

IEEE 802.3da SPMD TF: LLDP for MPoE

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Background

- Existing POE negotiation techniques will not work on the multidrop mixing segment.
- We have discussed using LLDP for MPoE control/negotiation many times.
- I submitted comments #121 and #122, and stated I'd provide a proposal least one week before January interim.
- This is it.

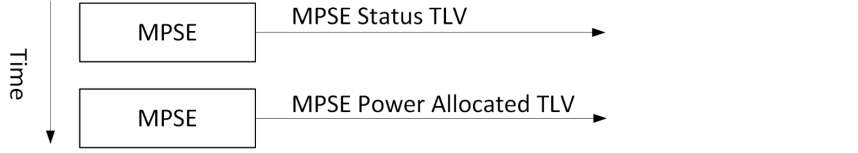
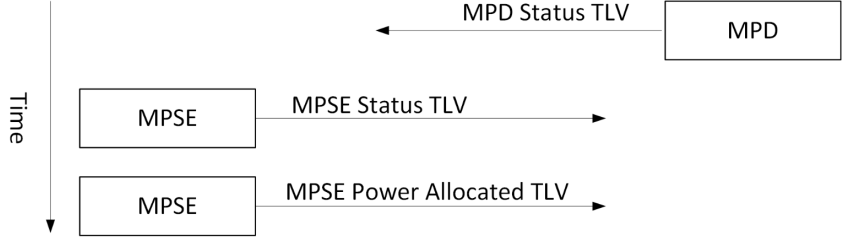
What do we need?

- From MPSE
 - Status, capabilities and power available/granted
 - MPD power assignments
 - Telemetry
- From MPD
 - Status, capabilities and power requests
 - Telemetry

Interactions 1 of 2

Interaction	Transactions	Key data elements
Startup	<pre> sequenceDiagram participant Time as Time participant MPSE1 as MPSE participant MPD as MPD participant MPSE2 as MPSE MPSE1->>MPD: MPSE Status TLV MPD-->>MPSE1: MPD Status TLV MPSE2->>MPD: MPSE Power Allocated TLV </pre>	<p>4.2.1 MPSE Status TLV : voltage support, measurement capabilities, max/allocated power, etc</p> <p>4.3.1 MPD Status TLV: voltage support, measurement capabilities and required/desired power, etc</p> <p>4.2.2 MPSE Power Allocated TLV: per MPD information for all MPDs, e.g., MAC address, granted power, desired power, etc</p>
MPD power change request	<pre> sequenceDiagram participant Time as Time participant MPD as MPD participant MPSE1 as MPSE participant MPSE2 as MPSE MPD-->>MPSE1: MPD Status TLV MPSE1->>MPD: MPSE Status TLV MPSE2->>MPD: MPSE Power Allocated TLV </pre>	<p>4.3.1 MPD Status TLV: updated power request, e.g., required power, desired power, desired power duration</p> <p>4.2.1 MPSE Status TLV MPD status: allocated power</p> <p>4.2.2 MPSE Power Allocated TLV: updated grant information for all MPDs</p>

Interactions 2 of 2

Interaction	Transactions	Key data elements
<p>MPSE update, e.g., max power change, power down notification</p>		<p>4.2.1 MPSE Status TLV MPD status: max power, allocated power, power withdrawal notification</p> <p>4.2.2 MPSE Power Allocated TLV: updated grant information for all MPDs</p>
<p>MPD sleep notification</p>		<p>4.3.1 MPD Status TLV: updated power request, e.g., power request withdrawal duration, delay until power draw ceases</p> <p>4.2.1 MPSE Status TLV MPD status: allocated power</p> <p>4.2.2 MPSE Power Allocated TLV: updated grant information for all MPDs</p>

Telemetry

- PoE uses LLDP TLVs (79.3.8) to request and report telemetry, and clause 30 objects to interact with management.
- I propose to just use clause 30 objects for management to request measurements and read the results.
- See 4.4 Measurements/Telemetry in [jones_3da_01_lldp_mpoe.pdf](#).

Detailed proposal

- Refer to [jones_3da_01_lldp_mpoe_proposal.pdf](#)

Straw Poll and Motion – January 2025

- Straw Poll #??
 - Would you support adopting the text in `jones_3da_01_lldp_mpoe_proposal.pdf` to define LLDP for MPoE and clause 30 objects for MPoE telemetry.
 - voting at:
 - Y:
 - N:
 - A:
- Motion #??
 - Adopt the text in `jones_3da_01_lldp_mpoe_proposal.pdf` to define LLDP for MPoE and clause 30 objects for MPoE telemetry, with editorial license to reformat and correct “editorial” errors (e.g., typos).
 - Mover: Peter Jones
 - Secunder:
 - voting at:
 - Y:
 - N:
 - A:
 - Motion passes/fails.

Consensus

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