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TELECOMMUNICATION STANDARDIZATION SECTOR

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Question(s): 10/15

LIAISON STATEMENT

Source:	ITU-T Study Group 15
Title:	Request and problem statements for temporal and hitless path segment monitoring

LIAISON STATEMENT

For action to:	
For comment to:	**IETF MPLS WG**
For information to:	
Approval:	**Agreed to at SG15 meeting (Geneva, 31 May – 11 June 2010)**
Deadline:	**31 October 2010**

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A contribution to the SG 15 meeting C944 (NTT) "Proposal of extending solution for temporal and hitless pass segment monitoring and sending liaison to IETF" describes the extension of possible solutions for temporal and hitless path segment monitoring.

The contribution clarified that sometimes normal Operations, Administration and Maintenance (OAM) functions for monitoring transport paths (ex: LSPs) are not enough to localize the fault point or defect. In such a case, detailed analysis by focusing on and selecting a specific portion of those transport paths is required.

In addition, the following Network Objectives for temporal and hitless pass segment monitoring were also proposed, based on the above scenario.

(1) The monitoring and maintenance of existing transport paths has to be conducted in service without traffic disruption.

(2) The monitored or managed transport path condition has to be exactly the same irrespective of any configurations necessary for maintenance.

From this discussion, it was agreed in ITU-T SG15 that Network Objective (1) is mandatory and that regarding Network Objective (2) the monitoring shall be hitless and not cause a change in the forwarding behaviour.

On the other hand, to monitor, protect, and manage a portion of a transport path such as LSP in MPLS-TP networks, Sub-Path Maintenance Element (SPME) is defined in MPLS-TP framework version 12. However, some concerns were raised that there are several potential issues on the SPME

(previous PST/TCM) based procedure. This method can cause the following problems, which are fatal in terms of cost and operation.

a) Increasing the bandwidth by stacking MPLS headers

b) Changing the condition of original transport path by changing the length of the MPLS frame (Delay measurement and loss measurement can be sensitive)

c) Increasing the address management of all MEPs and MIPs newly configured for SPME in the old MEG

Moreover the mechanism for temporal and hitless pass segment monitoring has not been provided.

We request that the above two Network Objectives are included in MPLS-TP OAM framework. In addition, we also request that the solution for temporal and hitless path segment monitoring should never cause the three problems mentioned above or minimize the impact of them. The provided solution is normative for the preparation of G.tpoam before it is consented.

We look forward to continuing our cooperative relationship with the MPLS working group and MPLS-TP related working group on this topic.

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