



To: Adrian Farrel and Deborah Brungard, IETF CCAMP WG Co-Chairs  
From: Jim Jones, OIF TC Chair  
Copy: Ross Callon and Bill Fenner, IETF Routing Area Directors  
Subject: Use of RSVP to support Ethernet Access

Dear Adrian and Deborah,

During our discussion of protocol requirements to support Ethernet services over optical networks, we identified some issues where application of the GMPLS specifications were not clear to us. We request CCAMP's views on the following issues:

1. Use of parameters to distinguish port-based vs. VLAN-tag-based forwarding of Ethernet frames

We have identified two variations on support of Ethernet services at the network access point:

- a) in the first variation, received frames are forwarded into a specific SONET/SDH path based on the incoming port, without processing the header information in the Ethernet frame; and
- b) in the second variation, received frames are forwarded into specific SONET/SDH paths based on header information, esp. the VLAN tag.

It is not fully clear to us how these are distinguished in GMPLS signaling, especially forwarding behavior (a) above. The closest match that was identified was to use the following approach:

- use the Switching Type value of "FSC" to indicate forwarding based on port; and
- use the Switching Type value of "L2SC" to indicate forwarding based on the L2 protocol header of received frames.

However, we feel that neither FSC nor L2SC exactly expresses behavior (a) above. In particular, "FSC" can also be interpreted as meaning that the signal received on the fiber is forwarded exactly as received, in its entirety, independent of the signal type (SONET, Ethernet, or other).

We request CCAMP comment on whether this approach is the correct interpretation of the specifications or if an alternative and/or supplemental mechanism should be considered.

2. Use of Label for these cases

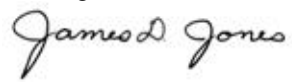
In addition to the question on the use of Switching Capability, it was not clear what value should be used as the Generalized Label for these cases.

For case (a) above, our current assumption is that the Label reflects the affected port, however it was noted that this may duplicate information in the RSVP\_HOP Interface Index sub-TLV.

For case (b) above it seems logical that the Label reflect the affected VLAN tags. We are investigating label formats to represent a list or range of VLAN identifiers, as used in MEF.11 bundling. In the case where a large number of non-consecutive VLAN identifiers is used for the same connection, we would like to keep the label to a reasonable size. In the case of bi-directional connections, the UPSTREAM\_LABEL is used to indicate the connection is bi-directional. The LABEL\_SET is then used if there is a need for the labels to be identical in both directions. In that case, there is a redundancy of labels. That is problematic with large label formats. We would appreciate your advice regarding the possibility to reduce the number of labels required in the case of bi-directional connections where the label is the same in both directions.

OIF requests CCAMP's comment on the use of Labels in these cases.

Best regards,

A handwritten signature in black ink that reads "James D. Jones". The signature is written in a cursive style with a large initial 'J'.

Jim Jones  
OIF Technical Committee Chair