

# IEEE 802.3ap Channel Ad Hoc Conference Call

9/17/04

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Minutes Recorded by Jimmy Sheiffield

## I. SDD21

1. There has been little or no negative feedback regarding discussions on the results of last week's adoption of the Goergen proposal. Joel requested that any issues be brought forward now. Discussion limited to 9 minutes.
  - a) Brian V is still concerned that the curve moved down ~2dB at 5GHz
  - b) Brian S voiced surprise at "sudden" movement up, down, and then stopping discussion.
  - c) Joel summarized progression of proposals and impact on curve of each proposal. Straw poll was intended to determine where the group was in agreement.
  - d) John D stated that the new parameters were a small adjustment and better fit the channels shown to date.

- e) Brian S indicated that moving the line down increases power required in the implementation.
  - f) Brian V stated that we still have not had a “healthy discussion” about Df to make sure that it is representative of the material we want to use.
  - g) Richard W – one of the major objectives is to set a Dk/Df boundary as part of the definition of “improved FR4” to help evaluate channel performance. This has been completed and voted on during the last plenary meeting.
2. Continuing discussion beyond the time limit:
- a) Shannon S – what is the feedback method between the channel and signaling ad hoc groups?
  - b) Joel – the intent is that all ad hocs stay coordinated and communicate throughout the process. Mike, Adam, and Joel have been trying to attend all of the calls to insure this process.
  - c) Mike – There has to be feedback to insure that impossible requirements are not levied and that relaxed requirements be immediately fed back as well.
  - d) Much discussion about the vote on the definition of improved FR4
  - e) Joe Abler – Within the bounds of Dk/Df, there were bounds placed on the curve, but the Goergen proposal goes beyond those bounds.
  - f) Joel repeated the guidelines issued July ‘04 from 50MHz through 6000MHz and from 6-15 GHz. The Goergen presentation stays well within the 6 dB at the low end and within the bounds set at the upper frequencies while Michael’s proposal does not.
  - g) Joel’s observations:
    - (1) *Nothing has been officially decided about the signaling.*
    - (2) *There is apparently support for some new proposal*
    - (3) *Surprised and disturbed that over 8 days no one has submitted anything to the ad hoc as an alternative*
    - (4) *The channel that was adopted fits within the scope, and should not be a surprise to anyone*
  - h) Adam – The vote is a non-binding straw poll, but was voted on. An official vote can be held at the Ottawa meeting. Grievances can be brought up there. We need to bring this to closure and move on to other topics. We should move all other discussion to the reflector.

## II. SDD11 & SDD22

### A. Regarding the 09sept04\_snapshot.pdf file sent to the reflector

1. On page 8 re: SDD11 and SDD22 –10 minutes of discussion re: SDD11
  - a) Joel – Many presentations have been made that show SDD11 being impacted by launch and the distance from the interconnect to the backplane. Changes have been made to the test cards – data should be back by next Thursday. Joel feels that SDD11 should be raised from –12dB to –5dB.
  - b) John D – A clean launch is the primary concern, and then the daughtercard connection must be looked at. The backplane then augments the data. –5dB looks good based on test data.
  - c) Richard M – Are we considering the manufacturing deviations in impedance in the testing?

- d) John D – at this point no. All impedance values are 100 Ohms nominally, but specific impedance coupons, etc. have not been tracked.
  - e) Joel – test card results shows clearly that SMA launch pad strongly impacts SDD11, 22, and 21. Have had to change launch criteria to accommodate “clean launch” in and out of the channel, so all we should see is the via and channel, without serious reflections from the launch pads. We are slowly defining design practices that will help people adopt this standard.
2. Chicago Rules straw poll: re: SDD11 only
- a) Options
    - (1) Adjust the 400MHz to 15000MHz SDD11 limit line from -12dB to -4dB
    - (2) Adjust the 400MHz to 15000MHz SDD11 limit line from -12dB to -6dB
    - (3) No change to the 400MHz to 15000MHz SDD11 band: leave it at -12dB
    - (4) Adjust the 400MHz to 15000MHz SDD11 limit line from -12dB to -8dB
    - (5) Establish a new SDD11 curve
  - b) Other suggestions & discussion – extended to explain background
    - (1) Steve @ Xilinx – how about -8dB
    - (2) Tom – which presentations are we talking about?
    - (3) Joel – reviewed some of the presentation data and results
    - (4) Discussion re: moving the band division from 400MHz to 5GHz or adding in a third point at 5GHz. Ali wants to see John’s data prior to making a specific proposal.
    - (5) Shannon Sawyer committed to SDD11 data from multiple line cards and Ali committed to making a new proposal with different frequency bands.
  - c) Poll results

	1	2	3	4	5
Adam Healey	A	A	A	A	A
Ali Ghiasi	N	N	A	N	Y
Brian Seaman	A	A	A	A	Y
Cathy	N	N	A	A	A
Chris W	A	A	N	N	Y
Glen Koziuk	A	A	A	A	A
Jimmy Sheffield	Y	Y	N	N	N
Joe Abler	N	N			
Joe C	N	N	A	A	Y
Joel Goergen	Y	Y	N	N	N
John D’Ambrosia	Y	Y	N	Y	N
Mike Lerer	N	N	N	N	Y
Pete	N	Y	N	Y	Y
Richard Mellitz	Y				
Shannon Sawyer	N	N	N	N	Y
Sinjin	N	Y	N	N	Y
Steve Anderson	A	A	A	Y	Y
Tom	A	A	N	Y	Y

3. Straw Poll: Develop a new limit line for SDD11

Adam Healey	A
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Ali Ghiasi	Y
Brian Seaman	Y
Cathy	A
Chris W	Y
Glen Koziuk	A
Jimmy Sheffield	N
Joe C	Y
Joel Goergen	N
John D' Ambrosia	N
Mike Lerer	Y
Pete	Y
Shannon Sawyer	Y
Sinjin	Y
Steve Anderson	Y
Tom	Y

4. Adam – definitely wants this to be decided by or during the Ottawa meeting. Anyone with proposals should post them to the reflector. John D should update his presentation with proposal lines received by the Friday deadline.

III. Plea for information in support of the Ottawa meeting

- A. VNA setup; averaging vs. single sweep – please bring any contributions and opinions. The reflector should also be used liberally.
- B. Simulation Model – additional things have to happen between TP4 & TP5. Richard has done some modeling. Would like to see a proposal on the reflector prior to the meeting.
- C. SDD21 mask set – If there are other proposals, please send them to the reflector to include a large audience
- D. SDD11 & SDD22 – We definitely need contributions. Joel, John, Adam, and Steve will send data to website.
- E. NEXT & FEXT – We seem to be within 6 or 7 dB of adjustment. Please come prepared to discuss how your data fits.
- F. Group Delay Ripple – Bring any information you have.
- G. Requests for presentation time are due by midnight on Wednesday. Friday is the deadline for presentation material.