Implications of Comments 234, 235 and 236

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New Radical Feature to 802.3

- A new feature is pushed in to 802.3 through the ballot comments process.
- This is a single vendor supported feature intended to disturb the existing EPON markets.
- The proposed feature will change the EPON networking model.
- The proposed feature will invalidate legacy deployments.

Legacy & Backward Compatibility

- There is no technical need for such a change. EPON is already a shared media network and multicast control over this kind of network is well defined in 802.3.

- The proposed changes are not within the project scope. PAR clearly says *"new capabilities or functional enhancement will have to be deferred to a future amendment project"*

- Previous facts are disturbing by themselves and also are in contradiction with the 5C, reducing the EPON market size.

- The additional filtering rules are not compliant with current 802.3 EPON devices and networks. For example, a frame sent to a multicast LLID will always be discarded by a legacy device and may be accepted by a new device, making the network non-functional.

- After the proposed changes in the filtering rules, all legacy EPON deployments will not be compliant with 802.3 anymore since the capability of doing the additional mandatory matching filtering is missing.

Comment 234 (TR)

CI **01**   *SC* **1.4**   *P* **35**   *L* **3**   # 234

Frazier, Howard   Broadcom Corporation

Comment Type   **TR**   *Comment Status* **X**

Other comments submitted with this ballot will require a definition for the
term "multicast LLID".

SuggestedRemedy

Add the following definition to 1.4:
1.4.XXX multicast LLID (mLLID): An LLID bound to one or more ONU DTEs.

Proposed Response   *Response Status* **O**

Comment 235 (TR) -1G EPON

CI **65**   *SC* **65.1.3.3.2**   *P* **312**   *L* **54**   **#** 235

Frazier, Howard   Broadcom Corporation

Comment Type   **TR**   *Comment Status* **X**

The ONU receive filtering rules must be extended to support multicast LLIDs.
Material to support this change has been previously provided to the Working Group.

SuggestedRemedy

Following the paragraph that begins with "If the device is an ONU ...," add the
following sentence as a third bullet item:
"f) If the received logical_link_id value matches one of the assigned
multicast LLIDs, then the comparison is considered a match."

Proposed Response   *Response Status* **O**

Comment 236 (TR) – 10G EPON

CI **76** *SC* **76.2.6.1.3.2** *P* **577** *L* **4** # 236

Frazier, Howard Broadcom Corporation

Comment Type **TR** *Comment Status* **X**

The ONU receive filtering rules must be extended to support multicast LLIDs.
Material to support this change has been previously provided to the Working Group.

SuggestedRemedy

Following the paragraph that begins with "If the device is an ONU …," add the
following sentence as a third bullet item:
"f) If the received logical_link_id value matches one of the assigned
   multicast LLIDs, then the comparison is considered a match."

Proposed Response *Response Status* **O**

Conflicting Facts

- Multicast and Shared LAN Emulation is already defined for EPON in 64.3.2.2, 64.3.2.3, 77.3.2.2 and 77.3.2.3

- 802.3 defines the LLID bounding as a point-to-point emulation. This contradicts with "*multicast*" in comment #234

- Comment 235 asks for adding bullet (f) to a list that only contains (a) and (b).

Conflicting Facts (2)

The followings refer to comments 236 and 237 with specific examples for 236 only.

- There is no definition of the variable "*assigned multicast LLIDs*" .

- There is no definition of how the "*multicast LLIDs*" are assigned.

- There is no definition of who assigns the "*multicast LLIDs*".

Conflicting Facts (3)

- The 802.3 defines the bounding as a full registration process, where messages are exchanged between OLT and ONU.
  - EPON LLID registration process doesn't allow the registration of one LLID to multiple ONUs. REGISTER message is sent to the ONU MAC address and defines the ONU LLID. (64.3.3.5)
  - The REGISTER message makes no distinction between the regular LLID and the multicast LLID (64.3.3.5)
  - A new REGISTER for the additional LLID will not be processed by the ONU (Figure 64-22)
  - The EPON bandwidth allocation messages do not support multiple ONUs with the same LLID. The GATE message is sent to DA=01-80-00-00-01 and the ONU LLID. A mLLID GATE will instruct multiple ONUs to transmit data at the same time. (Figure 64-16, 64.3.3.5)
  - The OAMPDU has DA=01-80-c2-00-00-02 so the OLT has no way to distinguish messages for a specific ONU. (57.4.2, Figure 57-9)

Proposed Action

- Reject comments 234, 235 an 236