

Proposed Objectives

As modified in the SG meeting

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Disclaimer

- We are not proposing a complete set of objectives.
- These are intended to be discussion starters.
- The presenter will be ready to modify during the presentation.
- The colored text are proposed extras that can likely be deleted.

Objectives (final)

- Define a method to detect a Fault Managed Power (FMP) receiver before applying operating voltage
- Specify FMP transmitter interface startup, operating, and shutdown behaviors and electrical characteristics
- Specify FMP receiver interface startup and operating behaviors and electrical characteristics
- Do not preclude operation with at least one IEEE 802.3 PHY
- Do not preclude Ethernet operation of the supported IEEE 802.3 PHYs in the presence of FMP
- Do not preclude FMP operation in the presence of Ethernet traffic between the supported IEEE 802.3 PHYs
- Define optional management parameters such as FMP detection, startup, operating state, allocated power, fault state, and fault reporting
- Do not preclude meeting the UL 1400-1 Fault-Managed Power Systems (Part 1: Safety Requirements) standard

For more information on FMP operation, see the CFI consensus meeting presentation:

https://www.ieee802.org/3/cfi/0326_2/Fault_Managed_Power_Ethernet_Powering_Techniques_Call_For_Interest-260310.pdf

Objectives delayed or covered

- ~~Define FMP receiver electrical characteristics necessary for interoperable startup and operation, including input capacitance, inrush behavior, and behavior during FMP fault-detection intervals~~
- ~~Do not preclude operation with XXX [Define the PHYs that work for DW. Suggest SPE PHYs and perhaps optical]~~
- ~~Do not preclude Ethernet operation of the supported IEEE 802.3 PHYs in the presence of FMP~~
- ~~Do not preclude FMP operation in the presence of Ethernet traffic between the supported IEEE 802.3 PHYs~~
- ~~Define link segment, coupling-network characteristics, and conducted-noise requirements necessary for concurrent operation of FMP and the supported IEEE 802.3 PHYs~~
- Define optional management parameters such as FMP detection, startup, operating state, allocated power, fault state, and fault reporting

Potential additions

- ~~Need a power removal objective~~
- Do not preclude meeting the UL 1400-1 safety standard
- Define a standardized way to pause traffic during FMP power transitions
- Do not damage misconnected devices

Parked Objectives

- ?Support the IEEE Std 802.3 Ethernet frame format at the MAC client service interface
- ?Support the minimum and maximum frame size IEEE Std 802.3-2022
- ~~Define FMP receiver behavior during detection and startup and a minimum set of corresponding transmitter behavior necessary to support interoperable FMP receiver detection and startup~~