

ADVANCE

# Link Aggregation: control protocol addressing proposal

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# Protocol Identification vs. Addressing

- ▶ In 802.1:
- ▶ Ethertypes are used to indentify protocols
- ▶ MAC Addresses are used to determine delivery of frames
  - ▶ Reserved Group MAC Addresses are used to determine which bridges will relay our control protocol frames

# Link Aggregation 802.1AX Addressing

- ▶ Link Aggregation Control and Marker Protocols are encoded with
  - ▶ Ethertype: Slow Protocols Ethertype (88-09)
  - ▶ Destination MAC Address: Slow\_Protocols\_Multicast address (01-80-C2-00-00-02)
  - ▶ These are specified in 802.3 Clause 57A
- ▶ 802.1aj TPMR does not forward these frames, so
  - ▶ TPMRs cannot be successfully placed into links operating Link Aggregation with LACP/LAMP.
  - ▶ 802.1aj Annex K.2 suggests that LACP/LAMP PDUs could be sent to the Nearest non-TPMR Bridge group address (01-80-C2-00-00-03)

# TPMR reserved addresses

**Table 8-3—TPMR component Reserved addresses**

Assignment	Value
IEEE MAC-specific Control Protocols group address	01-80-C2-00-00-01
IEEE 802.3 Slow_Protocols_Multicast address	01-80-C2-00-00-02
IEEE MAC-specific Control Protocols group address	01-80-C2-00-00-04
Individual LAN Scope group address*, Nearest Bridge group address	01-80-C2-00-00-0E

\*It is intended that no 802.1 relay device will be defined that will forward frames that carry this destination address.

# Proposal

- ▶ In line with the separation of protocol identification from PDU addressing, it is proposed to modify 802.1AX to allow LACP/LAMP PDUs to be sent to other addresses in addition to that defined currently
- ▶ This would allow Link Aggregation to be operated across TPMRs by configuring the devices operating Link Aggregation to use the appropriate Destination Address.
- ▶ Alternatives might include
  - ▶ Only Slow\_Protocols\_Multicast address and Nearest non-TPMR Bridge group address, or
  - ▶ Allowing the use of any Destination Address

# Plan

- ▶ Amend 802.1AX to allow LACP/LAMP to be sent to other addresses
- ▶ Develop a PAR and Five Criteria for an amendment at the January interim meeting for pre-circulation before the March 802 plenary
- ▶ Expect the PAR to be approved in March
- ▶ Circulate an initial draft amendment prior to the March meeting
- ▶ Task Group balloting following the March meeting