

June 9, 2003 meeting of S800BaseT study group minutes

Agenda:

Admin:

Call for patents:

Broadcom and Apple have/will have patents that are applicable, but will license in a reasonable and non-discriminatory manner.

Attendees:

Michael Teener - Apple - teener@apple.com

Les Baxter - Avaya - les@baxter-enterprises.com

Peter Johansson - Congruent SW - pjohansson@acm.org

Colin Whitby-Strevens - Apple Computer - colinws@apple.com

Kevin Brown - Broadcom - kbrown@broadcom.com

Walter Hurwitz - Broadcom - whurwitz@broadcom.com

Burke Henahan - Texas Instruments bhenehan@ti.com

David James - Independent

S800 Base T working group/ study group: Need PAR to go from study group to official working group.

~1/2 way into adding 1394a into 1394-1995 today.

Need rigor of balloting process & implementation.

Try to get S800baseT as an amendment, voted separately. If required in the future, it can be added to 1394 as a whole.

Try to make pinout change to RJ45 as a recommended practice.

Peter J will ask Bob Davies about status of recommended practices. The intent is for the majority of work on this project becoming 1394c. The pinout change to RJ45 will be attempted as a recommended practice. This will allow publishing of draft documents and a balloting process.

Work Items:

PMD chapter, port changes (MJT)

It seems that it will require a PMD chapter and a port chapter. Michael will attempt to output the first draft before the Oxford TA meeting.

C-code – (CWS)

Colin will attempt to output the first draft before the Oxford TA meeting. Simulation of 1394b is still top priority for Colin.

Low Power (KB / CWS)

Some ideas from Kevin's company, however not in a state to discuss now. More details expected at Oxford meeting. Do believe that can do good low power modes.

M code 9 or 8 for compatibility with 802.3 auto-negotiation

Kevin B believes code "9" is the way to go and submitted a draft, please see: .

Reviewed presentation with group, please see: autoneg.pdf

IP/ Ethernet bridging (PJ)

64-bit Ids need to be mapped to 48-bit Ids. Need to map IP packets into Ethernet frames between IP over 1394 and Ethernet. Need arp packets to travel across bridges between 1394 and Ethernet. Microsoft selected Ethernet II frames as their one translation. Work on HW needs supporting work on SW.

Action Item for Michael Teener – Poll networking people in Apple on how Apple does IP bridging? Is there an informal standard? Are there de facto standards?

1394.1 (Peter J.)

Question: Is there anything about the conversion time to make one conversion domain un-workable? It is OK to do one domain, it might become a problem with gap count optimization if there are too many long (100m) connections. Retry time is 1.6us for root contention. Force root is 1.6us.

Higher speeds

Lots of people working on higher speed PHYs. Should be feasible to do S1600 PHY that can transmit across CAT6. Might work on CAT5e, but

probably not. Cat 7 individual shielded pairs. 2 Gig is achievable. Want infrastructure for higher speeds.

MJT: Figure out if the data dependent parts can be parameterized to allow for higher speeds when defining PMD & port documents.

Les will try to make a proposal for a double speed GMII at the next meeting

How to deal with changing the pinout of the RJ45

Kevin Brown presented on Auto-negotiation. See web site for document.

Once C-code is done – error states. Learned a lot about diagnostic modes in 1394. Inject errors, do particular patterns, etc. Colin working on.

Next meeting: July 8 in Oxford

August 12 Apple will sponsor it. 10:30 to 3:00

Sept meeting not scheduled.

Do any of the TI links have tweakable cycle timers?