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Broadband Forum Liaison from:
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Broadband Forum Liaison Communicated by:
Kevin Noll, k.noll@cablelabs.com

Date: June 5th, 2025

Subject: Use of the IEEE 802.1X YANG model in BBF-specified Access Nodes

Dear Colleagues

IEEE 802.1 defines within IEEE Std 802.1X-2020 a common architecture and protocol for port-based authentication, as well as a YANG model for managing this protocol.

The Broadband Forum (BBF) is working on an enhancement of the existing specification, TR-385: YANG Modules for PON Management. We informed you of this work through liaison LIAISE-513, sent in March 2022. We received your response on 16 March 2023.

To allow BBF to reuse the ieee802-dot1x YANG module, we would need a change to it so that a "derived-from-or-self" statement could be applied to the relevant interface types.

Specifically, we would very much appreciate IEEE 802.1 making the following change to the existing YANG module:

Current specification:

```
augment "/if:interfaces/if:interface" {
   when "if:type = 'ianaift:ethernetCsmacd' or
        if:type = 'ianaift:ilan' or
        if:type = 'ianaift:macSecControlledIF' or
        if:type = 'ianaift:ptm' or
        if:type = 'ianaift:bridge'" {
     description
       "Applies to the Controlled Port of SecY or PAC shim or
       Ethernet related Interface.";
   }
```

Proposed changed specification:

```
augment "/if:interfaces/if:interface" {
```

```
when "derived-from-or-self (if:type, 'ianaift:ethernetCsmacd') or
      derived-from-or-self (if:type, 'ianaift:ilan') or
      derived-from-or-self (if:type, 'ianaift:macSecControlledIF') or
      derived-from-or-self (if:type, 'ianaift:ptm') or
      derived-from-or-self (if:type, 'ianaift:bridge')" {
   description
     "Applies to the Controlled Port of SecY or PAC shim or
     Ethernet related Interface.";
}
```

In your liaison response, you indicated this would be a backward compatible change and that further discussion would be required to determine how to make the update. We note your Maintenance Item 0353 indicates "It was agreed to update the when statements as done in other 802.1 YANG modules. There is currently no vehicle by which to make the proposed change".

With the currently published model, the user would need to create a new interface per ONU where authentication occurs. This results in potentially thousands of additional interfaces per OLT. With the proposed change, the BBF can modify an existing interface type to also be derived from 'ianaift:ilan' resulting in no additional interfaces needed. This will greatly assist our efforts to resolve scaling issues in the management of operator networks.

The above change would be beneficial to Broadband Forum, but equally beneficial to any other standards organization that desires leveraging the ieee802-dot1x YANG module.

With this liaison, the Broadband Forum would therefore like to call for urgency to get the above change published.

We look forward to your feedback.

Sincerely,
Lincoln Lavoie,
Broadband Forum Technical Committee Chair

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Broadband Forum Reference: LIAISE-705

Date of Upcoming Broadband Forum Meetings: See https://www.broadband-forum.org/events/list?tribe-bar-search=Member+Meeting