

# Comments on Maintenance Item 0344: IEEE Std 802.1CB, IP stream recognition, and the R-tag

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# Maintenance item 0344: Problem

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The IP Stream Identification must be able to locate the IP Ethertype (0x0800/0x86DD) in the Frame in order to find Layer 3 (addresses) and Layer 4 (ports) matching parameters. If an R-Tag is present (Figure 8-3), this IP Ethertype is in a different position, than if not. The text of 6.7 and the managed objects (9.1.5) do not give any indication of how the IP Stream Identification should handle this case. How far back in the frame should the IP Stream Identification look for the IP Ethertype? Could there be other Tags present?

# Maintenance item 0344: Proposed solution

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Add some text or even a configuration item giving some indication where the IP Ethertype is to be looked for by IP Stream Identification if (no) other tags (specifically the R-Tag from this standard) than the C-VLAN are present.

# For reference: IEEE Std 802.1CB-2017

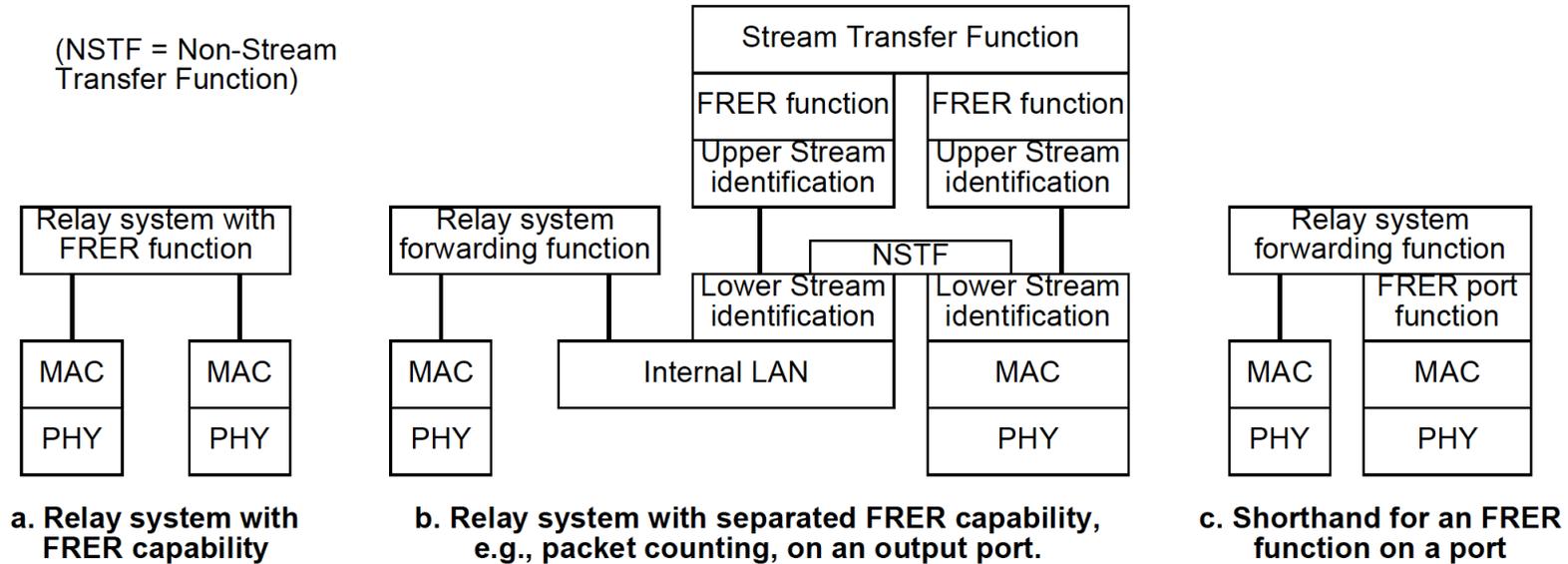


Figure 6-5—Stream functions in a relay system (three views of same system)

**Problem:** The **R-tag** is processed in “FRER in(out)-facing functions”. The **IP 5-tuple** is recognized in “Lower Stream identification”.

# Discussion (1/2)

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In general, Clause 6.7 **IP stream identification is a layer violation**, and **cannot be done cleanly** by a layer-2 bridge. All you can do is have a list of lower-layer protocols that you can skip over. IEEE Std 802.1CBdb mask-and-match had a similar issue with the Q-tag. We solved this by saying that mask-and-match is based on the ISS, and the other methods on the EISS.

IP stream identification is, potentially, used in place of the priority value in the VLAN tag. It is used, potentially, at every hop. If used this way, there possibly more tags to skip over (e.g., a Q-in-Q provider bridge might peek at the IP header to spot VoIP). This makes the CBdb solution impractical; one size does not fit all.

# Discussion (2/2)

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**Solution 1:** Add parameters to 9.1.5 (the managed objects for 6.7), analogous to those now present for the VLAN tag, to optionally require and/or skip over the R-tag.

This is more general, but it adds a feature, so is perhaps more suitable to an amendment than a corrigendum.

**Solution 2:** Add clarification to 6.7 to state that the R-tag is skipped over if and only if the IP stream identification is tied (via the `stream_handle`) to a sequence decode function. Otherwise, an R-tag would prevent IP stream recognition.

This would be suitable for a corrigendum.

# Suggested solution

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Add the following paragraph to the end of section 6.7

If the IP stream identification function is tied, via the `stream_handle` parameter, to a sequence decode function (7.6), then IP stream identification functions only if the appropriate sequence encode/decode format is present. Otherwise, IP stream identification functions only if the IP protocol identifier immediately follows the (optional) VLAN tag.

# Summary

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I think that this solution clarifies the function in a reasonable way, without adding complexity.

Thank you