IEEE 802.3da SPMD TF: MPoE: Externally Defined MPI Types

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Background

- During the May meeting the TF accepted my comments regarding multiple MPIs per DTE, but did not accept the definition of "MPI Extended Types" for AC, DC and FMP.

- Discussion during and after the meeting indicated that using OIU/CID to allow external organizations to specify a range of MPI types (e.g., 240VAC) that can be carried in MPoE LLDP messages may be acceptable.

- This presentation provides an outline of my proposed changes.

Basic Concept

- Define a 32 bit Externally Defined MPI Type to be carried in LLDP
  - MPoE treats this as an opaque identifier
  - This is recommended be formatted as:
    - 24 bit OUI/CID
    - 8 bit MPI subtype
- Carry only the basic parameters generally applicable to power interfaces (e.g., voltage, power, current)
- Reuse as much as possible of the existing Clause 189 MPI definitions and add minimal extensions as required.

Clause 189 Changes

- Add a new subclause describing Externally Defined MPI Types

- Add appropriate PICs entries

Clause 79 Changes

- Add "Clause 189" to names/description for MPSEs/MPDs specified in subclauses 189.4 through 189.7
- Add 'Externally Defined MPI Entry' counts to the 3 TLV fixed element tables
- Add an 'Externally Defined MPI Entry' array after the "Clause 189 Entry" array to the 3 TLVs.
- Add new definitions for:
  - Externally Defined MPI Type, Externally Defined capabilities and status, Nominal Voltage,
- Use bit 15 of the 16-bit current/voltage/power definitions to indicate amps/volts/watts vs milliamps/millivolts/milliwatts.
- Add PICS Entries as needed

Clause 30 Changes

- Add
  - aMPSEExternalMPIType/ aMPSENominalVoltage
  - aMPDExternalMPIType/ aMPDNominalVoltage

Detailed proposal

- Refer to jones_3da_02_july2025.pdf

Consensus
WE BUILD IT.