

Proposed New .bt objectives

Jeff Heath

Linear Technology

July 2013

Type 2 Classification Problems

- Many PD OEMs do not like and can't afford LLDP and largely do not implement it.
- Many PD OEMs do not like and can't afford 13W start up and largely do not implement it when existing designs do not

Type 2 PD Vendor Trends

- Tier 2 PD vendors I am familiar with largely ignore LLDP and 13W startup requirements
- This weakens the spec.
- Tier 2 PD vendors are under-represented in this room (and in previous PoE working groups)

Proposed new .bt Objectives

- Objective n: LLDP is optional type 3 PDs
- Objective n+1: 13W startup (as opposed to inrush) is not required for type 3 PDs

- Straw poll slides

LLDP and Power Islands

Jeff Heath

Linear Technology

July 2013

A representative Type 2 PD OEM Customer

- Many OEM has an Ethernet data communication and a external power supply with power requirements $\leq 25.5W$
- IEEE802.3 PoE PSEs have become ubiquitous and widely known
- The PD OEM vendor is being asked to change to PoE power due to its many advantages, (with installation standing out as a primary benefit.)
- The PD OEM does not have LLDP software as it has never been a requirement for their externally powered PD.
- The PD OEMs overwhelmingly expect Type 2 to behave like Type 1 meaning they can use the 25.5W upon power up (80mS later!)

Issues Facing these Type 2 PD OEMs

- They are completely unaware of what LLDP is
- They often do not have the software expertise to understand how to scope the product.
- They do not have the NRE resources nor schedule to understand, hire, implement, and test LLDP
- Their existing power tree designs must be modified to reduce power below 13W upon power up.
- Their basic uP/MAC/PHY power requirements frequently exceed 13W (this is increasingly true for PSs >25.5W)
- Their product has no utility below their desired power level (again above 13W).
- *The result is that they do not implement LLDP and if and when they are connected to a type 1 PSE or type 2 PSE sans two event classification, they motorboat. (yes, this is against the rules) but pragmatically speaking, they get powered so they save money, schedule and are happy with the solution*
- This weakens the standard

PD OEM Vendor Participation is very Low at IEEE802.3 (PoE)

Jeff Heath

Linear Technology

July 2013

Today's PD OEM Participation Poll

- How many PD OEMs are in the room today?
 - Ans:
- How many non-Tier One PD OEMs are in the room today?
 - Ans:

PD OEM Participation for IEEE802.3 PoE is Vanishingly Small

- Linear has >300 PD customers (Type 1 & 2)
- Linear has >100 PD customers (Type 2)
- These customers do not have the budget to attend IEEE802.3 meetings.
- Virtually 0% of them attend if the tier one OEMs are excluded
- *The PD community, by percentage of OEMs is essentially not represented.*