TELECOMMUNICATION STANDARDIZATION SECTOR

STUDY PERIOD 2009-2012

English only

Original: English

Question(s):	10/15

Geneva, 14-25 February 2011

LIAISON STATEMENT

Source:	ITU-T Study Group 15
Title:	Comments on the IETF MPLS working group last call on "Proactive Connectivity Verification, Continuity Check and Remote Defect indication for MPLS Transport Profile" draft-ietf-mpls-tp-cc-cv-rdi-03 (ref #050.01)" (ref #050.02)

LIAISON STATEMENT

For action to:	IETF MPLS WG
For comment to:	-
For information to:	-
Approval:	Agreed to at Study Group 15 meeting (Geneva, 14-25 February 2011)
Deadline:	1 April 2011
Contact:	Huub van Helvoort Huawei Technologies Ltd. P. R. China	Tel: +31 649248936 Email: Huub.van.Helvoort@huawei.com

Thank you for your liaison statement (Ref # 050.01) requesting a review by the ITU-T of the *Proactive Connectivity Verification, Continuity Check and Remote Defect indication for MPLS Transport Profile* draft.

The experts of Q.10/15 have reviewed `draft-ietf-mpls-tp-cc-cv-rdi-03` both via correspondence and in the Q10 meetings during the recent SG15 meeting. We have collected a number of comments and notes below.

We would appreciate the opportunity to discuss the disposition of these comments before the MPLS Working Group requests publication of this document as an RFC.

_____

Please note that there was no time to properly edit the comments.

Section 3.5.2, The text says "BFD control packets are received with an unexpected encapsulation (mis-connectivity defect)". BFD control packet is just part of cc-cv-rdi OAM as in Figure 3, so the question is if the verification is only for this area even if cv mode. I ask for clarification with text proposal # This was addressed last week.

Section 3.5.2, The text says "BFD control packets are received with an unexpected encapsulation (mis-connectivity defect)". Even if only BFD control packet, what does it mean by "unexpected encapsulation"? -- it is noted that BFD control packet includes timer value, so does the so called unexpected period mean this?

Section 3.5.2 end of 1st paragraph, The text says "BFD session times out (Loss of Continuity defect)". Why is BFD session times out directly dealt as equal to LOC Please provide the clarified text here. Is (e.g. Loss of Continuity defect) better?

Section 3.3 after 4th para, X1 to X3 are defined. There is not description of the defect due to the mismatch Xi (e.g. send as X1 but receiver is set X2). This should be clarified in section 3.5.x

Section 3.1, Para 3, Pl add a note mentioning that CC and CV will have separate ACh Code Point as it is not clear that both will have separate code point as the place holder for both mention 0xHH in addition to the one mentioned in section 5 or use the same placeholder as in Section 5.

Section 3.5, Para 1 "In the rare circumstance where an operator has a reason to change session parameters, poll/final discipline is used." This can create issue of interoperability issue if one end MEP starts changing the rate all of sudden even if it is a rare case. This option should not be ever included.

Section 5, Para 5 " The base spec is unclear on aspects of how a session with a BFD source set to zero interval behaves." The clause should say that it is NOT recommended to set BFD to zero interval for the sake of avoiding unwanted configuration and hence the additional discussion on the following par. should not be added in the draft. There should be a configuration option to keep the MEG and MEP without BFD actually running E2E.

Section 3.5.2, Para 1 & 2, If a MEP can be configured as either CC (or CV)mode, then it gets a BFD with CV code point it shall raise a misconfiguration alarm and vice versa. In case MEP operate in CC and CV mode then this is not applicable.

Section 3.5.6, Para 1, It would be good if we can mention all the parameters which are configurable like MEP can be in CC, CV or CC&CV mode.

We would like clarification of the backwards compatibility requirements and considerations. Note the results of the interop testing and ask what steps are being taken to improve the draft to ensure that we have an interoperable draft. Note that the requirements expressed by a significant number of members of SG15 have not been met and that SG15 will not be able to reach consensus to support this draft or to make normative references to it from ITU-T Recommendations.

Please add the following paragraph, whether in introduction or as a separate section, as it is an important clarification:
"BFD-based OAM functions described in this draft will NOT be backwards compatible with

RFC5880 from a network viewpoint, and will not have the same codepoint."

Section 3.1 last par., Please add the text: "Both CC+CV packets must be deployed in every BFD instance so a service interested in CV never receives leaks from services not interested in CV." "At system initialization, only CVs are exchanged, to prevent a misconnected session from going up."

Section 3.5.2,The text "IF BFD authentication is used, receipt of a message with incorrect authentication information (password, MD5 digest, or SHA1 hash)" should be cut from this list of CV entry criteria. Otherwise, a malicious user (the reason understood to use authentication) could easily bring service down at will.

Section 3.5.6, Could the authors please state the full list of parameters one needs to configure for a session, as captured in the week 14-18/Feb in Q10?

Section 3.5.7, In Q10 clarification session, it was explained that discriminators have platform scope. Please reflect that in this section.

Section 3.3&3.5.2, mismerging detection, when detecting mismerging MEP need expected MEP_ID or MEG_ID, they can be found in " Unique MEP-ID of source of the BFD packet" which consist of 3 different TLVs. Different combination of these TLVs will involve different policies for mismerging detection and in some case configuration may be needed because certain TLV is not carried in packet. Futher clarification may be needed for this issue.

Section 3.1 2 dependendant mode for cc and cv, how to ensure CC and cv mode are used all MEG in order to grarrentue 50ms protection switch?

Section 3.1 cc-cv-rdi is used in pw, lsp, SPME, how to support PW, it is not clear in the draft. and how to align VCCV in PW, it define 4th type of PW VCCV?

Section 3.3.1, MEP ID refer to draft-id, with IP based MEP ID, how to distinguish MIP misconfigure and MEG mismerger?

Section 3.5, draft-cc-cv-rdi support only co-routed Bidirectional LSP and Associated Bidirectional LSP, how to support Unidirectional p2p and p2mp LSP?

Section 3.5, when support associated bidirectional lsp, 2 independant sessions used, how to connection this independatant session, because it is belong to one accociated LSP, from management view, it should be one session.

Section 3.5.1 On transition to the UP state, message periodicity changes to the negotiated and/or configured rate and the detect interval switches to detect multiplier times the session peer's Tx Rate. It is ambiguous for using the word "and/or". clarify the use of the configured periodicity during negotiation.

Section 3.5.1 it is not clear to how to configure Detect Mult and insure it is not change during transport or how to detect mis configuration?

Section 3.5.1 negotion. "and/or" configuration period is used in cc-cv-rdi, and BFD packet in Gach, how to interwork with BFD in IP/MPLS, this requirment is request.

Section 3.5.2 MEP to enter the defect state-- if Singal Degrade, how to deal with?

Notes captured during the discussion in Q10 about the Liaison Statement on "Proactive Connectivity Verification, Continuity Check and Remote Defect indication for MPLS Transport Profile" (ref #050.01) - TD 492 (WP3/15)

1) Need to clarify the behaviour when YourDiscriminator=0 is received.

2) Need to clarify Detect Mult behaviour.

Afterwards, it was clarified that Detect Mult is fixed to 3 when BFD runs under the new ACH codepoints

3) Clarify what types of packets are exchanged during the initialization procedure? CV packets.

4) Clarify whether CV needs to be used on all the sessions or not.

5) Clarify that P/F is ignored if used by the other peer.

6) Clarify that backward compatility is achieved by supporting both base BFD and TP BFD on the same box.

7) clarify that the spec cover both base BFD and TP BFD. The two behaviours can be got by different configuration (may help an example)

8) Clarify that the profile is applicable to Sections, LSPs and PWs.

9) introduction: clarify the statement "Procedures for uni-directional LSPs are for further study". Suggested change "Procedures for uni-directional P2P and P2MP LSPs are for further study"

10) section 3.5: clarify "Coordinated operation is as described in [4]". Not all the behaviours are the same and therefore should be indicated which ones are acceptable for BFD TP.

11) Section 3.5.1: Clarify that the rate with MPLS-TP will be the configured rate.

12) list parameters that need to be configured (in appendix?)

It was not part of the discussion, but I'd like avoiding statement like "Receiving from an incorrect source (determined by whatever means". Explicating what are the case help in improving equipment interoperability.

LCC1: clarify the behaviour of the handling discriminator and the raising/clearing of defects

LCC2: describe the start-up procedure

LCC3: clarify the use of the multiplier filed

LCC4: during the initiation of a connection CV packets are exchanged, clarify by showing the order at source and sink

LCC5: which part of the complete set of initiation packet exchange can/will be used by MPLS-TP - PID

LCC6: clarify the difference in periodicity of the CC and CV packet transmission

LCC7: claryfy the use of the Tx and Rx fields in the PDU

LCC8: clarify the backwards compatibility with e.g. the VCCV mode and how this affects the configuration

LCC9: where are the requirements for negotiation

LCC10: where are the requirements for including diagnostics

LCC11: how is the confirmation achieved when the sink MEP returns to the UP state

LCC12: clarify the interpretation of RDI, and how the sink MEP is kept in the UP state in this case

LCC13: clarify the use of the configured periodicity during negotiation, also in view of backwards compatibility

LCC14: clarify why the backwards compatibility does not affect the interoperability

LCC15: are CC and CV always on? clarify, see also LCC6 for periodicity

LCC16: clarify how CC/CV/RDI can be used in associated bi-directional applications, and is this applicable for LSP and section?

LCC17: is this (LCC16) also applicable to PW and VCCV implementations

LCC18: clarify the use of poll-final, especially the dependency of the application/deployment

LCC19: consider adding an appendix to show typical applications

LCC20: clarify the raising/clearing of defects as well as any consequent actions,

LCC21: use consistent defect names, but not necessarily the ITU-T coonvention (e.g dDEG for DEGRADED)

_____