

# IEEE 802.3ap Channel Ad Hoc Conference Call Minutes

9/7/04

Attendance:

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Jimmy Sheffield taking notes.

- I. Old Business
  - a. Joel is running behind on meeting minutes for the last three meetings, but will send them out soon.
  - b. Agenda was sent out this morning
- II. Test Point Verification
  - a. There has been much discussion re: TP1, TP4, and the location of the blocking capacitor. Adam sent out a summary email 8/26, but there has been little or no response or discussion of the summary.
  - b. Straw Poll: Do you disagree with the model that has been developed?
    - i. Steve Anderson @ Xilinx, Charles Moore @ Agilent voiced opposition to model.
    - ii. Roll call vote was held:
      1. Yes 5
      2. No 5
      3. Abstain 3
  - c. Reasons for decisions (chair limited discussion to 45 seconds per person):
    - i. Charles Moore – No; this leaves a substantial area from the capacitor to the package with a split area of responsibility between

the board vendor and the IC vendor, possibly resulting in contention downstream.

- ii. Steve Anderson – No; Echoes Charles’ reason, plus putting the cap in the chip results in a chip that is IEEE compliant rather than relying on the designer.
  - iii. Brian Brun – No; Synergy seems to be with putting it in the IC.
  - iv. Gary – Abstained; short history, and not sure of expertise in dealing with capacitor issue. It sounds like a silicon issue.
  - v. Jimmy – Used to dealing with caps from a PCB design issue; consistent with previous design standards and practices.
  - vi. Joel – Not sure how to relate PCB characteristics into a repeatable model. Consistent with past discussions and design techniques.
  - vii. John – Consistent with past techniques; schedule issue; no one has stated that the cap will not be accounted for; area of concern cannot be dealt with in models.
  - viii. Chris – Abstained; recently joined & just coming up to speed
  - ix. Shannon – No; Good separation between board and chip people
  - x. Glen – No; Need the ability to look at how we can take this into consideration.
  - xi. Brian V – feels like the cap may end up in the receiver IC, but may be reason for TP5 between cap and receiver IC
  - xii. Jeff – Yes; reasons already covered
  - xiii. Tom – Abstained due to joining the conversation late
  - xiv. Graham – Abstained, but definitely wants the cap on the receiver side of TP4.
- d. We need to get to an 80% agreement. Joel will talk with Adam prior to Thursday’s conference call to try to reach this agreement.

### III. SDD21 Discussion

- a. Page 2 of the agenda summarizes straw poll results from August (?)
- b. Existing model has resonance issues around 1GHz; potential changes submitted by John, Steve, & Joel.
- c. Discussion of proposals (10 minute limit):
  - i. Steve: wants to increase across the board except 1.5-2 G range, including ~2.5 dB at 5G. Wants to make sure skin effect is included. Dk and Df values may be different from what was agreed upon, but tried to follow data presented by Park/Nellco.
  - ii. John: tried to combine Steve’s model with group discussion. Actually likes Joel’s better, and would withdraw his proposal in favor of Joel’s.
  - iii. Joel: need to drop in the 1-3 G range around 3dB. Model of Enhanced FR4 has to change at upper frequencies to support Steve’s proposal, esp. w/r/t Df. Liked John’s numbers, but feels the need for larger drop at lower frequencies.
  - iv. Brian: Feels we really haven’t discussed Df.
  - v. David(?): Believes high frequency should be higher as reflected in Steve’s proposal.

d. Chicago Rules Straw Poll: Which is preferred?

i. Current Ad Hoc:

- 1. Yes 2
- 2. No 12
- 3. Abstain 1

ii. John's Proposal:

- 1. Yes 1
- 2. No 11
- 3. Abstain 3

iii. Steve's

- 1. Yes 8
- 2. No 4
- 3. Abstain 3

iv. Joel's

- 1. Yes 5
- 2. No 8
- 3. Abstain 2

e. Joel will pursue further questions, including a straw poll through email.

IV. SMA Launches – not discussed due to time constraints.