



INTERNATIONAL TELECOMMUNICATION UNION

TELECOMMUNICATION  
STANDARDIZATION SECTOR

STUDY PERIOD 2009-2012

COM 15 – C 1755 – E Rev.1

November 2011

English only

Original: English

---

**Question(s):** 10/15

Geneva, 5 – 16 December 2011

**STUDY GROUP 15 – CONTRIBUTION 1755 Rev.1**

**Source:** Japan

**Title:** Possible scenario and actions to allow progress on MPLS-TP

---

**Abstract**

This contribution proposes a possible scenario and actions to allow progress on MPLS-TP standardization for approval of both G.8113.1 and G.8113.2 Recommendations. The concept is that both Recommendations would be approved at the next SG15 meeting with a reservation from a Member State on each that would be automatically lifted when the code point for G.8113.1 is assigned by IETF. This would need to be done within 4 weeks of the reservation period. If the reservations are not lifted within the 4 weeks period neither Recommendation would be approved.

**1. Introduction**

The Telecommunication Standardization Bureau (ITU-T) and the Internet Engineering Task Force (IETF) have agreed to organize a joint project on the use of Multiprotocol Label Switching (MPLS) to meet the needs of the transport network in 2008. Standards for MPLS were to be developed by the IETF, and standards for transport networks were to be developed by the ITU-T. This joint project would result in a transport profile for MPLS technology, commonly called MPLS-TP and it was anticipated that some Recommendations on MPLS-TP including OAM would be approved within 2009. However, no Recommendations other than G.8101 (Terms and definitions) and G.7712 (DCN) have yet been approved due to a considerable controversy between ITU-T and IETF over different aspects of MPLS-TP.

**2. Discussion**

One aspect of MPLS-TP networks requests that MPLS-TP should offer powerful OAM, easy operation, and management-system-based provisioning in a similar manner with current circuit based networks like SDH and carries various kinds of client services such as PDH, SDH, Ethernet, and IP/MPLS. Then, services, networks, and network operations are expected to be optimized without persisting IP capabilities (IP routing and forwarding capabilities) and a full set of MPLS features.

---

**Contact:** Makoto Murakami  
Japan

Tel: +81 422 59 6709

Fax: +81 422 59 3494

Email: [murakami.makoto@lab.ntt.co.jp](mailto:murakami.makoto@lab.ntt.co.jp)

**Attention:** This is not a publication made available to the public, but an **internal ITU-T Document** intended only for use by the Member States of ITU, by ITU-T Sector Members and Associates, and their respective staff and collaborators in their ITU related work. It shall not be made available to, and used by, any other persons or entities without the prior written consent of ITU-T.

The other aspect of MPLS-TP requests compatibility with existing IP/MPLS and PW OAM protocols, such as LSP-Ping and MPLS-BFD and carry applications that require unidirectional point-to-point and point-to-multipoint transport path for applications, such as video distribution. Then, services, networks, and network operations are expected to be optimized without any constrained connection types, such as point-to-point bidirectional co-routed LSPs.

To achieve MPLS-TP networks satisfying both requirements, we will need two kinds of Recommendations for OAM, G.8113.1 and G.8113.2 with different G-ACh code points assigned by IETF.

### 3. Proposal

To execute the scenario described above and to address the interoperability concerns without a potentially damaging debate, the following actions are proposed:

1. ITU-T and IETF agree that MPLS, including MPLS-TP, is defined exclusively in the standards-track RFCs. The ITU-T will reference the IETF RFCs for MPLS-TP from its Recommendations providing there is consensus that they meet the needs of its members. By mutual agreement some other specific aspects, including the equipment model and protocol-neutral management information model (G.8121-series, G.8151, G.8152), developed in ITU-T are considered part of MPLS-TP. Further, ITU-T and IETF agrees that Ethernet based OAM provides an alternate OAM mechanism for MPLS-TP networks and is not considered to be a part of the MPLS-TP protocol suite.
2. The following text will be included in G.8113.1:  
Any pseudowire (PW) or end to end label switched path (LSP) connection between a domain that normally uses the Ethernet tool set defined in this Recommendation and a domain that uses the MPLS tool set defined in Recommendation ITU-T G.8113.2, will use the MPLS tool set defined in Recommendation ITU-T G.8113.2 as defined in annex B.3 of G.8110.1.
3. Change the titles of G.8113.1 and G.8113.2 to reflect that the tools used in G.8113.1 are based on G.8013/Y.1731 whilst the tools used in G.8113.2 are based on MPLS OAM:

G.8113.1: Alternative mechanisms for Operations, Administration and Maintenance of MPLS-TP networks using the tools defined in G.8013/Y.1731

G.8113.2: Operations, Administration and Maintenance mechanisms for MPLS-TP networks using the tools defined for MPLS

4. During the approval of Recommendations ITU-T G.8113.1 and G.8113.2 on 16 December, 2011, Recommendation ITU-T G.8113.1 should be agreed with one reservation in accordance with ITU-T Resolution 1 clause 9.5.5, and Recommendation ITU-T G.8113.2 should be agreed with opposition from one Member State and with one reservation in accordance with ITU-T Recommendation A.8 clause 5.6. The reservations should be based on the requirement that a

code point will be assigned to G.8113.1 by 10 January 2012, i.e. within 4 weeks of the reservation period provided for in Resolution 1 and Recommendation A.8.

5. A code point will be assigned by IETF to G.8113.1 by 10 January 2012, i.e. within 4 weeks of the reservations.
  6. Assignment of the code point for G.8113.1 satisfies the reservations: Therefore, both G.8113.1 and G.8113.2 are automatically approved.
  7. ITU-T and IETF jointly publish a statement prepared in advance to announce the following contents within 24 hours after SG15 plenary meeting to promptly advertise a successful achievement of MPLS-TP standardization.
    - (1) SG15 have agreed G.8113.1 and G.8113.2
    - (2) The assignment of the code point for G.8113.1 will allow the ITU-T to confirm the approval of both Recommendations.
  8. Any press release regarding MPLS-TP, including this scenario, shall be approved by both the IETF and the ITU-T managements.
-