

# P802.1CB Arranging Layers

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# Representing many things

- CONTEXT: P802.1CB D1.1 ballot comments 38, 48, 49, 50, 100, 103.
- There is a perfectly justified skepticism about the “Popeye diagrams” in P802.1CB D1.1.
- The question is, “**Can we just specify what the box has to do, instead of going into this detail?**”
- The editor’s answer is, “This may be possible, but the editor needs help if we are to make this change. Let’s look at the issue and decide what we want to do.”

# The simple cases

- Specify, on each port, the input encapsulation of each stream.
- Specify which streams can be combined (tripled, etc.) for the purposes of sequence recovery.
- Specify, on each port, the output encapsulation of each stream, which may be a combined stream.

(You generally want to combine two streams into a single stream, which may or may not have the same encaps as one of the input streams.)
- Specify whether, on each port, stream combining and/or duplicate elimination is to be performed.

(Sometimes, you want to output both packets.)
- This should handle many cases.

# The somewhat more difficult case

- The bridge proxies for a non-CB-aware end station, identifying packets belonging to a specific IP 5-tuple and converting them into an AVB/TSN L2 multicast stream.

# P802.1CB D1.1

Because I have specified that the transformations take place on the input port, I can configure the bridge relay (Relay System B) to forward the AVB packets out the correct ports.

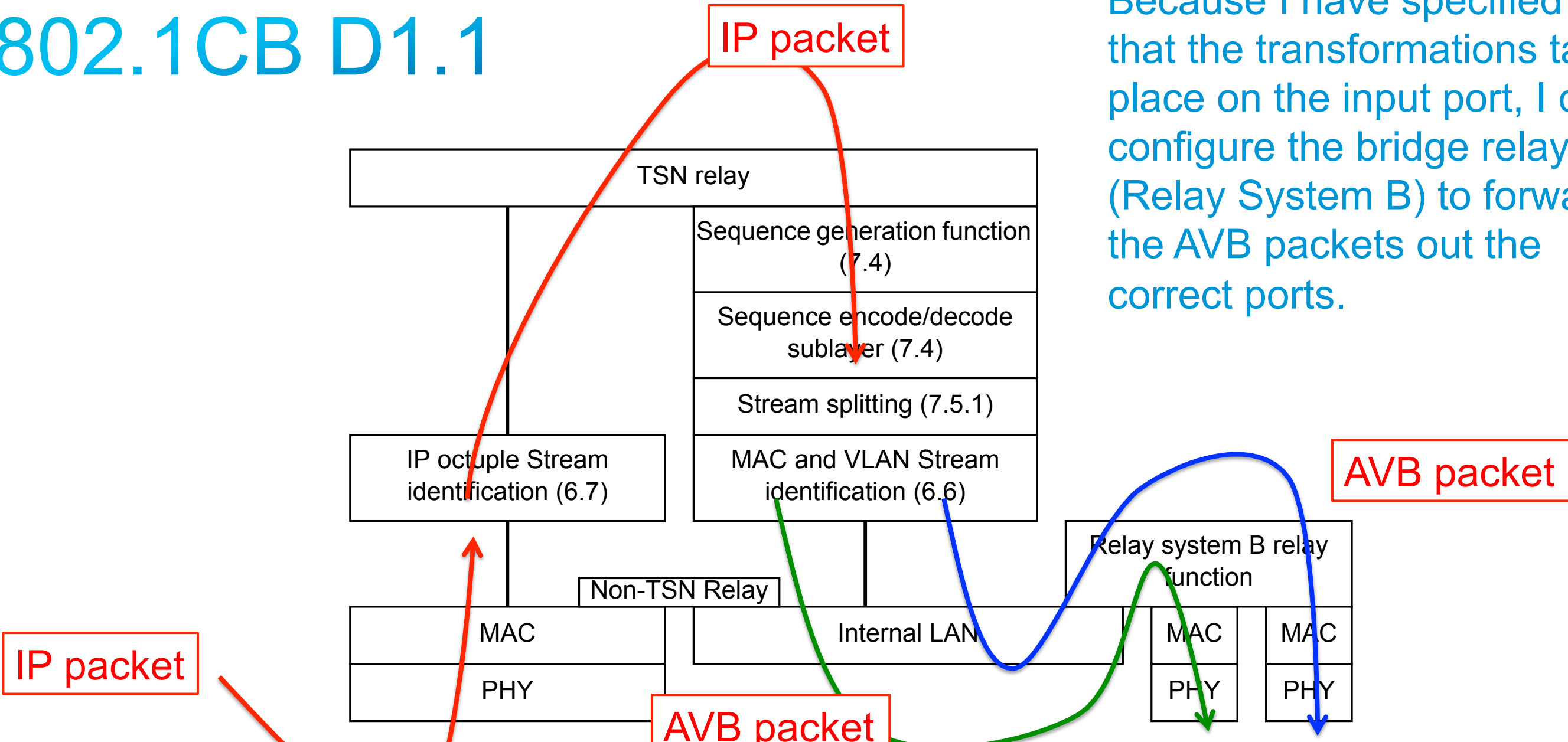


Figure F-4—Protocol stack for relay system B, proxying for End System A, in Figure F-3

# In a sense, the current text is overspecified

- **To summarize the preceding diagram's configuration:**  
**INPUT:** Split streams, assign each stream a MAC address.  
**FORWARD:** Forward two separate streams, using normal bridge MIB.  
**OUTPUT:** Do nothing special.
- **The same results could be obtained with a different configuration:**  
**INPUT:** Assign the stream one MAC address.  
**FORWARD:** Forward that one stream out multiple ports.  
**OUTPUT:** Translate streams on different ports to different {MAC, VLAN} pairs.
- Two ways to get the same results is, in some sense, an overly-complex model.

# However ...

- However, note that the programming of the Filtering Database is different in the two cases.
- The Filtering Database controls are long established and often implemented.
- We have no controls (OpenFlow may, but we don't) to say, "Deliver this IP 5-tuple to these ports."
- So, if we are to use the existing Filtering Database controls to create nailed-down paths, I think that the overspecification in P802.1CB is a reasonable way to proceed.
- **If someone wants to propose how to configure this example with much less configuration detail, I'm sure that the committee would like to hear it.**