Contents

"Link section" vs "channel"

All Comments marked REF204 was pulled out and marked as TFTD.

(168-176, 180-185, 187,188,190,192-199, 204,205,207,210)

Updated response to all REF 204 comments:

1. I made errors with my response to comment 204:
   Error 1: My presentation that addresses the comment is darshan_14_0517.pdf and not darshan_13_0517.pdf

   Error 2: In my first response after TFDT FS which says:
   "Keep it TFTD. It can't be REF204. It is bigger text change. I propose different text: Change to " Within Clause 145 and its annexes, the term link section refers to the point-to-point medium connection between two and only two active Power Interfaces (PIs)."

My updated response:

   a) It belongs to comment #205 and not #204. Therefore comment #205 need to be in the TFTD file.
   b) The response text need to be change to only: "Keep it TFTD. It can't be REF204. It is bigger text change. In addition, what is "active"? it needs to be clearly defined and make sure that Endspan and Midspan are still allowed to be connected to the same PD as was allowed always in PoE and is covered by this spec. "

2. Comment #194 should not be referenced to comment REF 204 since it involves other issue. My response to this comment: "Does link section contains 4 connector channel behavior as we used to assume in our P2P Runb analysis?"

The problems with accepting REF204 comments

See http://www.ieee802.org/3/bt/public/mar17/Thompson_01_0317.pdf which was used to justify why we need to replace "channel" with "link section"

1. The current definition of link section doesn't allow connecting Endspan and Midspan to the same PD while it is allowed by the spec and supported by the spec.
   See:
   -backoff time etc.
   -Clause 145.1.2
   -Clause 145.2.3
   -Clause 145.4.9)
   For this configuration, it seems better to use link segment.
   Per the current link section definition, it doesn't well covered Midspans and REndsapns.

2. Thompson_01_0317.pdf use the argument of using link segment as complicated configuration. Not clear why? It is allowed by the spec without causing any issues. hazard.

3. Other spec parts allow two PSEs (Alternative A PSE and Alternative B PSE to be connected under Environment A) to form 4-pairs PSE connected to the same PD. Using link section per its current definition make this use case unclear which is not sync with the rest of the spec.

4. Not clear why we can't use the "channel" definition per ISO11801 which I been told is equivalent to TIA/EIA definition which is currently used in the 802.3bt spec and in IEEE802.3-2015 (CLAUSE 33).

Discussion:

Issue #1

link section defined as: The portion of the link segment from a PSE to the PD.

Geoff's Fantasy Definition: (see http://www.ieee802.org/3/bt/public/mar17/Thompson_01_0317.pdf)
Link section: The point-to-point medium connection between two and only two Power Interfaces (PIs).
Problem: It contradict the current spec that allows Midspan and Endspan to be connected to the same PDs. As a result, I prefer that this stays as Fantasy Definition**.**
Proposed Remedy: For comment #205: Reject it. i.e. keep the current page 102 line 44-45 as is: **145.1.3.2 Channel requirements** Within Clause 145 and its annexes, "channel", as defined in 1.4.134, refers to the electrical path on which the power is transferred, i.e., the link section. It allows Endspans and Midspans to be supported per the current spec. It also allows us not to change "channel" with "link section" everywhere and raise new issues (P2PRunb model, Midspan and Enspan connected to PD etc.)

Link segment: The point-to-point full duplex medium connection between two and only two Medium Dependent Interfaces (MDIs).

No issues with this definition.

Issue #2:

145.1.3 System parameters

A power system consists of a **single PSE**, a **single PD**, and the **link section** connecting them.

Problem: Does this text allows PSE Alternative A and PSE Alternative B to form 4-pairs operation under environment A? I don't ~~belive~~believe so.
Proposed Remedy: Change to: A power system consists of a ~~single~~ **PSE** system, a **single PD**, and the **link section** connecting them.

Issue #3:

145.1.3 System parameters

A power system consists of a **single PSE**, a **single PD**, and the **link section** connecting them.

AND

145.2.5.1 State diagram overview and timing

It is possible that two separate PSEs, one that implements Alternative A and one that implements Alternative B (see 145.2.2), may be attached to the same link segment. In such a configuration, and without the required backoff algorithm, the PSEs could prevent each other from ever detecting a PD by interfering with the detection process of the other.

Problem_1: A Power system could be also Midspans and Endspans connected to the same PDs. See **145.2.5.1 State diagram overview and timing**
Possible solution, use "link segment" and not "link section." Which is ~~similar to~~like "channel"

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Problem_2: In order to form 4-pairs operation, Alternative A PSE and Alternative B PSE construction or SYSTEM operating under environment A conditions is required. The above text doesn't allow it, it says, "**single PSE"**
Possible solution, change the text to: "A power system consists of a **single PSE** **system**, a **single PD**, and the **link section** connecting them."

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Solving Problems 1+2:
Possible solution, change the text to: "A power system consists of a **single PSE** **system**, a **single PD**, and the **link** ~~**section**~~ segment connecting them." OR "A power system consists of a **single PSE** **system**, a **single PD**, and the channel connecting them."