2005 Nov 15 IEEE PoEPlus Task Force Minutes

Start at 08:30.

Agenda:

- Appoint Recording Secretary
- Discussion of order
- Intros
- Etc.

Meeting Order

- Tue – 8:30-17:00 .3at
- Wed – 8:30-12:00 .3au / 13:00-17:00 .3at
- Thu – 8:30-12:00 .3at / 13:00-18:00 working group

Motion to approve schedule by Chad Jones, seconded by Phillip Brownlee
Approve – unanimous

Housekeeping

- Chairman
  - Appointed by 802.3 WG Chair (Bob Grow)
  - Approved by Task Force
  - Serves at leisure of the WG Chair
- Candidates
  - Mike McCormack
  - Others see Bob Grow
- Vote
  - Conducted by the secretary

Ground Rules – mutual respect and consideration

- No cost, product pitches, etc

IEEE Structure

Patent Policy read by Mike McCormack

- No questions or patent applications issues brought up

IEEE Standards Process reviewed

Rules – web sites presented for bylaws, operating rules, etc presented. Also Roberts Rules – in general… behave

Vote on 802.3at TF Chairman

- Confirmed without opposition

Electronic information

- Web address – www.ieee802.or/3/3at_study/index.html

- eMail reflector – stds-802-3-poep@ieee.org
- Next meeting – watch www.ieee802.org/meeting/index.html

Presentations

Extended Classification – Yair Darshan (Enhanced Classification Concept- Proposal #1.pdf)

- Presented additional PSE classification for voltage capability
- This is a fix to what Steve (Ixia) presented previously.
    - Concern about stepping within the classification voltage range due to accuracy
        - Suggested a voltage step that is not .af compatible
    - Addition of unique current signature

Extended Classification – Martin Patoka (patoka_1_1105.pdf)

- This method can provide future expansion over other presentations – not that we would want to come back to this, but the wiring infrastructure could be improved in the future
- We should not look over 100 W since this would create difficulties in power transporting.
- The believe of around 60 levels would be sufficient

Fair and "Balanced" – Clay Stanford (Fair and Balanced.pdf)

- Addresses balancing between two sets of pairs – 4 pair solutions.
- Discussion about where balancing is placed
    - In PSE for cost simplification for PD
    - In PD since most devices would use 2-pair with a few 4-pair devices

2 Pair Revisited – Dave Dwelley (2P PSE Revisited.pdf)

- Heated discussion on 2-pair and 4-pair implementation. Went back to Sept's minutes to bring up straw poll that was taken.

Power Feeding – Yair Darshan (IEEE802.3at PSE-PD power feeding method concenus proposal summary 001.pdf)

- Summarized the Sept straw poll as discussed earlier
- 4-pair PSE should power all options

Bob Smith Terminations – Steve Robbins (robbins_1_1105.pdf)

- Presents info that active current balancing (ACB) is the best solution. The ideal topology would use BJTs
- Original Bob's Termination was used to enhance CAT3 cables
- Recommendation to find out how removing Bob's Termination would be taken with the other 802 groups.

Applications – Yair Darshan (Applications and their effect on PoEp standard.pdf)

- Discussed load curves over time
- 802.1 is looking at power allocation via software

New PoE Applications – Steve Robbins (robbins_2_1105.pdf)

- Presented application of using PoEPlus for short-time backup for desktops

Adjourned for the day at 17:00.

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Start at 13:20.

Presentations (continued)

System Decisions – Yair Darshan (System Decisions - What are the primary decisions.pdf)

- Presented table of pros / cons to put current balancing/sharing (CBS) in the PD. Discussion on putting it into the PSE.
  - PSE can monitor broken wire would require CBS in PSE
  - In PSE would keep cost of PD lowered – not all PDs would be solely powered off Ethernet

  Straw poll – Count of people who sell end-point PD or PSEs (non semiconductors or component people) – 13 out of 53

Standardized PoE+ Nomenclature – Clay Stanford

- Balance for magnetics – share for between pairs
- Let's discuss on reflector the proper terminology that will eventually be applied to the standard

Test Procedures – Chris DiMinico (802.3at-Test Procedure-DC Current-11-6-05.pdf)

- This is relevant to temperature rise and data operation, and not cable derating.
- Though presentation talked about demating, there was a concern about the mating cycle. Robbins will provide a model for mating cycle – concern is of stored charge on the cable due to capacitance.
- TI (Martin) and LT (Clay) will provide PD EVBs for use in testing
- Cabling will be PVC type.
- AdHoc committee will need to provide models of load, heating amount, and mating models.

Motion by David Law – Suggest that we charter an adhoc to develop test procedures and execute the tests to determine dc current operating limits.

Seconded by Daniel Friedman
Motion carried without opposition
Reports will be provided to Chair

Liaison Letter discussion – Masood Shariff

- Correction – provide information from the cabling meeting
- 1-page list of confusions developed and it is important to reference the safety precedent. 180mA is general practical limits based on 25 °C ambient and permitted temp rise.
- Presented statements which may apply to both cabling standards and applications standards. – preview presented and is not official.
- Cables cannot take more than 60 °C based on PVC jacket – PVC polymer deforms and does not recover. Data transmission can then change in undesirable ways.
- 420 mA per conductor is generally accepted for 24 AWG conductor for up to 40 °C ambient

Suggested RJ45 Connection Load with PSE – Steve Robbins (Test Circuit.pdf)

- Connector insertion is more of a concern on connector wear, rather than extraction.

Meeting adjourned at 17:00

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Start at 08:34.

Presentations (continued)

Output Voltage Range – Arkadiy Peker (PoEp Output voltage range.pdf)

- Technical presentation promoting 51 V minimum.
- Marketing presentation whereby 51 V is acceptable and to create words in the standard to clearly state what a Plus PSE should have to be labeled as such.

Chris DiMinico – TR42 discussion

- Last ballot cycle a comment was brought up to include ac power.
- Chris suggested that we comment back regarding ac powering.
- Chris will continue to be rep to the TR42 group to discuss their concerns.
- .at group will put a letter of concerns to go to the TR42 group.

Review of objectives.

- Request by Mike McCormack to modify Objective 12 text.
    - P802.3at Task Force will consider and respond of all maintenance requests concerning Clause 33 that are forwarded by the maintenance Task Force.

"Motion to re-approve the Objectives with changes to #12 as discussed."

- Motion by Derek Koonce
- Seconded by Yair Darshan
- Motion passed without opposition

Schedule proposed for the Task Force

- January '06 for start of a very rough draft. – mark-up of clause 33.
- Once we overcome a few hurdles, goal is to get some form of document out in May.
- Sponsor ballot at end of '06
- Goal is a standard by mid-'07

Editor request

- Requirements
    - Big commitment (whole week and more)
    - Thick skin
    - Impartial recorder and translator
    - Framemaker compatible

Chris DiMinico

- Presented letter of response to TR42.
- Chris will clean up and present at closing Plenary during liaison reports.

Motion to approve the language to be brought forth to 802.3 WG for approval for submission to TR42. – by Chris DiMinico; seconded by Yair Darshan; Ayes: 35; Nays: 0; Abstain 0

Response to ISO-IEC will be done on the reflector.

Action items:

- As a group we should solidify nomenclature to use for future presentations, and ultimately Standard vocabulary. Note: We should not use .af or .at – we should use Type 1 or Type 2. This is because of the dropping of the rev in future specs. Clay will be the moderator for this.
- Develop response to ISO-IEC on the reflector.

Motion to adjourn at 11:44.

Submitted by Derek Koonce, acting secretary

Derek Sean Koonce