

Monday 13-May-02

8:30am

Called to order by Steve Carlson, TF Chair at 8:30AM

Introductions;

Acceding to a groundswell of support for his nomination as Recording Secretary, Tommy Sokola graciously accepted the opportunity to take minutes

Objectives List presented - to create working group draft 3.1

Future Interim Meetings announced -

July 8-12 in Vancouver, CA

September interim tbd.

Voting Requirements presented - to vote in the sponsor ballot, one must be a member of the sponsor pool. Requirements are 1) membership in IEEE & standards association, 2) sign up for sponsor pool on IEEE website, and 3) response to the invitation for ballot.

9:00am

Yair Darshan made a series of presentations as listed below:

AC disconnect ad hoc, including review of actions and status

AC disconnect probing signal spectrum analysis

Recommended $F_{max} = 500\text{kHz}$, slew rate (max) = $1\text{V}/10\mu\text{s}$ or

$0.1\text{V}/\mu\text{s}$

Disconnect detection ad hoc activities

PD AC Input Impedance - Sensitivity Analysis

Optimizing disconnect detection AC probing signal

Audio Interference ad hoc

Immunity Tests ad hoc

AC disconnect detection - goes to rev 0003

3.4

RF Interference (EN55024 tests)

ESD

Continuous radiated interference

Electrical Fast Transients

Surge (N/A, deals with mains)

Continuous conducted disturbances

Power-frequency magnetic fields (N/A)

Voltage dips & interruptions (N/A)

Immunity to load & PSE voltage transients

PD power supply output to input noise rejection ratio

AC disconnect detection - results of demo on 1Gbps system

When PSE is periodically detecting probing signal spectrum measurements & more.

AC disconnect detection - spec provided for review

After lunch, Roger Karam discussed AC disconnection & DC detection. A number of recommendations were made, including that for a more conservative spec that keeps the feel of an Ethernet port the same (PSE vs. legacy) and makes interoperability testing a low entropy process. Good dialogue on how to handle when a PD is plugged into another power source.

Need requirement for minimum AC load?

Slow down rise time from 10 μ s?

In PSE-PSE connection, should the discovery process be stopped?

A straw poll was held:

- Do you feel the technical feasibility of the AC disconnection scheme as proposed has been demonstrated?
Votes: Yes - 16 No - 2
- Do you feel the economic viability has been demonstrated?
Votes: Yes - 14 No - 2

Following the straw poll, Steve suggested an ad hoc break off to define the concrete, solid concerns; Yair suggested composing a spec defining AC disconnect.

The ad hoc stayed and worked on this spec.

Tuesday 14-May-02

Yair presented results of Monday afternoon's ad hoc to write the AC disconnect spec. The results were reviewed and edited.

Motion 1 - Move that the editor close comment 678 and make changes to the draft as instructed in the document "Yair AC disconnect.doc" with appropriate editorial changes

Moved by Mike McCormack - Second by Hank Hinrichs

C. Cullin objected that the wording had not been reviewed.

9:20 am

Motion 2 - Move to table Motion 1 pending further discussion

Moved by Terry Cobb - Second by Chris Cullin

Y-20 N-2 A-3 motion carried

Considerable dialogue on the scope of the committee and the proper wording of the paragraph, finally resolved

9:35 am

Motion 3 - take Motion 1 off the table

Moved by Terry Cobb - Second by Wael Diab

Y-27 N-2 A-2 motion carried

9:37 am

Back to motion 1

802.3 members vote – Y-27 N-2 A-2 motion carried

There were 2 resolutions with open comments regarding wording. Both were closed by the following vote.

Y-26 N-0 A-0

10:00 am

Resolution 678 – withhold resolution pending evaluation of alternative methods. Addressed by Motion 1 of 14-May-02. “Link disconnect” has been removed from the document and replaced by “AC disconnect” method.

John summarized the resolution status as 651 closed, 15 unsatisfied, 22 withdrawn.

10:07 am

Initiated discussion of draft 3.01

Clause 30

Figure 30-3 needs to be replaced by more recent version from David Law; insure that 30.9.2 PD and 30.9.1 PSE should be connected directly to 30.3.1 MACEntity rather than through 30.3.2 PHYEntity.

John instructed to electronically search clause 30 for any references to link disconnect & replace w/ AC disconnect if appropriate

Clause 33

Figure 33.4 mislabeled as 33.1

33.2.2 wordsmithing

33.2.4 – figure 33-6 remove “>70kΩ”, leave only Zsource

Figure 33-5 – Yair proposes reducing “>70kΩ” to “>40kΩ”. This was deemed an optimization rather than a “broken” and should be referred as a comment to the 3.1 comment round.

33.2.5.1 – change mA to μA (milliamps to microamps). A general reminder was given that in drafts, we should not use μ or Ω but rather “micro” and “ohms”, to allow reviewing via ASCII email tools.

P. 21 line 46 – change value 520nF to a reference to Table 4.

General wordsmithing

Table 33-5 – considerable dialogue regarding “shall” vs “may”. A few minor changes made and agreed upon.

1:45 pm

Dan Dove gave a presentation on :Midspan PSE - AC Disconnection impacted by PDs on both ends? Conclusion was Mid-Span AC disconnect works with transformers or chokes at insertion point.

Continued dialogue regarding table 33-5. Agreed to move forward in the interest of time.

33.2.9 – discussion regarding allocation of power. Will issue a comment to 3.1.

33.2.10 – inserted text agreed upon this morning via Motion 1.

33.3.5 - inserted text agreed upon this morning via Motion 1.

33.3.1 – inserted a sentence stating “The PD shall not source power on its MDI. Removed Table 6 reference to “Automatic MDI/MDI-X”.

Agreed to add definition of Automatic MDI/MDI-X to clause 1 where it will draw comments.

Various clean-ups to tables.

33.4 – copied 9.7 to 33.4.2 Port to Port Isolation - Geoff will work on wording. During multiple cut-paste operations, references in section 33 became “hosed” and will need to be scrutinized by the editor.

33.4.7 – new figure added defining common mode pair to pair output voltage.

33.4.8 – is 10mV differential noise for PSE too low?

33.4.10.1.1 – inserted Terry’s text for Near End Cross Talk (NEXT)

33.4.10.1.2 – inserted Terry’s text for Insertion Loss

33.4.10.1.3 - inserted Terry’s text for Return Loss

6:00 pm adjourned for evening

Wednesday 15-May-02

Added notes regarding use of 11801:2002 if available by publication.

Wording cleanup in sections 33.4 thru 33.6, including update of definitions of register bits.

Wording and formatting additions/changes updated, references updated and double-checked.

Dave discussed the work done this morning by the State Machine ad hoc.

Dave will capture his notes electronically and add to the draft. Moderate dialogue from the group.

Break for lunch

Addressed “holes” in the spec and member comments, as below:

Finalized spec limits in Table 33-5, for timing of detection, turn-on, turn-off, total detection and power on, etc.

Considerable dialogue on detection time, total time, etc. T_{TOT} finally defined as the sum of T_{DET} , T_{PDC} and T_{PON} .

Updated Table 33-11 maximum values.

Discussed need for PD Power supply input impedance, whether it belongs in Table 33-12 or whether it should be text in the body, or in an annex. Decided to handle by text above 33.2.10 for now, with an editor's note referring to an annex if a practical test methodology can be devised.

Similar text and editor's note was inserted for PD input impedance.

Considerable dialogue on power supply allocation, resulting in revised wording of 33.2.10.

33.2.5.1 discussed link section versus link segment. Will need to review everywhere in the document the term "link" is used and whether it is used properly.

33.2.8 testing and compliance conditions for table 33-5 needs definition by working group.

Comment 727 added definition of V-I slope.

Comment 728 resolved by same figure as comment 622 behavioral model (mask).

Comment 733 reworded 33.4.

Comment 685 Annex 30A/30B clause 30

Comment 700 Clause 30 attributes – status bits reviewed, OC and UC bits defined in 30.9.1.1.8 reviewed, determined attributes had not been addressed.

David Law will need to do this.

Added, edited figures defined earlier.

Yair explained test conditions he generated for Table 33-5 tests.

Motion to accept Yair's "Test Setup" and Dave Dwelley's "State Machines" into draft 3.1

Moved: Hank Hinrichs Second: Mike McCormack

Y-12 N-0 A-1

Motion carried

5:45 pm

Move to instruct the editor to incorporate the work of the task force resulting from the May 2002 interim meeting into 802.3af D3.1 for 802.3 Working Group recirculation ballot to close prior to the July 2002 plenary.

Moved: Mike McCormack Second: Wael Diab

Y-12 N-0 A-1

Motion carried

5:46 pm

Move to accept the minutes from the March 2002 plenary meeting.

Moved: Yair Darshan Second: Wael Diab

Acclamation

Motion carried

5:47 pm

Move to adjourn

Moved: Hank Hinrichs Second: Tommy Sokola

Acclamation

Motion carried

5:48 pm
Adjourned

Motion 2

- Move to table motion 1.
- M: Cobb S: Cullin
- Procedural 50%
- All Y 20 N 2 A 3
- Passes – 9:21

Motion 3

- Move to take motion 1 off the table.
- M: Cobb S: Wael Diab
- Procedural 50%
- All Y 27 N 0 A 0
- Passes: 9:35

Motion 4

- Move to instruct the editor to include the materials presented by Yair Darshan “Test Setup” and Dave Dwelley “State Machines” into draft 3.1.
- M: Hinrichs S: McCormack
- Technical 75%
- All Y 12 N 0 A 1
- Passes: May 15, 2002 5:45 PM

Motion 5

- Move to instruct the editor to incorporate the work of the task force resulting from the May 2002 interim meeting into 802.3af D3.1 for 802.3 Working Group re-circulation ballot to close prior to the July 2002 plenary.
- M: McCormack S: Wael Diab
- Technical 75%
- All Y 12 N 0 A 1
- Passes: 5:46 PM, May 15 2002

Motion 6

- Move to accept the minutes from the March 2002 Plenary meeting.
- M: Darshan S: Wael Diab
- Procedural 50 %
- All by acclimation
- Passes: 5:48 PM, May 15 2002