Minutes for IEEE 802.3af Plenary Meeting – Austin, TX (Nov 12-15, 2001)

TUESDAY, 11/13/01
Steve Carlson called the meeting to order at approximately 8:30am.

Version 2.0 of draft (along with red pens) was distributed to all for review before Thursday, Nov 15, 2001.

Steve went over the agenda, rules, etc.

David Law reminded all voters that IEEE P802.3 Interpretation 1-03/01 Draft response/D1.0 recirculation votes need to be submitted today.

Geoff Thompson read and explained Intellectual Property policy for the group. A lengthy discussion followed involving infringement, assurance letters, etc.

After a short break, Mike McCormack pointed out new changes to the draft since Portsmouth. Presentations that have been prepared will be done this afternoon. After everyone has had a chance to review draft 2.0 tonight, we plan to discuss "bones of contention" tomorrow morning to go over redline issues and make minimal changes to draft 2.0 (creating draft 2.1) before Thursday. This way it'll have a better chance of making it to the Working Group balloting stage on Thursday.

Things to be discussed are: AC Disconnect (Thong Huynh/Maxim, Yair Darshan/Power Dsine), Harmonization, Tables 5 and 12 in draft 2.0 (Kevin Brown/BroadCom), and Classification.

Break for lunch 11:47am….reconvene at 1pm.

PRESENTATIONS:

Kevin Brown (BroadCom)—brief presentation regarding Differential Noise and how Tables 5 and 12 are incorrect in the new draft. Discussion followed regarding rewording D2.0 section 33.4.7 (Differential noise voltage) and adjusting wording in the tables, based on Terry Cobb's comments. Kevin Brown will send associated pictures/diagrams to the Editor.

Thong Huynh (Maxim) "An AC Method for Load Disconnect Detection 'Heart-Beat' "— discussion followed: What is the frequency? 5Hz. One or two missed pulses (within 400ms) will detect disconnect, although one pulse is enough.

Yair Darshan (Power Dsine) "Disconnect Detection Alternative and More…."—discussion followed: Why can't this AC signal be added over the DC signal on the PSE side, instead of the PD side? It's too hard and expensive to do it that way. Dave Dwelley suggests keeping the frequency higher (in the 100's of Hz range). This is conceptually the same solution as the Maxim solution, but at a different frequency.

(Keep in mind that these AC solutions are for DISCONNECT only.)

Discussions about specific numbers and wording in the draft were looked at. Mike made notes about changes that should be made regarding these (table 5, item 7; section 33.2.11; section 33.3.6; table 12, item 5). These changes included adding the option of having the AC disconnect detection, so the values related to that were discussed and included in the list of changes to be made to the draft 2.0.

Threw out some placeholder numbers for Table 12, item 5c (15Hz +/- 25%, 10-90% duty cycle). The group will ponder these numbers and make comments tomorrow.

Straw Poll: Who is comfortable with the changes we've made here to the document for going into 802.3? Show of hands says that most attendees are comfortable with this.

Terry makes a request: make sure to read Yair's and Terry's documents on the website and make sure you agree with them.

Meeting adjourned at 5:12pm.

WEDNESDAY, 11/14/01
Meeting called to order by Steve Carlson at 8:42am.

Steve suggested saving editorial/non-imperative comments for official Working Group balloting in the near future.

Table 5, item 7 parameters and Table 12, item 5c parameters changed yesterday were displayed. Mike McCormack reviewed the reasons why the changes were necessary. Dave Dwelley was unsure about our chosen values only because the frequency chosen is very close to the line frequency and may not be detected. Do not want to put TBD in there, but don't want people reading this and building things and then having the numbers change. Thong/Yair suggest putting in the new numbers that they calculated last night until further testing has been done in between meetings to determine the best numbers for this AC signal.

Thong informed us that Maxim is patenting this AC disconnect detection 'heartbeat' scheme.

Wording for PSE power removal was also discussed. Don't want to make it sound like you need both AC and DC or you will be disconnected. PD has to supply both components of power maintenance signal; PSE must check for at least one of those two components, not both.

Motion made:
Motion 1—move that the task force accept the changes to the PD power maintenance signal as described in "Power Maintenance.pdf" under sections titled "Table 5, section 7" and "33.2.11".
Moved: D. Dwelley
Second: J. Rasimas
MOTION WITHDRAWN

Motion made:
Motion 2—move that the task force accept the changes to the Draft 2.1as described in "Power Maintenance.pdf".
Moved: K. Nakamura
Second: C. Cullin
TECHNICAL 75%
802.3 Y 10 N 6 A 5
All Y 13 N 7 A 5
MOTION FAILS

Break for lunch….resume meeting at 1pm.

Draft 2.0 was gone through page by page, and any important changes to the document were brought up and discussed. The following page and line numbers were altered to be included in Draft 2.1:
Page 14, line 15—add 'Mode B'
Page 21, line 42—add phrase about 1000BASE-T
Page 23, line21—1.5 volts should be 2.0 volts
Page 23, line 22—add "current offset of 12uA"
Page 23, line 35—change 200ms to 500ms
Page 23, line 36—change 50ms to 400ms
Page 24, line 30—change 45mA to 100mA to match table limits
Page 24, line 16—adjusted power range values, based on max current draw
Page 25, lines 3,4,12,15—change subscript from 'detect' to 'class'
Page 25, line 42—cut out upper range for delay, make the number 2 seconds

Page 25. Line 3—change 45mA to 47mA to match table limits
Page 25, line 44—change 0.1V to 1V
Page 25, line 48—change 5M to 1M
Possibly get rid of all of 3b), Table 5, page 26.
Page 28, line 17—change "may" to "shall"
Page 28, line 28—add min of 50mS
Page 29—remove all of section 33.2.10 (Isolation) and its subsections
Page 33, Table 11—add Vmax = 30V
Page 33—remove all of section 33.3.5 (Isolation)
Page 34, table 12, item 2—min value should be replaced with an explanation instead of that value
Page 37, line 26—more boilerplate isolation lingo (national codes) added here
Page 39, section 33.4.6 and 33.4.7—both sections have been totally revamped
Page 40, line 3—get rid of UTP and call it the proper name (100 ohm balanced twisted pair)
Page 40, line 24—add the words "For this application…"
Page 43, line 50—add combination "101" to the list and change Class 5 (table 33-22, next page) to Reserved

Short break…

New discussion about using Link for disconnect detection, since the AC scheme failed this morning. For devices like the Ethernet shaver, that doesn't actually use the Ethernet, how would this work? Geoff Thompson said the shaver would look like a hub that nothing is connected to. It would get power and would take a VERY LONG time (i.e. infinite) before sending any packets.

Yair said there are downsides to using link, some of which are 1) some devices have no PHY and 2) Midspan doesn't support link.

Geoff said you can have a dumb device that takes power on the spare pair (through midspan), and data pairs can have link taken off them in this situation (removal doesn't have to be detected on the pair on which power is supplied). Steve Carlson suggests we use DC detection when using the spare pairs for powering.

Maxim will license their AC scheme ('Heartbeat' method) for no charge, and are providing an assurance letter to that effect.

Straw poll (Chicago rules): do we need more than one disconnect detection scheme going forward to tomorrow? Y 19 N 4
Favor dumping DCscheme: 0
Favor ACscheme: 11
Favor Link scheme: 20
Favor PD Cap Scheme: 11

Mike McCormack suggested the following situation: Devices getting power off spare pairs could use link or DC disconnect detection, or if those devices get power off data pairs then they have to use link (because if they're 802.3 compliant, they'll be providing link pulse anyways). More discussion followed.

Peter Schwartz showed a flowchart that splits off into two cases: I > 10mA or Link Pulses

Rich (?) pointed out that there are some applications where link goes up and down when it first starts, and if power is applied and link goes away, power will be removed. This can put you into an endless loop.

Straw poll: How many methods for disconnect detection do you favor?
4? 0
3? 5
2? 19

Straw poll: Of the two, how many favor that DC should be ONE of them? 27
For the other one, how many favor the following:
LINK? 18
AC? 7
PD cap size? 2

DECISION: DC and LINK will be used as the two methods for disconnect detection.

Motion made:
Motion 3—Move that the PD power maintenance signal consist of a minimum DC current draw and "Link". The PSE may accept the loss of either as a valid method of detecting removal of PD.
Moved: P. Schwartz
Second: G. Thompson
TECHNICAL 75%
802.3 Y 19 N 1 A 3
All Y 20 N 2 A 4
MOTION PASSES 6:08pm 11/14/01

Motion made:
Motion 4—Move that the task force instruct the editor to prepare draft 2.1 for 802.3 to consider for forwarding to working group ballot on Thursday 11/15/01 based on the input of the last two days.
Moved: M. McCormack
Second: H. Hinrichs
TECHNICAL 75%
802.3 Y 21 N 1 A 0
MOTION PASSES 6:13pm 11/14/01

Meeting adjourned at 6:14pm.

THURSDAY, 11/15/01
Steve called the meeting to order at about 8:50am

Steve went over the agenda for the day. Note that Draft 2.1 needs to be changed to Draft 3.0 before forwarding to Working Group (for procedural reasons only). The content will not change. This will be voted on today at the Closing Plenary.

John Jetz is taking on the roll of comment editor for the working group balloting comments.

Need to choose dates for January Interim in Raleigh-Durham, North Carolina. Is 3 days enough? A majority of the group feels that is the case. Which days? T/W/Th 17? M/T/W 3
DECISION: We will meet Tuesday, Wednesday, Thursday of the interim week in January.

WG Balloting timeline:
Open balloting on Monday, Nov 26 and close on Dec 30 (35 days).
Create comment database.
Resolve comments at interim in January.
Recirculate D3.1 January 21-30?
Create comment database and resolve comments via e-mail.

Mike McCormack went through the 'change bar' version of draft 2.1 and pointed out everything that was changed, according to our decisions yesterday.

Karl Nakamura suggested everyone who's involved on the PD side report back soon with numbers for an ideal time period from power to link, including the link coming up and going down several times in a short period.

Questions were raised about the differences between Technical (T) comments and Technical Required (TR) comments, and how these affect a vote in favor or against the draft.

Bob Grow explained what Sponsor Ballot is. Sponsor Ballot pool is a list of people who have a specific interest. Sign up to be a member of the pool (voting on 802.3 items). When DTE Power goes to sponsor ballot, all members in the pool are asked if they'd like to be a member of the Sponsor Ballot Group. Then they can vote specifically for DTE Power. Must join IEEE and Standards Association (SA). Also, Working Group ballot members are those who are voting members at the time DTE power goes to Working Group ballot (hopefully this afternoon).

Motion made:

Motion 5—Move that the 802.3af task force request 802.3 to forward Draft 2.1 to working group ballot, and authorize meetings and recirculation ballots as required, and that 802.3 request formation of a sponsor ballot group.

Moved: P. Schwartz
Second: H. Hinrichs
TECHNICAL 75%
802.3 Y 20 N 0 A 0
MOTION PASSES 10:25am 11/15/01

Motion made:

Motion 6—Move that the 802.3af task force approve the minutes from Portsmouth.
Moved: D. Dwelley
Second: H. Hinrichs
TECHNICAL 50%
MOTION PASSES BY ACCLAMATION 10:27am 11/15/01

Terry Cobb made a suggestion to form an alliance for DTE Power. Looking for support from companies and their marketing departments.

Meeting adjourned around 10:30am.

Minutes submitted by Jennifer Rasimas