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| **itu-old** | INTERNATIONAL TELECOMMUNICATION UNION | | | | | | **COM 15 – LS 197 – E** |
| **TELECOMMUNICATION STANDARDIZATION SECTOR**  STUDY PERIOD 2009-2012 | | | |  | | |
| **English only**  **Original: English** | | |
| **Question(s):** | | 9/15 | |  | | | |
| **LIAISON STATEMENT** | | | | | | | |
| **Source:** | | ITU-T Study Group 15 | | | | | |
| **Title:** | | Ethernet over OTN (E-OTN) requirements | | | | | |
| **LIAISON STATEMENT** | | | | | | | |
| **For action to:** | | | IEEE 802.1 | | | | |
| **For comment to:** | | |  | | | | |
| **For information to:** | | | Metro Ethernet Forum, Broadband Forum | | | | |
| **Approval:** | | | **Agreed to at SG15 meeting (Geneva, 31 May – 11 June 2010)** | | | | |
| **Deadline:** | | | 30 September 2010 | | | | |
| **Contact:** | | Ghani Abbas  Ericsson  UK | | | | Tel: +44 7710 370 367  Email: Ghani.Abbas@ericsson.com | |
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**Introduction**

ITU-T SG15 Q9 appreciates the discussion held during the IEEE 802.1 joint meeting on May 28, 2010. As a result of the feedback received in your liaison [1] and at this meeting, Q9 has developed some high level requirements to explain the motivation for the E-OTN proposals that were sent in our previous liaison.

Study is underway in Question 9 of ITU-T Study Group 15 (Q9/15) on what new recommendations or amendments, if any, would be required to support Ethernet over OTN (Optical Transport Network). This is still work in progress, and no decisions have been made by Q9/15.

This liaison provides IEEE 802.1 with some clarification on the motivation. However, Q9 wants to be clear that there is no intent to change the functionality of 802.1 bridging with this work. ITU-T Q9/15 wants to work within the constraints of IEEE 802.1Q VLAN Bridging.

**Problem Statement**

We have identified that there are the following essential components to the problem that we are looking to solve:

* Transport all MEF (G.8011.x) services over OTN
* Transport all 802.1 service interfaces over OTN
* Support the management of all above services simultaneously using a single forwarding function
* Transport by using a unique edge-to-edge layer that is separated from the customer layer

Each of these components can be further detailed as follows:

1. Transport all MEF (G.8011.x) services over OTN

* Including traffic engineered and best effort
* The OTN should support Ethernet Private Line, Ethernet Private Tree and Ethernet Private LAN services.
* The OTN should support Ethernet Virtual Private Line, Ethernet Virtual Private Tree and Ethernet Virtual private LAN services.

2. Transport all 802.1 service interfaces over OTN

* The OTN should support ‘transparent’, ‘port-based’, ‘individual’ and ‘bundled’ type services.
* This includes Untagged LANs, Priority-C-Tagged LANs, C-Tagged LANs, Priority-S-Tagged LANs, S-Tagged LANs, S+C-Tagged LANs, I-Tagged LANs and S+I-Tagged LANs.

3. Support the management of all above services simultaneously using a single forwarding function

* OTN with this forwarding function is E-OTN
* The E-OTN should support p2p, p2mp, rmp and mp2mp connections to support the E(V)PL, E(V)PT and E(V)PLAN services.
* The E-OTN should manage (set up, modify, tear down, configure) these connections and their MEP and MIP functions under control of NMS and/or ASON/GMPLS.

4. Transport by using a unique edge-to-edge layer that is separated from the customer layer

* The solution should support all service types in a single layer network, keeping the different UNI interface presentations to the UNI-N ports, and outside the OTN NNI ports.
* The solution should be able to accept customer frames in a peering mode (e.g., without further encapsulation)
* The solution should be able to accept customer frames in a client/server mode (e.g., with encapsulation).

**Question**

In the same cooperative spirit that we enjoyed during the development of Y.1731 and IEEE 802.1ag, ITU-T Q.9/15 would appreciate working jointly with IEEE 802.1 to specify a solution.

We would appreciate a response on your view of these requirements in time for our next meeting on this topic to be held October 2010.

We look forward to your reply and continued assistance.

**References**

[1] TD270/WP3 – IEEE 802.1 liaison

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