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COMMUNICATION STATEMENT

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FOR: Information
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Subject: Ethernet Ring Protection
Reference: ITU-T SG15 Liaison COM15-LS98

We would like to thank you for your liaison informing us of the consent of G.8031 Ethernet Protection Switching covering Ethernet linear protection and your potential future work to add Ethernet ring protection to this Recommendation.

The 802.1 Working Group would like to draw your attention to several potential issues with defining Ethernet ring protection:

- We would welcome clarity of the perceived utility of protecting specific VLANs on a link when the entire link will likely be what fails.
- 802.1 is concerned that standards activities that treat VLANs like circuits may not fully appreciate the existing semantics of VLANs which are defined not just in terms of frame formats, but in terms of interoperability behaviours with 802.1 specifications. Development of future 802.1 specifications may further refine VLAN semantics consistent with interoperating with existing equipment. This may be incompatible with any interpretation of semantics based purely on packet formats.
- Particular attention needs to be paid to the interactions between any new protection protocol and the protection mechanisms that could be running in the layers above or below it.
- P802.1ag, Connectivity Fault Management, which is under development, includes specific messages (CC) that that can detect faults within a very short time. Care should be taken in the development of any new protection mechanism to ensure that they are useful within this emerging framework of a more aggressive end-to-end recovery.
- It should be the goal of any Ethernet ring protection mechanism to not adversely affect the convergence of spanning tree (RSTP/MSTP), whether or not spanning tree is used in the ring protection mechanism.

The 802.17 Working Group would like to draw your attention to the ability of RPR to selectively protect Ethernet client traffic. The service interface for RPR allows the client to indicate whether a frame is to be protected or not. Thus, it should be clear that to protect frames from a particular VLAN is a straightforward operation for the client of the MAC. RPR is unique in this capability and it is not available in other 802 MACs. When using the 802.17 MAC, the addition of ring protection to your Recommendation becomes a simple operation of marking a VLAN's frames as desiring protection (or not). This is specifically done by setting the mac_protection parameter of the MA_DATA.request service interface (6.4.1 of 802.17-2004).

The scope of the 802.17 Working Group is the MAC layer. As a result, we have no plans to standardize any client application. However, we would like to provide assistance should you require it during development of your recommendation to describe Ethernet ring protection using RPR.

We wish to thank the leadership and the members of ITU-T SG15 for the inquiry into our work programs and look forward to the continuation of the exchange of information on topics of common interest to our organizations.

Regards,

Mike Takefman
Tony Jeffree