

Tuesday, March 13th, 2007
Location: Orlando, Florida

Minutes Recorder: David Lucia, Sifos Technologies

Attendees: (Mike McCormick Emailing to me)

8:30AM, Mike McCormick, Chair

- Opening Introductions. Name and company representation
- Mike did poll if everybody in the room registered and has a badge for the meeting
- Meeting proposed by Matt Landry and Chad. Approved without opposition by entire group.
- Ground Rules presentation
 - o If everybody doesn't follow these rules then Robert's Rules of Order will apply
- Patent policy
 - o Nobody in the group is providing any letters of assurance to the IEEE
- Electronic Information
 - o Web address www.ieee802.org/3/at/index.html
 - o E-mail reflector www.ieee802.3org/3/at/reflector.html
 - Stds-802-3-poep@ieee.org is the email
 - o www.ieee802.org/3/at/private/, username 802.3at / password MoPwr2v
- Next meeting
 - o 5/28 – 5/31
 - o Geneva, ,Switzerland
 - o 22 people in the group said that they will be thinking about and/or probably going to the meeting
 - o At the meeting will need to get a security badge for access and to get around the building. Mike will get more information on this topic.
- Meeting after Switzerland
 - o Seoul, South Korea
 - o Hosted by Samsung, TTA, ETRI
 - o 9/17 – 9/20
 - o Hotel Shilla, Seoul
 - o Contact Geoffrey M. Garner and Hyunsurk Ryu
 - o 20 people in the group said that they would attend a meeting in Korea. 5 people said that they would NOT attend a meeting in Korea.

- Move that: P802.3at will meet in Seoul at the proposed interim as specified in “IEEE802 1 and 3 joint interim proposal.pdf”
 - Motion: Matt Landry Second: Daniel Feldman
 - ALL Y: 0 N: 0 A: 14
 - 802.3 Y: 17 N: 0 A: 10
 - Motion passed
- Meeting next March
 - New Orleans not possible
 - Chicago an option
 - Meeting back in Orlando, FL
 - Meeting Materials
 - Please provide before the meeting
 - Val will presenting her TIA liaison report

9:35AM, TIA TR-42 Liaison to IEEE

- Val Rybinski Presentor, Chair TR-42.7
- Sterling Vaden, Vice-Chair, TR 42.7
- Last meeting with in Houston, TX 2.5- 2/9. Updated from their presentation at that point in time.
- Was hoping to publish cabling current carrying capacity recommendations, no information on timelines yet
- TSB-155 approved and waiting to be published
- Category 6A, not approved, resolutions will be worked on starting 3/27 – 28 in Irvine, CA
- SP-3-4426-REV3, 568-C.2 Development (copper – patch cords, cables, etc.). Want to include permanent link requirements. Draft 1 of C.2 was put together. C.3 is fiber optic components and that still needs to be put together.
- Next TIA Meetings
 - TR-42.7 Interim Meeting, 3/27-28, Irvine, CA
 - TR-42 Plenary Meeting 6/4-8, Canada?
- Right now TIA is focused on Category 6A. Moving forward, to help TIA prioritize work that they do for PoE+ please submit in writing vs. verbal. That makes it easier for TIA to formalize. Ok with verbal conversations between Mike McCormick and Val Rybinski.

10:00AM, 15 minute break

10:15AM, Attendance List Instructions

- Talk to Mike McCormick if you attended the January meeting and were not correctly credited for attending.
- Side note, check hotel bills from January a couple of attendees were incorrectly billed by the hotel.

10:22AM, ISO Liaisons

- Presenter, Wael Diab
- Two letters that we will find (end with 1 and 3)
- Start with 3, Current carrying capacity
 - o Two IEC safety task committees
 - o 175mA per conductor
 - o Constraint for bundling in terms of heat
 - o No safety constraint for bundling cabling and temperature at 60 degrees C.
 - o 60950 is the document, 6.93 is the document for maximum safe current/temperature for a single cable.
- Letter that ends with 1 and on 802.3at website
 - o ISO with 9 questions from 802.3at responded to all. Included in the letter on the website
 - o Mating and unmating under power is a critical issue
 - o Do not understand the impedance of the load.
 - o Wael believe that the original letter was not clear and we should have been much clearer.
 - o Questions the ISO group is worried about:
 - How do we deal with installations should be qualified for PoE?
 - Do you add tests on top of existing tests or separate tests for PoE
 - If one disconnects power is there a problem?
 - An independent test group ran some tests and adding components the results were better. We can use 802.3af as a reference; however, 802.3at the final circuit design has not been finalized, yet.
- Wael proposing smaller 802.3at groups to review and write letters vs. the entire group work on at the end of the meeting
- Move that:
 - o Create an ad-hoc chaired by Wael Diab to create liaison responses and provide such to the TF by 10:00 AM Thursday.
 - o Motion: Hugh Barass Second: Wael Diab
 - o Procedural (50%)
 - o Passed by voice without opposition

11:00AM, Layer 2 Power Management

- Presenter, Hugh Barass
- Background
 - o First skeleton baseline adopted in January
 - o Details of the communication packets was left TBD, based on LLDP protocol
 - o The baseline included the concept of minimum support, “dumb” PD
- Minimal PD Requirements
 - o 16 bit field allows up to 102.3W in 100mW increments
 - o Concept of “power priority”
 - o Knowledge of power source
 - PSE only
 - Local only

- PSE and local
 - All supported by LLDP-MED
 - Proposing that all 802.3at PDs support LLDP-MED PoE frame
 - First approach, use reference to ANSI/TIA-1057 (either 2006 only or living)
 - Second approach, could use the exact frame & TLV definitions in TIA-1057 (may run in to copyright issues, though...)
 - Third proposal, could also use same TLV definitions but use IEEE 802.3 OIU subtype (2 definitions of the same thing in 2 bodies...)
 - Hugh proposing to adopt 1st, 2nd, or 3rd proposal. Strongly recommends the first proposal
 - (If Google you can find the final draft of the LLDP-MED and ANSI/TIA-1057 specifications)
 - Move that:
 - The Task Force accept the proposal to reference ANSI/TIA-1057 TLV (barass_1_0307.pdf) as the minimal mandatory requirement for PD support for Layer 2 management as a baseline.
 - Motion: Hugh Barass Second: David Law
 - Technical (75%)
 - All Y: 37 N: 0 A: 0
 - 802.3at Y: 29 N: 0 A: 3
 - Motion Passes

11:35AM, VPort Ad-Hoc PD DI/DT and PSE Voltage Transient Limits Proposal

- Fred Schindler, Presenter
- Move that:
 - The IEEE 802.3at Task Force adopt presentation schindler_1_03_07.pdf slides 5 and 9 to be incorporated in P802.3at draft D0.2.
 - Friendly amendment by Wael. New motion reads:
 - The IEEE 802.3at Test Force to adopt presentation schindler_1_03_07.pfd slides 5, 9 and 10 as part of the IEEE 802.3at draft baseline
 - Motion: Fred Schindler Second: Thong Huynh
 - Technical (75%)
 - All Y: 36 N: 0 A: 5
 - 802.3at: Y: 25 N: 0 A: 4
- Motion passes

12:05AM Break, standing adjourned until 1:30PM

1:30PM, 2nd Part of VPort Ad-Hoc Presentation

- Presenter, Fred Schindler
- “PSE Limiting the Current” slide, friendly input by Clay Stanford to change PD_Min to PSE_Min. Fred is going to look in to and get back to everyone.
- Next Steps
 - Review and expand details on the proposed energy based limit
 - Create a simply method to test for compliance

- Update the task force on progress made
- This is going to continued to be discussed in Ad-Hoc's between now and the next meeting. Fred feels that the group is slowly converging on an answer.

2:00, Short Circuit Protection

- Presenter, Yair Darshan
- Clay's Question. Understanding the 802.3af specification to allow that the PD implementation the PD could switch in the load capacitor, discharge the voltage, and to charge back up.
- Yair's response, PD must startup successfully in one trial. You can get to 120V if you allow Clay's approach. Yair' preference is to have smooth clean current implementation. There are other ways though.
- Mike McCormick's input. Does not disagree that this harmonizes the intent of what was trying to be done; however, it is broken. Mike believes that Yair is correct you would be believe that foldback is the answer if you read the informative section. Does not believe that this covers everything that could be done. Problem is larger now that we submitted a broken requirement and we need to allow for interpretations based on what was submitted.
- Martin Patoka, PD should not operate below 30V. Therefore, PSE should be able to disconnect every time forced below.
- Fred Schindler, we are going to an energy approach and you can go to a higher level then you would not have resistor problems.
- Conclusion is that Fred, Yair, and others are going to talk offline and come to conclusions.

2:15, Discussion of 2-Event Classification Timing

- Presenter, Clay Stanford
- Thong's recommendations 2-4mS changed to 6-8mS.
- Move that:
 - The P802.4at Task Force to modify the mark time of the 2-Event Classification from 2-4 ms to 6-12 ms.
 - Friendly input from Wael Diab
 - The P802.4at Task Force modifies the mark time of the 2-Event Classification from 2-4 ms to 6-12 ms.
 - Motion: Thong Huynh Second: Yair Darshan
 - Technical (75%)
 - All Y: 26 N: 2 A: 9
 - 802.3 Y: 18 N: 2 A: 6
- Motion passes
- Wael Diab comments. Type 2 PSE could follow state engine different ways if following the labeling. The state engine is correct. Should we worry about fixing this labeling problem?
- Move that:
 - The P802.3at Task Force adopts standfor_2_0207.pdf as the updated PD state diagram
 - Motion: Wael Diab Second Clay Stanford

- Technical (75%)
- All Y: 30 N: 0 A: 6
- 802.3 Y: 21 N: 0 A: 1
- Motion Passes

3:55, 802.3af Detection with Classification

- Presenter, Mike McCormick
- Graph on 4 point detection.
- New state machine requires that in the 2nd mark there is a monotonic increase in this region...
- Comment, PD cannot affect the voltage. It is a slave.
- Reason to monotonically increase is a preventive measure.

Wednesday, March 14th, 2007

9:00AM

- Mike McCormick's Announcements
 - Posted schedule for Geneva IEEE Interim meeting
 - Monday, May 28th – Wednesday, May 30th

9:15AM, Cable Current Limits for IEEE 802.3at

- Presenter, Fred Schindler
- What is the temperature in the channel between the PSE and PD?
- Need to find the "Hotspot" in a PoE installation
- Trying to find the acceptable power spot where it is not too complicated or too low based relative to the cabling temperature. If it is too complicated then consultants will need to be hired to make sure that the cabling infrastructure is ok.
- Next step, determine if the task force prefers a lower power level with simpler compliance targets?
 - For example, PD 25.5W, 600mA, 50 Degrees C Ambient or PD 23.7W, 550mA, 51 Degrees C Ambient
- Val Rybinski indicated that the UL temperature rating listed on cables refers to the maximum temperature at which an insulating material may be used in continuous operation without loss of its basic properties.
- Suggestion to do a straw poll. No decision made.

10:30AM, Break

10:45AM, Straw Poll Discussion

- Decision made that we are not doing any straw polls at this point in time and will wait until we have a complete dataset.

11:00AM Classification Ad Hoc Extended Classification Using Two Classification Events

- Presenter, Clay Stanford

11:05AM Editor Report

- Presenter, Matt Landry
- Status Update
- Clay will take on the update of the PD state machine
- Decision made that we have a draft which the editor reaches all of the decisions made so far and then we start commenting.

1:25PM Comment Instructions

- Presenter, Mike McCormick
- Run the software "Comment_Tool_Generic_Solution.exe"
- Editorial tool instructions covered in the presentation.

3:00PM Elimination of Alternative B for Midspans

- Presenter, Rick Frosch
- Move that:
 - o The 802.at task force eliminate the requirement for midspans to be only alternative B powering and to become alternate A or B the same as endspans for 1000baseT
 - o Friendly amendment by Wael Diab to correct alternative spelling:
 - o The 802.at task force eliminate the requirement for midspans to be only alternative B powering and to become alternative A or B the same as endspans for 1000baseT
 - o Wael's comments are we should do testing before we go forward with this motion.
 - o Moved: Rick Frosch Second: Chad Jones
 - o Technical (75%)
 - o All Y: 16 N: 4 A: 14
 - o 802.3 Y: 16 N: 3 A: 8
- Motion passes

9:00AM, Geneva Meeting Additional Information

- Presenter, Mike McCormick
- Right on French/Swiss border. If you stay at a French hotel you will need to go through customs each time you go back and forth to hotel

9:20AM, Maintenance Requests

- Presenter, Yair
- First drawing shows that the detection waveform can be anything if you have two points between 2.8 and 10Volts.
- There is undefined regions that you can do what ever you want
- Move that:
 - o Accept the resolution of maintenance item 1164
 - o Moved: Yair Darshan Second: Fred Schindler
 - o Technical (75%)

- All Y: 19 N: 0 A: 5
- 802.3 Y: 16 N: 0 A: 0
- Motion passes
- Second maintenance item, 1163
- Specification says that the switch will initiate the second attempt within 1 second after the first attempt.
- Changed drawing to better clarify the explanation
- Yair input “If a PSE performing detection using Alternative A detects an invalid signature, it should complete a second detection attempt within 2 sec after the beginning of the first detection attempt.”
- Move that:
 - Replace strike through text with underlined text “If a PSE performing detection using Alternative A detects an invalid signature, it ~~should initiate a second detection attempt within 1 second~~ it should complete a second detection attempt within 2 sec after the beginning of the first detection attempt “ as resolution of maintenance item 1163.
 - Moved: Yair Darshan Second: Parker
 - Technical (75%)
 - All Y: 14 N: 2 A: 14
 - 802.3 Y: 11 N: 1 A: 11
- Motion passes

10:30AM IEEE 802.3at Liaison Ad-Hoc Chair’s Report for March 2007

- Presenter, Wael William Diab
- Summary of the meeting from Wednesday, March 14th, 5:00PM – 6:30PM
- Displaying the letter to TIA for group to understand and provide comments
- Move that:
 - The IEEE 802.3at Task Force accept and send the communication letter IEEE_802_3 to TIA_0307.doc to TR42.7 as an informal communication.
 - Mike McCormick friendly amendment change to
 - The IEEE 802.3at Task Force accept and send the communication letter IEEE_802_3 to TIA 0307.doc to TR42.7 as an informal communication. Also, requests 802.3 send it as a formal liaison to TR42.
 - Moved: Wael Diab Second: Fred Schindler
 - Technical (75%)
 - All: Y: 27 N: 0 A: 1
 - 802.3 Y: 21 N: 0 A: 0
- Motion passes
- Moved that:
 - The IEEE 802.3at Task Force accept the letter IEEE_802_3_to_ISO_0307.doc and request that 802.3 send it as a liaison to ISO/IEC SC25/WG 3.
 - Moved: Wael Diab Second: Yair Darshan
 - Technical (75%)
 - All: Y: 30 N: 0 A: 2
 - 802.3 Y: 24 N: 0 A: 1

- Motion passes
- Alan Flatman (ISO Liaison to 802.3at) announced to the group that he like the effort of the 802.3at group to put together the Ad-Hoc and thanked Wael Diab for participating in the ISO meeting and driving the process in 802.3at. Wael Diab also discussed that he felt this was a much more efficient process to follow.

11:11AM

- Move that:
 - o Adjourn
 - o Motion: Matt Landry
 - o Second: Wasel Diab

Respectfully submitted
David Lucia