Minutes for IEEE802.3af meeting 3/14/01and 3/15/01

Open 8:40 am
Dave Dwelly selected as recording secretary

Next interim meeting 5/21- 25 St Louis MO hosted by Agilent
802.3af meets starting noon 5/23
Next plenary meeting 7/9-13, Portland OR

Review of IEEE standards process by Steve Carlson

Patent policy issues by Geoff Thompson - http://www.ieee802.org/3/patent.html

Rules for spec review by Steve Carlson - http://www.ieee802.org/3/rules/rules.html

Review of 3/12 Detection Ad Hoc progress – Don Stewart
- significant progress made on controversial issues
- motions prepared to present to complete group
- summary document presented by Don
- proposal to re-group afternoon to discuss classification and current limiting

Motion #1
Motion to charter the Detection Ad Hoc to investigate detection of multiple power classes of PD devices by Mike McCormack, second Steve Jackson, procedural 50%
Y: 42 N:0 A:2, motion carries All

Power and detection ad hocs split off at this point.

Move to adjourn by John Jetzt, second Arlen Anderson, meeting adjourned 10:30 am.

Meeting resumed 4:30 pm.

Karl Nakamura described upcoming power issues to be resolved by the Power Ad Hoc.

Karl presented a proposed list of PSE and PD power specs with several TBDs. Much discussion about noise and hysteresis.

Steve Carlson previewed tomorrow's agenda.

Steve adjourned meeting 5:45 pm.

Wednesday 3/15/01 meeting convened 8:35 by Steve Carlson

System Considerations – System Modeling," Yair Darshan, PowerDsine

- a model was presented that can be used to simulate the PSE/PD interface including power supplies and UVLO switches

System Considerations – PD Detection," Yair Darshan, PowerDsine
Second presentation by Yair on detection time vs. system parameters

- values of 0.1u (PD) and 0.5u (PSE) were proposed for maximum allowed capacitances
- values of 5u (PD) and 35u (PSE) were proposed for maximum allowed leakages
- the impact of these terms on detection time was discussed – Yair suggests that 100ms per point is achievable with these values
- the need for UVLO in the PD was discussed – Yair asserts that UVLO with a significant voltage band is needed if a non-linear load such as a switching power supply is used

System Considerations – PSE – PD Issues," Yair Darshan, PowerDsine
Third presentation by Yair on system dynamics and inrush current

- sudden drop of line voltage will cause PD current to drop to zero briefly, 100ms timer suggested to prevent turnoff
- sudden rise of line voltage will cause PD current to exceed the current limit briefly, Iout < 350mA averaged over 100ms is suggested as a current limit. Much discussion.
- Inrush limiting in the PSE vs the PD is contrasted. Various "problem" circuits were presented. Yair proposes that the primary inrush limit should be in the PSE. Much discussion. It was pointed out that a time delay must be added to the PD UVLO circuit for this proposal to be a valid solution.
- It is noted that allowing a 500mA peak current for 100ms will increase the demands on the PSE power supply.

15 minute break at 11:15pm

"Power Turn-On," Dieter Knollman, Avaya
Presentation by Dieter Knollman on PSE/PD powerup

- an alternate test circuit is presented
- power dissipation in the various elements was presented
- Dieter suggests that there are more viable options to limit the dissipation in the PD MOSFET, thus the PD is where the inrush limit should be.

"PSE Power Dissipation," Bruce Inn, Micrel
Presentation by Bruce Inn on PSE power dissipation

- a foldback current limit scheme is presented for use in the PSE
- Bruce asserts that this scheme can help minimize temperature rise in the PSE power FET

Adjourned at 12:30pm for lunch and Ad Hoc meetings

Meeting Resumed 4:45 pm

Summary of Detection Ad-Hoc results by Don Stewart:

- Prevent a PSE from detecting another: resolved to mandate high-Z PDs OR mandate all PSEs remain in 1st quadrant (add series diode)
- Guarantee power-up with power on both pairs: no resolution, to be resolved on the reflector
- Classification: no resolution, to be resolved on reflector
- Support for "30W PDs" – no resolution

Motion #2
Motion that 802.3af instruct the editor to include the content of the two packages of source material titled "Draft Requirements from PSE 3-14.doc" and "PDStandardsreqs0313.doc" from the detection ad-hoc in the next draft. Motion by Don Stewart, second Jennifer Rasimas, Procedural 50%, All Y:36 N:0 A:2, dot3 voters Y:28 N:0 A:2, motion carries.

Review of current draft with changes from January Interim meeting by Terry Cobb
Draft 2 – DTE Power Electrical and Environmental Specifications," Terry Cobb, Lucent

Summary of Power Ad Hoc meeting by Karl Nakamura:

- review of current proposed power specs
- most issues still outstanding, to be resolved "soon"
- power ad hoc will meet to assign homework to get issues completed

Motion #3
Motion that 802.3af instruct the editor to include the content of the two packages of source material titled "IEEE802af power spec RevB karln.doc" from the detection ad-hoc in the next draft. Motion by Karl Nakamura, second Hank Hinrichs, All Y:40 N:0 A:1, dot3 voters Y:29 N:0 A:1, motion carries.

Motion #4
Motion that the 802.3af Task Force authorize the editor to produce a new draft with the goal of Task Force ballot in May. Motion by Scott Burton, second Amir Lehr, dot3 only, Y:26 N:0 A:0, motion carries.

Motion #5
Motion that the chair of the 802.3af task force request from the 802.3 working group permission to hold an interim meeting. Motion by Robert Muir, second Amir Lehr, Y:26 N:0 A:0, motion carries

Motion #6
Move that the 802.3af task force accept the meeting from the interim meeting in Irvine. Motion by Rick Brooks, second Steve Jackson, dot3 only, carried by acclimation.

Motion to adjourn by Steve Carlson, approved.

Meeting closed at 6:00pm.

Next meeting in St Louis 5/23 at noon