Unconfirmed Meeting Minutes: IEEE P802.3bt DTE Power via MDI over 4-Pair Task Force

October 13-15, 2015
Catania, Sicily, IT
Prepared by George Zimmerman

Interim meeting of the IEEE P802.3bt DTE Power via MDI over 4-Pair Task Force meeting convened at 8:05 AM, Tuesday, October 13, 2015 by Chad Jones, 802.3bt Task Force Chair.

<u>Attendance is listed in Appendix A</u>

<u>ADMINISTRATIVE MATTERS</u>
Presentation: agenda_1015.pdf
Presenter: Chad Jones, Chair.

<u>Motion #1:</u> **Approve the agenda from agenda_1015.pdf**
M: Yair Darshan   **S:** Dave Dwelley
Approved by voice vote without objection (Procedural > 50%)

The Chair appointed George Zimmerman acting recording secretary for the session.

The Chair called for introductions and affiliations, the participants introduced themselves, and the Chair then proceeded with the agenda.

The Chair reviewed the agenda, focused on resolving comments on draft 1.3 and hearing associated contributions.

<u>Motion #2:</u> **Approve the minutes from September 2015**
M: Mathias Wendt   **S: Yair Darshan**
Approved by voice vote without objection (Procedural > 50%)

The Chair then resumed the review of the agenda presentation:

- Mr. Jones asked if anyone was attending from the press including those who would run a public blog on this meeting – there were no indications from the group.
- Mr. Jones noted that there should be no recording or photography without permission.

Mr. Jones reviewed the goals for the meeting, access to the reflector and website, and ground rules. Mr. Jones then continued review of the presentation.

Attendance, Mr. Jones advised the group of the IEEE meeting attendance tool and procedures, including both the attendance book and the web attendance tracking tool.

IEEE Patent Policy, at **8:15 AM**, Mr. Jones showed slides 0 through 4 patent policy from agenda_1015.pdf. Mr. Jones showed slide 0 and read aloud slides 1 through 4. Mr. Jones made the call for potentially essential patents at **08:17 AM**, and none responded. Mr. Jones then completed the reading of slide #4.

Mr. Jones then continued review of the presentation, discussing that the group was focused on "Task Force Review" preparing the draft to enter the "Working Group Ballot" phase, and at this point was primarily comment driven.

LIAISONS

The Chair moved to liaisons, and noted two liaisons for this meeting, assigned to the group in September. Seeing as there was no urgent action required (prior to the November Plenary), the Chair asked that the group review the two liasons received in September:

- From ISO/IEC SC25/WG1 SC25_N2457_to_IEEE_802d3_heating.pdf
- From TIA TR42: TSB-184A_PowerDelivery_D3.0_IEEE.pdf

The Chair completed review of the presentation noting the project objectives for each group that were unchanged from the prior meeting.

Ad Hoc Reports - None

Comment Resolution and Presentations

The Chair then moved to main business of the meeting, which was comment resolution.
Resolution of comments by consensus or motion is listed in the comment database. Procedural events and significant motions are below. Please see the comment resolution files posted for detailed action in the meeting.
Where a presentation was given, it is noted, along with the presenter and the associated comment number. Where a motion was made, it is recorded, along with the associated comment number (if applicable).

Mr. Abramson, the comment editor, proceeded with comment resolution.

EZ BUCKET:

The Chair noted several comments were requested over the reflector to be removed from the EZ bucket. The Chair then asked the group that if anyone wished to remove a comment from the EZ bucket, they do so now. No additional comments were offered other than those received via the reflector.

The comment editor then presented the following motion:

Motion #3: Approve the proposed resolution of all EZ comments, marked with the EZ Topic in 8023bt_D1p3_EZ_DraftOrder.pdf, with the following exceptions: 24, 58, 61, 76, 116, 117, 125, 126, 131, 135, 144, 156.

The Task Force chair asked if there was any discussion of the motion; none was offered by participants.

M: David Abramson   S: Yair Darshan
Y: 18   N: 0   A: 1
MOTION PASSES (Technical >= 75%)

The comment editor then asked for 90 seconds to clear out the EZ bucket, and initiated comment resolution first with those removed from the EZ bucket, then proceeding in order given in :
http://www.ieee802.org/3/bt/comments/8023bt_D1p3_NonEZ_DraftOrder.pdf

BREAK AT 10:05AM, RECONVENED 10:30AM, when comment resolution resumed.

During the course of comment resolution, comments relating to presentations were postponed until after a first pass of the comments.

RECESSED FOR LUNCH AT 12:30 PM, RECONVENED AT 1:36PM, resuming comment resolution.

BREAK AT 3:05 PM, RECONVENED AT 3:38PM, resuming comment resolution

RECESSED FOR THE DAY AT 6:00 PM.

DAY 2: WEDNESDAY OCTOBER 14

The Chair reconvened the Task Force at 8:04AM, Wednesday, October 14, resuming comment resolution from http://www.ieee802.org/3/bt/comments/8023bt_D1p3_NonEZ_DraftOrder.pdf

At 8:43 AM, all of the non-presentation-related comments had been resolved, and discussion proceeded to presentations related to comments.

Presentation:

Title: PSE State Diagram – Sequence 3: Considerations for Staggered Detection and Power-on of Dual- Signature PDs (Bullock_01_1015_rev_1.pdf)
Presenter: Chris Bullock, Cisco Systems
Discussion: The presenter described an additional path to the proposed state diagram modification. Discussion centered on a proposal to allow swapping of the roles of alt A and alt B in the state diagram at the IDLE state. There was general agreement that such a swap, if implemented needed to be in the state diagram (perhaps in addition to the descriptive text offered).

Following the presentation, comment resolution resumed on comments related to the state diagram. (see comment database,   comments marked with *PSE SD* or *Pres: Bullock1*)

BREAK AT 10:20AM RECONVENED 10:43AM

Comment resolution related to the state diagram resumed

RECESSED FOR LUNCH AT 12:18 PM, RECONVENED AT 1:37PM, resuming comment resolution related to the state diagram.

At 2:06PM, comment resolution related to the state diagram concluded, and comment resolution moved on to other presentations.

Title: Updating E2EP2P_Iunb numbers per latest changes in Draft D1.2 (Rev 001)
and September discussions (darshan_01_1015_Rev001.pdf)
Presenter: Yair Darshan, Microsemi
Discussion: The presenter discussed changes to E2EP2P_Iunb for comments 46, 25, 30-35 as well as a change to the remedy adopted to comment 184 earlier at this meeting (in the updated Rev 001).

As a result of the discussion, the following motion was made:

Motion 4:   Reopen Comment 184
M: Yair Darshan   S: Lennart Yseboodt
The Chair asked if there was any discussion on the motion, there was none offered.
Y: 16   N: 0   A: 4
MOTION PASSES (Technical >= 75%)

Following the motion, presentations resumed:

Title: Baseline for Figure 33-14 update to Type 3 and Type 4, v233
(yseboodt_1_1015_fig3314_v233.pdf)
Presenter: Lennart Yseboodt, Philips

Discussion: The presenter discussed updates to add Figures 33-14a, 33-14b, and 33-14c to cover the following cases, respectively: Type 3 or Type 4 PSE attached to dual signature unmatched class, Type 3 PSE, and Type 4 PSE. Questions were asked and answered on the presentation.

BREAK AT 3:10PM, RECONVENED AT 3:30PM…

Upon reconvening, the Task Force heard the following presentation, related to the same topic as the previous presentation:

Title: E2EP2PRunb with Dual Signature PDs (darshan_03_1015.pdf)
Presenter: Yair Darshan, Microsemi
Discussion: The presenter presented various scenarios of dual signature PDs leading to a choice for the Task Force of whether dual load PDs would need to isolate the power supplies on each pair set. There was discussion pointing out many ways that Figure 3c (slide 7, bottom rails tied together) would not function properly, and was undesirable, and general agreement that dual signature, dual-load PDs should be isolated. The discussion concluded that adopting the previous presentation (Lennart's) would provide this result.

Comment resolution resumed, resolving comments related to the two presentations (see database for comments marked Darshan1, Yseboodt1, Darshan3, Darshan4 as well as the re-opened comment 184).

--- Based on the resolution of the comments, the following presentation was NOT presented:
Title: Update Figures 33-14x (darshan_04_1015.pdf)
Author: Yair Darshan, Microsemi

Presentations then resumed:
Title: Numbers vs. Formulas (beia_1_1015_rev11.pdf)
Presenter: Christian Beia, ST Microelectronics
Co-Author: Antonio Rotta, ST Microelectronics
Discussion: The presenter described the problems associated with using formulae in tables where a single number might be available. (see comments 100, 101, 102)

Following the presentation, at 5:05PM, the Task Force recessed to allow preparation of a joint solution to the issue raised in the presentation, incorporated in to a revision of Lennart Yseboodt's presentation on Table 33-7.
The Task Force reconvened at 5:18PM, with the following revised presentation:

Title: Table 33-7 rev 120 (yseboodt_1015_table_33_7_v120.pdf) (Not posted - revised from v110 originally posted)
Presenter: Lennart Yseboodt, Philips
Discussion: The revised contribution introduced a column in Table 33-7 for PD Assigned Class and attempted to replace the minimum supported power level formulae with numbers. Discussion focused on issues of rounding combinations for dual signature PDs. General conclusion was that the table was in the right direction, but needed more development before inclusion in the draft. Resolution was that the author would attempt another revision overnight.
(NOTE - the next day, the revised version (yseboodt_1015_table_33_7_v130.pdf) was completed and adopted as the resolution of comment 65.)

For the remainder of the day, the Task Force heard presentations unrelated to comments:

Title: Diode Forward Voltage Spread (diode forward voltage spread.pdf)
Presenter: Koenraad Van den Eeckhout, On Semiconductor

Co-Author: Paul de Vries, On Semiconductor

Since there was not a presenter at the meeting for the following presentation, Mr. Law, who had conferred
        with the author, asked for input to help prepare to hear the following presentation at the
        next meeting (but did not present the presentation):
Title: LLDP Power Price (802.3_4PPOE LLDP Price1.pdf)
Author: Bruce Nordman, LBNL

Title: Draft of IEC 60512-99 (Draft of IEC 60512-99-002.pdf)
Presenter: Stephan Steinke, Molex
Co-Author: Paul Butschbach, Molex
Discussion: The presenter described work ongoing in IEC 60512-99-002/Ed1 to support the higher
                    currents in 802.3bt for unmating of RJ-45 connectors with PoE load. There was much
                    discussion of the models, and that the IEC work needed to be clear that it was dealing
                    with maximum transient currents, rather than the steady-state currents.

THE MEETING RECESSED FOR THE DAY AT 6:20PM.

DAY 3: THURSDAY OCTOBER 14

The Chair reconvened the Task Force at 8:05AM, Thursday, October 15, resuming presentations related
to comments:

Title: Remedy for Comment 238 (dwelley_1_1015.pdf)
Presenter: Dave Dwelley, LTC
Discussion: There was brief discussion, which mainly centered around how the proposed text might
                    be related to other work presented in the next presentation (darshan_05_1015.pdf).

Title: Analysis of: Iinrush for Type 3 and 4 PSEs (darshan_05_1015.pdf)
Presenter: Yair Darshan, Microsemi
Discussion: The presentation was an update on a presentation given at the September interim. (see
                    darshan_03_0915.pdf). There was much discussion of the analysis and whether there
                    was consensus on the issue with the prior presentation. No consensus was reached.

Seeing no consensus from the prior two presentations, the Chair moved on with presentations.

Title: PSE Type Concerns (schindler_3bt_1_1015.pdf)
Presenter: Fred Schindler, Seen Simply
Discussion: The presentation raised issues with the definition of Type 4 PSE that might lead to
                    confusion and possible interoperability issues. There was discussion about the meaning
                    of Type 3 and Type 4, without resolution.

BREAK AT 10:00 AM AND RECONVENED AT 10:25 AM

Following the break, the task force continued with presentations:

Title: Proposed baseline text supporting the LLDP extensions
                    (wendt_1_1015_LLDP_baseline_v104.pdf) (revised from v103 originally posted)
Presenter: Mathias Wendt, Phillips
Co-Author: Lennart Yseboodt, Phillips

Discussion: The presentation proposed a new version of the PoE TLV for LLDP. During the discussion, David Law suggested those interested look at a summary presentation he gave to 802.3az (http://www.ieee802.org/3/az/public/may08/law_01_0508.pdf), as well as the current definitions in IEEE Std 802.1AB(tm)-2009 <https://standards.ieee.org/getieee802/download/802.1AB-2009.pdf> along with its two approved corrigenda, IEEE Std 802.1AB(tm)-2009/Cor 1-2013 Corrigendum 1: Technical and Editorial Corrections <https://standards.ieee.org/getieee802/download/802.1AB-2009_Cor1-2013.pdf> and IEEE Std 802.1AB(tm)-2009/Cor 2-2015 Corrigendum 2: Technical and Editorial Corrections <https://standards.ieee.org/getieee802/download/802.1AB-2009_Cor_2-2015.pdf>.

Title: Type 3/4 PSEs Inrush_max value with Type 1/2 PDs (Rev005) (darshan_02_1015.pdf)
Presenter: Yair Darshan, Microsemi
Discussion: The presentation proposed that Type 3 and 4 PSEs did not need to limit inrush for Type 1 and Type 2 PDs (beyond limits proposed for Type 3 / 4 PDs). Discussion indicated lack of consensus and desire to review.

Presentations were completed. There was discussion that some of the proposed state diagram changes to allow the flopping of alternatives were too complex for overnight and would be presented at the next meeting.

Following presentations, comment resolution resumed.

Resolving comment 246, there was much discussion about what 'type' meant vs. 'class', and general agreement that our specification has evolved and this needed clarification, the result was resolving a comment with changes to Table 33-1.

BREAK FOR LUNCH AT 12:04PM, AND RESUMED AT 1:10PM.

Following lunch, the Task Force resumed comment resolution on the remaining comments.

BREAK AT 3:15PM, RECONVENED 3:35PM, resuming comment resolution.

Comment resolution concluded at 4:19 PM.

MOTIONS AND PROGRESSING THE DRAFT

The Chair noted the following open items, requiring work:

- State diagram
- LLDP
- Type 4 power levels
- Inrush (Inrush Min/Inrush Max)
- P_Type
- Cleanup of ILIM and IPEAK
- Document cleanup of editor's notes and TBDs (for reviewers)
- PICS will be addressed following convergence on other items

Having completed comment resolution, the following motions were made:

Motion #5: Move to adopt comment resolutions in the comment database and charter the editor to create D1.4 by incorporating the comments for review by October 26, 2015.

M: Dave Abramson   **S:**   Matthias Wendt

Y: 21   N: 0   A:0 (TECHNICAL >= 75%)

MOTION PASSES

Motion #6: Move that the Chair holds a comment cycle on D1.4 starting no later than October 26 and ending November 3, 2015 11:59PM AOE.

M: Dave Abramson   **S:**   Lennart Yseboodt

Y: 21   N: 0   A:0 (TECHNICAL >= 75%)

MOTION PASSES

****THE COMMENT EDITOR REQUESTED THE GROUP READ AND APPLY 'CHAD'S RULES FOR COMMENTS' TO AID IN THE VERY RAPID TURNAROUND THAT IS REQUIRED. THE CHAIR POINTED OUT THAT THESE RULES ARE INCLUDED IN EVERY DRAFT REVIEW ANNOUNCEMENT.****

CLOSING BUSINESS
Having completed the presentations and comment resolution business for the meeting.

No further motions of business were offered.

Adjournment

Motion #7: To adjourn the meeting.
M: Dan Dove   S: Yair Darshan
MOTION PASSES by voice without opposition
The Meeting was adjourned at 4:40PM, Thursday, October 15, 2015.

Appendix A: Attendees at the IEEE P802.3bt Task Force Interim Meeting, October 13-15, 2015

4PPoE Task Force Attendance

Name	Employer	Affiliation	10/13	10/14	10/15	
Chad Jones	Cisco	Cisco	CnJ	CnJ	CnJ	
David Abramson	TI	TI	Da	Da	Da	
SESHA PANGULURI	BROADCOM	BROADCOM	PS	PS	PS	
Fred Schindler	Seen Simply	Broadcom Cisco TI	ZS	ZS	ZS	
5 George Zimmerman	CME Consulting	LTC, Aquantia, Commscope	Mg.	Mg.	Mg.	
DAVE DWELLEY	LTC	LTC	DAVD	DAVD	DAVD	
David Stover	LTC	LTC	DMS	DMS	DMS	
Koenraad Van den Eeckhout	ON Semi	ON Semi	KVDE	KVDE	KVDE	
Christen Beia	STMicroelectronics	STMicroelectronics	CB	CB	CB	
10 David Tremblay	HP	HP	DT	DT	DT	
Paul Butschbach	Molex	Molex	PB	PB	PB	
Stephan Steinke	Molex	Molex	ST	ST	ST	
David Law	HP LH	HP LH	DL	DL	DL	
John Skinner	Sifos Technologies	Sifos Technologies	JHS	JHS	JHS	
15 DAN DOVE	Dove Networking	LTC	DD	DD	DD	
ELI OHANA	Microsemi	Microsemi				
YANIV GIAT	Microsemi	Microsemi	YG	YG	YG	
Chris Bullock	Cisco	Cisco	CB	CB	CB	
LENNART YSEBOODT	ROYAL PHILIPS	ROYAL PHILIPS				
20 Darshan Yair	Microsemi	Microsemi	3	3	3	

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4PPoE Task Force Attendance

Name	Employer	Affiliation	10/13	10/14	10/15	
WENDT, Matthias	Philips	Philips	MW	MW	MW	
Miklos Lukacs	Silicon Labs	Silicon Labs	Lukacs Miklos	Lukacs	Lukacs	
Flavio Sextapalli	COILCRAFT	COILCRAFT		F.S.	F.S.	
Koenraad Van den Eethout	ON Semiconductor	ON Sem				
5						
10						
15						
20						