PoEPlus – My Thoughts

Chad Jones

Class 4

Reserved for future use

- 'Hook' left in af for PoEplus

- In practice, the existing classes are bad for power management

  0-4W, 4-7W, 7-15W – 'granularity' not fine enough

- A 15-30W Class 4 is even worse

Objective 7 from Jan 05 meeting

PoEplus PDs, when connected to a legacy 802.3af PSE, will provide the user an indication a PoEplus PSE is required.

- **PD boots into <13W mode**

- **PD must know if PoEplus PSE or legacy PSE is probing**

- **PD stays in LP mode if legacy PSE**

PoEplus needs a new class method

Solves these previous issues

- **New method needs to include more class levels at finer power partitions**

- **New method can be distinguished by PoEplus PD**

    PoEplus PD chip flashes LED???

- **New method backwards compatible with 802.3af**

- **New method adds a marginal and not significant cost vs. old method**

    Just a tweak!

Common Mode Comm Class Method

Suggest not to use common mode communications for new class method

- **Unbalanced signaling**

- **May lead to EMI issues**

- **High common mode environment installations may be unable to use this method**

2 Pair vs. 4 Pair

Allow both – not mutually exclusive

- **Applications for both**

    Type II cables (2 pair)

    Mega-power applications (4 pair)

- **Requires a method to distinguish between 2 pair and 4 pair**

- **Why 2 Pair? Cost arguments for 2 pair:**

    Only slightly more cost but more power than existing 15.4W solution. 4 pair estimated at 1.5x current cost

2 Pair

Raise power to max allowed

- **Lowest cost adder for Higher Power (but not highest power)**

- **Call this class 4?**

- **Possible to push this out and then add 4 pair at later date?**

4 Pair

Need to verify all 4 pairs terminate at one device

- **Only one PSE port to feed the PoEplus PD**

- **Only one PD fed by the PoEplus PSE**

- **AND only add marginal cost!**

Time is of the essence

This spec cannot drag out 4 years like the previous standard

- There are already PoEplus type applications

- There are already High Power PoE products

- More will appear if this process takes too long