INTERNATIONAL TELECOMMUNICATION UNION

TELECOMMUNICATION STANDARDIZATION SECTOR

STUDY PERIOD 2009-2012

COM 15 – LS 317 – E

English only

Original: English

Question(s):	10/15		

Ref.: TD 584 (WP 3/15)

Source:	ITU-T Study Group 15		
Title:	Last Call review of draft-ietf-mpls-tp-li-lb-03 [#058.02]		

LIAISON STATEMENT

For action to:	**IETF MPLS WG**		
For comment to:			
For information to:			
Approval:	**Agreed to by Question 10/15 (by correspondence)**		
Deadline:	**5 December 2011**		
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This liaison is in response to the IETF MPLS working group last call on "MPLS Transport Profile Lock Instruct and Loopback Functions" (ref #058.01).

Please note that the ITU-T is required to respond to a WG last call.

The experts of Q10 have comments on draft https://www.ietf.org/id/draft-ietf-mpls-tp-li-lb-03.txt

as provided in the Annex.

The experts of Q10 request that their comments are resolved before the IETF approves the draft.

Annex

#	Reference	Comment
1.	General	Throughout the document "Lock message" and "LI message" have been used interchangeable. Should be aligned.
2.	Abstract/introduction: "This document specifies one function and describes a second function … the second enables an operator to set, in loopback, a given node along a transport path."	The document's body does not reflect the abstract and introduction. Actually there is a very short reference to a loopback function carried out by NMS that cannot be considered covered by the document as it was in the previous version (-02). Either add a description of the Loopback function addressing also the comments below, or change the title of the document to reflect its content.
3.	Introduction: "The Lock function is operated from MEP to MEP on bidirectional (associated and co-routed) Label Switched Paths (LSPs), Pseudowires (including multi-segment Pseudowires)."	Why have "*sections*" not been covered by the Lock function as per RFC 5860?
4.	Introduction: "control traffic (such as OAM messages dedicated to the transport path) can be mapped" also: Section 4.1: "via management or control"; and: Section 5	From RFC 5860 "Note that lock corresponds to an administrative status in which it is expected that only test traffic, if any, and OAM (dedicated to the PW, LSP, or Section) can be mapped on that PW, LSP, or Section". What does "control traffic" mean in the document? Is it something different from OAM as described in RFC 5860?
5.	Introduction: "The Loopback function is operated from MEP to MEP on bidirectional (associated and co-routed) Label Switched Paths (LSPs), Pseudowires (including multi-segment Pseudowires)."	Why have "*sections*" not been covered by the Loopback function?
6.	Introduction: "traffic sent by the source will be received by that source."	A question for clarification: Does the loopback function here described cover all traffic types (customer traffic, OAM traffic, Control traffic, etc.) as per RFC 5860?
7.	Introduction: "The Loopback can be performed using a management plane"	Is management plane approach the only one foreseen? "*can*" seems suggesting other ways as for example the usage of OAM messages as proposed in the previous version. Could the author explain the reasons for excluding such an approach (loopback function by OAM) from this version? With respect to the document description, being the loopback function performed by NMS & due to the fact that "NMS MUST insure that the two MEPS are locked before performing the loopback function" I don't see any advantage in considering the loopback function in this document because it is evident that there is a limited advantage in using LI messages (i.e. Lock and Loopback can be easily performed by NMS)
8.	Section 3.2: "When a lock is applied, a refresh timer is chosen"	The lock referred to here is on one side only or does it refer to both sides (e.g. when NMS lock MEP-A of a transport path, then when the first LI message is sent, the refresh value cannot be changed for the duration of the lock on the MEP-A)
9.	Section 3.2: "MEP Source ID TLV"	Only Global-ID MEP are described. They are a subset of MEP ID specified in the draft-Identifier.

10.	Section 4: "lock is used to request a MEP …"	It is not clear the way "LOCK" is used. Is it "Lock Instruct message" or "NMS command" or are you referring to an "ME state"?
11.	Section 4.1: "Unlock is used to request a MEP…"	Same comment as above… is it an "NMS command" or are you referring to a "state"?
12.	Section 4.1: "When a MEP is unlocked via management or control it MUST cease sending LI messages."	From section 4 seems there are MEPs that are locked receiving LI messages but such MEPs seem do not generating any LI messages. Suggest rewording because it seems that also MEP-D ceases sending LI messages
13.	Section 5: "When an LSP is locked, the management or control function is expected to lock both ends."	My interpretation is that both ends are locked by the same entity (either NMS or OAM). Is it right?
14.	Section 5: LI messages may be lost during looping or maintenance operations, thus locking both ends is required, before such operations occur."	Does it mean that when Loopback function is used, both ends should be locked by NMS?
15.	Section 5: "When a transport path is put in loopback, traffic sent from the sender MEP will be looped back to that sender MEP."	If loopback is performed at a MIP, how can LI messages reach the far end MEP to preserve the LOCK state at MEP-D? it seems that LI should be performed by NMS at the two ends to avoid race condition between the two tools (Lock Instruct and Loopback) or to avoid complicated tools (selectively filtering LI messages at Loopback points)
16.	Section 6.3: "If no label binding exists or there is no associated transport path back to the originator … Processing ceases."	Why should we have such restriction? Does the protocol foresee an LI message back to MEP-A?
17.	Section 6.3: "Otherwise the message is processed"	Should the text be enriched (e.g. "and the MEP-D is locked.")? How does MEP-A know that MEP-D was successfully locked? It seems you propose a one-way handshake protocol
18.	General	A question for clarification: It seems that the exact position of the Transmit, Loopback and receive MEP/MIP in the data-plane processing is not well defined, which could lead to unpredictable results. For example what is the expected behavior for Transmit, Receive and Loopback points: • Transmit Before or after Ingress policing? • Transmit and Loopback before or after Queuing/shaping? • Loopback Before or after forwarding (Label Switching)? • Loopback at Ingress Port (Down-MEP) or Egress port (Up-MEP)? • Loopback before TTL decrement or after TTL decrement? • Loopback before or after LSP termination at LSP terminating MEP? • Loopback or not loopback ACH messages at terminating MEP?

		• Loopback or not Loopback VCCV messages at terminating MEP?
		• Loopback or not Loopback LSP OAM messages (such as BFD) with IP address = 127/8 at terminating MEP?
		• Loopback or not Loopback LSP-Ping messages not defined in this draft?
19.	Previous versions of the draft	Did address all the following issues, how are these done without special messages and Acks. • How is a MIP put to Loopback mode? • How does the MIP get out of loopback? • How does the Ingress MEP know that the Egress MEP has accepted its request for Lockout? • How does the Ingress MEP know that the MIP is or is not in loopback mode?
20.	In section 1.Introduction	The following sentences should be modified by adding clear definition of data-plane loopback point which doesn't coincide with MIP or MEP. I think the descriptions need to be carefully aligned with the oam-framework draft: • "The Loopback function is operated from MEP to MEP on bidirectional (associated and co-routed) Label Switched Paths (LSPs), Pseudowires (including multi-segment Pseudowires). The Loopback function is additionally operated from MEP to MIP on co-routed bidirectional LSPs, and on multi-segment Pseudowires. The Loopback is a function that enables a MEP to request a MEP or a MIP to enter a loopback state." • As proposed in the last call comments #3 on oam-framework draft MIP or MEP is different from data-plane loopback point. (See http://www.ietf.org/mail-archive/web/mpls-tp/current/msg04887.html) MIP&MEP are related only to OAM packets. On the other hand, data-plan loopback points are related to both OAM packets and data packets. Therefore, I think that the two points are clearly different from the functional perspective. The current definitions of MIP and MEP in li-lb draft go beyond the original definitions of MIP and MEP.
21.		All the questions for clarifications in comment #18 should be clarified in the context of the definition of data-plane LB point.
22.		More details about the configuration of data-plane loopback point(s) should be clarified. • This is related to comment #4 also in the above last call comment on oam-framework draft. In particular, it should be clarified how to designate or specify a data-plane loopback point, if there are more than one data-plane loopback points within a node. If the point could be set by OAM message, the method and protocol needs to be specified in this draft.

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