channel with two connectors was reviewed. The two connectors added significant ILD.

The question was asked whether or not the IEEE KR channels should be analyzed to see which of them are appropriate to use for 16GFC. The consensus was that the KR would not be good enough but they will be brought in.

If anyone has crosstalk data please bring it in, this will need to be included in the model. The reference receiver used was a three tap FFE (1 post, 1 pre), 8 tap DFE and an analog front end in the receiver.

The simulation conditions and the simulation results were reviewed. The simulation results show that there wasn't much difference between 14.025 and 17Gb in this simulation.

8.2 Possible 16Gbps bladeserver channel, Pravin Patel, IBM 08-329v0

For 16GFC the model was presented that had two connectors, not the current three connectors. Length varies from 14" to 20" end to end. The material is FR-406. Pravin showed SDD21 plots of 5 different channels. The insertion loss at Nyquist (8.5GHz) was between 25dB to 30dB. The channels had a significant amount of ripple.

The SDD11 curves were shown for the 5 channels. The return loss was very high. It could be the launch conditions were causing the high return loss or at least contributing to the high return loss.

FEC could also be an option for 16GFC, the gain from FEC is about 1.5dB.

9. Project Review

FC-PI-3: No action.

FC-PI-4: In public review

MSQS Liason

10. Old business/presentations

No old business.

11. New business

No new business

12. Review action items

New Action items

Upload channel models that were in the presentation. Pravin Patel, IBM.

Request update to FCIA MRD to include Epsilon points. Tom Palkert

Get the direct attach copper cable requirements and distance from FCIA. Tom Palkert

A liaison letter will be sent to OIF requesting that the CEI 25Gb channels be shared with T11.2. Tom Palkert.

IEEE KR channels will be brought in and presented to electrical ad hoc. Ali Ghiasi, Broadcom.

Request a joint meeting between T11.3 and T11.2. Mike Jenkins will request this meeting at the T11.2 plenary. The meeting will be on Wednesday from 5 to 7. The following items will be discussed:

- 1) 8b/10b versus 64b/66b as it relates to speed negotiation, latency and any other protocol issues, implementation.
- 2) Training including the possibility of an RX/TX backchannel.
- 3) If 8b/10b, should a different scrambling scheme that scrambles primitives and ARBff be considered?

Old Action Items

No old actions

13. Next meeting schedule

The next meeting is Wednesday August 6th from 2:00pm to 6:00pm in Bellevue, Wa.

Request two teleconference.

14. Motion to adjourn

Motion to adjourn: Greg McSorley (Amphenol) seconded by Paul Levin(Xyratek)