

# **YANGster Meeting Week 28 2020**

## **7 July 2020**

[Webex Link](#)

Meeting number: 795 139 311

Password: gPZhmrZc528

# Agenda

## 7 July 2020 (week 28)

### Preamble (5)



- [admin-WG+TG-intro-0620.pptx](#)

### Update on Hot Issues (30)

- Splitting functionality out of EVB to support managed objects for ECP

- Metadata

- NMDA Compliance Check

- Transmission Selection Algorithm

- (out of time: discuss on Maintenance)

### Continue Maintenance Discussion ()

### AoB

# Hot Issues

## Active

- | MAC Address Format
  - | IEEE 802.3 has agreed to modify 802.3.2 to point to ieee802-types for mac-address datatype
- | Semantics of read-write in YANG
- | Press Release Discussion
- | IEEE P802f Update
- | YANG Revisions Update
- | Update on Tooling Guidance
  - | Add Confd (Mark E's material to be included)
- | Use of Git workflow document created
- | Status of meta-data in YANG Catalog
- | Splitting functionality out of EVB to support managed objects for ECP
- | Transmission Selection Algorithm
- | NMDA Compliance Check

# EVB

- | Splitting functionality out of EVB to support managed objects for ECP in 802.1Q-2018
  - | <http://www.ieee802.org/1/files/public/docs2020/maint-bottorff-248-decouple-ECP-from-EVB-0620-v03.pdf>

# Module Metadata

- | For the following modules:
  - | ieee802-types.yang
  - | ieee802-dot1q-bridge.yang
  - | ieee802-dot1q-pb.yang
  - | ieee802-dot1q-tpmr.yang
  - | ieee802-dot1q-types.yang
  - | ieee802-dot1q-vlan-bridge.yang
- | use:
  - | maturity-level: ratified
  - | document-name: “IEEE Std 802.1Qcp-2018, Bridges and Bridged Networks—Amendment 30: YANG Data Model.”
  - | reference: <https://ieeexplore.ieee.org/document/8467507>
  - | module-classification: network-element

# Module Metadata (cont.)

## For:

- | ieee802-dot1q-tsn-types.yang

## use:

- | maturity-level: ratified
- | document-name: "IEEE Std 802.1Qcc-2018, Bridges and Bridged Networks -- Amendment 31: Stream Reservation Protocol (SRP) Enhancements and Performance Improvements."
- | reference: <https://ieeexplore.ieee.org/document/8514112>
- | module-classification: network-element

## For:

- | ieee802-dot1x-types.yang
- | ieee802-dot1x.yang

## use:

- | maturity-level: ratified
- | document-name: "IEEE Std 802.1X-2020, Port-Based Network Access Control."
- | reference: [https://www.techstreet.com/ieee/standards/ieee-802-1x-2020?gateway\\_code=ieee&vendor\\_id=7345&product\\_id=2099736](https://www.techstreet.com/ieee/standards/ieee-802-1x-2020?gateway_code=ieee&vendor_id=7345&product_id=2099736)
- | module-classification: network-element

# Module Metadata (cont.)

- | for:
  - | ieee802-ethernet-interface-half-duplex.yang
  - | ieee802-ethernet-interface.yang
  - | ieee802-ethernet-link-oam.yang
  - | ieee802-ethernet-pon.yang
  - | ieee802-ethernet-pse.yang
- | use:
  - | maturity-level: ratified
  - | document-name: "IEEE Std 802.3.2-2019, YANG Data Model Definitions."
  - | reference:  
<https://ieeexplore.ieee.org/document/8737019>
  - | module-classification: network-element

# Pretty Printing

- ieee802-dot1x-types.yang has some bad formatting

Before

```
scott@emwp-vm: ~/yang_pretty
File Edit View Search Terminal Help
module ieee802-dot1x-types {
    namespace "urn:ieee:std:802.1X:yang:ieee802-dot1x-types";
    prefix "dot1x-types";
    organization "Institute of Electrical and Electronics Engineers";
    contact "WG-URL: http://www.ieee802.org/1 WG-E-Mail: stds-802-1-L@ieee.org Contact: IEEE 802.1 Working Group Chair Postal: C/O IEEE 802.1 Working Group IEEE Standards Association 445 Hoes Lane Piscataway NJ 08854 USA E-mail: STDS-802-1-L@LISTSERV.IEEE.ORG";
    description "Port-based network access control allows a network administrator to restrict the use of IEEE 802 LAN service access points (ports) to secure communication between authenticated and authorized devices. IEEE Std 802.1X specifies an architecture, functional elements, and protocols that support mutual authentication between the clients of ports attached to the same LAN and secure communication between the ports. The following control allows a port to be reinitialized, terminating (and potentially restarting) authentication exchanges and MKA operation, based on a data model described in a set of YANG modules.";
    revision 2020-02-18 {
        description "Updated Contact information.";
    }
    revision 2019-05-28 {
        description "Updates based upon comment resolution on draft D1.0 of P802.1X-Rev.";
        reference "IEEE Std 802.1X-2020, Port-Based Network Access Control.";
    }
    /* -----
    * Type definitions used by dot1X YANG module
    * -----
    */
    typedef pae-nid type string {
        length "0..100";
        description "Network Identity, which is a UTF-8 string of length 1 to 100 characters."
    }
}
```

After

```
scott@emwp-vm: ~/yang_pretty
File Edit View Search Terminal Help
module ieee802-dot1x-types {
    namespace urn:ieee:std:802.1X:yang:ieee802-dot1x-types;
    prefix dot1x-types;
    organization
        "Institute of Electrical and Electronics Engineers";
    contact
        "WG-URL: http://www.ieee802.org/1
        WG-E-Mail: stds-802-1-L@ieee.org

        Contact: IEEE 802.1 Working Group Chair
        Postal: C/O IEEE 802.1 Working Group
        IEEE Standards Association
        445 Hoes Lane
        Piscataway
        NJ 08854
        USA

        E-mail: STDS-802-1-L@LISTSERV.IEEE.ORG";
    description
        "Port-based network access control allows a network administrator to restrict the use of IEEE 802 LAN service access points (ports) to secure communication between authenticated and authorized devices. IEEE Std 802.1X specifies an architecture, functional elements, and protocols that support mutual authentication between the clients of ports attached to the same LAN and secure communication between the ports. The following control allows a port to be reinitialized, terminating (and potentially restarting) authentication exchanges and MKA operation, based on a data model described in a set of YANG modules."
}
```



# Transmission Selection Algorithm

- | Currently there is no way to set a Transmission Selection Algorithm (TSA) for a specific traffic class in a YANG module.
  - | There is a proposal to use a uint8
  - | There is a proposal to use Identities

# NMDA Compliance Check

- | None of the currently published YANG modules in 802 or 802.1
  - | Have
    - | yang-version 1.1;
    - | Required for NMDA compliance
  - | Suggestion:
    - | Check all drafts to make sure the yang version is set correctly
- | The published modules in 802.3 do have the yang version set correctly for NMDA compliance

# Maintenance Discussion

- | <http://www.ieee802.org/1/files/public/docs2019/maint-specht-yang-comments-0919-v01.pdf>
- | Status related to 13 and 14
- | Continue with Discussion

# AoB

# Preamble

# MEETING INTRODUCTION

---

FOR IEEE 802.1 WORKING GROUP AND TASK GROUPS

# INSTRUCTIONS FOR CHAIRS OF STANDARDS DEVELOPMENT ACTIVITIES

**At the beginning of each standards development meeting the chair or a designee is to:**

- Show the following slides (or provide them beforehand)
- Advise the standards development group participants that:
- IEEE SA's copyright policy is described in Clause 7 of the IEEE SA Standards Board Bylaws and Clause 6.1 of the IEEE SA Standards Board Operations Manual;
- Any material submitted during standards development, whether verbal, recorded, or in written form, is a Contribution and shall comply with the IEEE SA Copyright Policy;
- Instruct the Secretary to record in the minutes of the relevant meeting:
- That the foregoing information was provided and that the copyright slides were shown (or provided beforehand).
- Ask participants to register attendance in IMAT: <https://imat.ieee.org>

# IEEE SA COPYRIGHT POLICY

**By participating in this activity, you agree to comply with the IEEE Code of Ethics, all applicable laws, and all IEEE policies and procedures including, but not limited to, the IEEE SA Copyright Policy.**

- Previously Published material (copyright assertion indicated) shall not be presented/submitted to the Working Group nor incorporated into a Working Group draft unless permission is granted.
- Prior to presentation or submission, you shall notify the Working Group Chair of previously Published material and should assist the Chair in obtaining copyright permission acceptable to IEEE SA.
- For material that is not previously Published, IEEE is automatically granted a license to use any material that is presented or submitted.



# IEEE SA COPYRIGHT POLICY

- The IEEE SA Copyright Policy is described in the IEEE SA Standards Board Bylaws and IEEE SA Standards Board Operations Manual

- IEEE SA Copyright Policy, see  
Clause 7 of the IEEE SA Standards Board Bylaws  
<https://standards.ieee.org/about/policies/bylaws/sect6-7.html#7>  
Clause 6.1 of the IEEE SA Standards Board Operations Manual  
<https://standards.ieee.org/about/policies/opman/sect6.html>

- IEEE SA Copyright Permission

- <https://standards.ieee.org/content/dam/ieee-standards/standards/web/documents/other/permissionltrs.zip>

- IEEE SA Copyright FAQs

- <http://standards.ieee.org/faqs/copyrights.html/>

- IEEE SA Best Practices for IEEE Standards Development

- [http://standards.ieee.org/develop/policies/best\\_practices\\_for\\_ieee\\_standards\\_development\\_051215.pdf](http://standards.ieee.org/develop/policies/best_practices_for_ieee_standards_development_051215.pdf)

- Distribution of Draft Standards (see 6.1.3 of the SASB Operations Manual)

- <https://standards.ieee.org/about/policies/opman/sect6.html>

# Instructions for the WG Chair

The IEEE-SA strongly recommends that at each WG meeting the chair or a designee:

- **Show slides #1 through #4 of this presentation**
- **Advise the WG attendees that:**
  - IEEE's patent policy is described in Clause 6 of the *IEEE-SA Standards Board Bylaws*;
  - Early identification of patent claims which may be essential for the use of standards under development is strongly encouraged;
  - There may be Essential Patent Claims of which IEEE is not aware. Additionally, neither IEEE, the WG, nor the WG Chair can ensure the accuracy or completeness of any assurance or whether any such assurance is, in fact, of a Patent Claim that is essential for the use of the standard under development.
- **Instruct the WG Secretary to record in the minutes of the relevant WG meeting:**
  - That the foregoing information was provided and that slides 1 through 4 (and this slide 0, if applicable) were shown;
  - That the chair or designee provided an opportunity for participants to identify patent claim(s)/patent application claim(s) and/or the holder of patent claim(s)/patent application claim(s) of which the participant is personally aware and that may be essential for the use of that standard
  - Any responses that were given, specifically the patent claim(s)/patent application claim(s) and/or the holder of the patent claim(s)/patent application claim(s) that were identified (if any) and by whom.
- The WG Chair shall ensure that a request is made to any identified holders of potential essential patent claim(s) to complete and submit a Letter of Assurance.
- It is recommended that the WG Chair review the guidance in *IEEE-SA Standards Board Operations Manual* 6.3.5 and in FAQs 14 and 15 on inclusion of potential Essential Patent Claims by incorporation or by reference.

Note: **WG** includes Working Groups, Task Groups, and other standards-developing committees with a PAR approved by the IEEE-SA Standards Board.

# Participants have a duty to inform the IEEE

- Participants shall inform the IEEE (or cause the IEEE to be informed) of the identity of each holder of any potential Essential Patent Claims of which they are personally aware if the claims are owned or controlled by the participant or the entity the participant is from, employed by, or otherwise represents
- Participants should inform the IEEE (or cause the IEEE to be informed) of the identity of any other holders of potential Essential Patent Claims

**Early identification of holders of potential  
Essential Patent Claims is encouraged**

# Ways to inform IEEE

- Cause an LOA to be submitted to the IEEE-SA (patcom@ieee.org); or
- Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible; or
- **Speak up now and respond to this Call for Potentially Essential Patents**

If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance, please respond at this time by providing relevant information to the WG Chair

# Other guidelines for IEEE WG meetings

- All IEEE-SA standards meetings shall be conducted in compliance with all applicable laws, including antitrust and competition laws.
  - Don't discuss the interpretation, validity, or essentiality of patents/patent claims.
  - Don't discuss specific license rates, terms, or conditions.
    - Relative costs of different technical approaches that include relative costs of patent licensing terms may be discussed in standards development meetings.
      - Technical considerations remain the primary focus
  - Don't discuss or engage in the fixing of product prices, allocation of customers, or division of sales markets.
  - Don't discuss the status or substance of ongoing or threatened litigation.
  - Don't be silent if inappropriate topics are discussed ... do formally object.

-----  
For more details, see *IEEE-SA Standards Board Operations Manual*, clause 5.3.10 and *Antitrust and Competition Policy: What You Need to Know* at <http://standards.ieee.org/develop/policies/antitrust.pdf>

# Patent-related information

The patent policy and the procedures used to execute that policy are documented in the:

- ***IEEE-SA Standards Board Bylaws***  
(<http://standards.ieee.org/develop/policies/bylaws/sect6-7.html#6>)
- ***IEEE-SA Standards Board Operations Manual***  
(<http://standards.ieee.org/develop/policies/opman/sect6.html#6.3>)

Material about the patent policy is available at  
<http://standards.ieee.org/about/sasb/patcom/materials.html>

**If you have questions, contact the IEEE-SA  
Standards Board Patent Committee  
Administrator at [patcom@ieee.org](mailto:patcom@ieee.org)**

---

# Participant behavior in IEEE-SA activities is guided by the IEEE Codes of Ethics & Conduct

- All participants in IEEE-SA activities are expected to adhere to the core principles underlying the:
  - [IEEE Code of Ethics](#)
  - [IEEE Code of Conduct](#)
- The core principles of the IEEE Codes of Ethics & Conduct are to:
  - *Uphold the highest standards of integrity, responsible behavior, and ethical and professional conduct*
  - *Treat people fairly and with respect, to not engage in harassment, discrimination, or retaliation, and to protect people's privacy.*
  - *Avoid injuring others, their property, reputation, or employment by false or malicious action*
- The most recent versions of these Codes are available at <http://www.ieee.org/about/corporate/governance>

---

## Participants in the IEEE-SA “*individual process*” shall act independently of others, including employers

- The [IEEE-SA Standards Board Bylaws](#) require that “*participants in the IEEE standards development individual process shall act based on their qualifications and experience*”
- This means participants:
  - **Shall act & vote** based on their personal & independent opinions derived from their expertise, knowledge, and qualifications
  - **Shall not act or vote** based on any obligation to or any direction from any other person or organization, including an employer or client, regardless of any external commitments, agreements, contracts, or orders
  - **Shall not direct** the actions or votes of other participants or retaliate against other participants for fulfilling their responsibility to act & vote based on their personal & independently developed opinions
- By participating in standards activities using the “*individual process*”, you are deemed to accept these requirements; if you are unable to satisfy these requirements then you shall immediately cease any participation

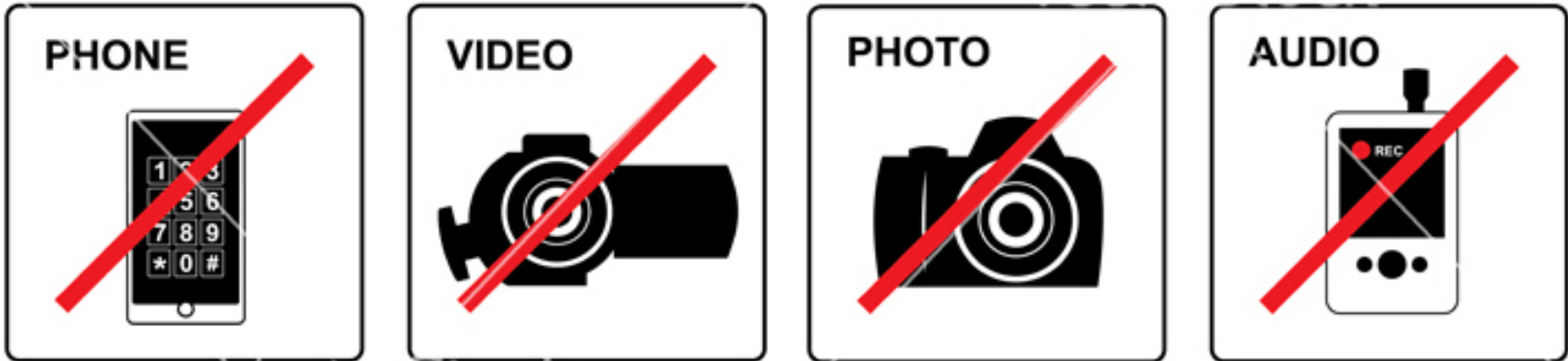


---

## IEEE-SA standards activities shall allow the fair & equitable consideration of all viewpoints

- The [IEEE-SA Standards Board Bylaws](#) (clause 5.2.1.3) specifies that *“the standards development process shall not be dominated by any single interest category, individual, or organization”*
  - This means no participant may exercise *“authority, leadership, or influence by reason of superior leverage, strength, or representation to the exclusion of fair and equitable consideration of other viewpoints”* or *“to hinder the progress of the standards development activity”*
- This rule applies equally to those participating in a standards development project and to that project’s leadership group
- Any person who reasonably suspects that dominance is occurring in a standards development project is encouraged to bring the issue to the attention of the Standards Committee or the project’s IEEE-SA Program Manager

# DECORUM



- **Press (i.e., anyone reporting publicly on this meeting) are to announce their presence (*SASB Ops Manual 5.3.3.3*)**
- **Video/Audio recording by participants is prohibited (*SASB Ops Manual 5.3.3.2*)**
- **Photography by permission only (*SASB Ops Manual 5.3.3.2*)**
- **Cell phone ringers off please**

# REGISTER ATTENDANCE FOR MINUTES

Please **register** your attendance at IMAT: <https://imat.ieee.org>

- This requires a free IEEE Account.
- Please sign up if you do not yet have an IEEE Account.

| Schedule | 7:00 | 8:00 | 9:00 | 10:00 | 11:00 | 12:00 | 13:00 | 14:00 | 15:00 | 16:00 | 17:00 | 18:00 | 19:00 | 20:00 | 21:00 | 22:00 | 23:00 |
|----------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| TSN TG   |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |

Please record your attendance for an active meeting (denoted by a yellow bar) by clicking on the yellow bar. Once your attendance has been recorded, the yellow bar changes to a green bar.

The data from IMAT is used as the meeting participant list.

# ELECTRONIC MEETING GUIDELINES

## Please provide your information

- Full name
- Affiliation, as part of your name, e.g., in brackets
- (May provide them in the chat window.)

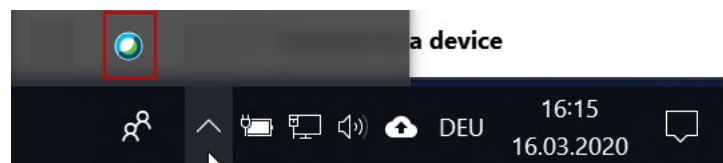
## Please **mute** yourself when you are not speaking

Please put yourself into the queue “at the mic” via the Chat, e.g.,: “+q” / “-q”

## Changing your data in Webex

### Step 1

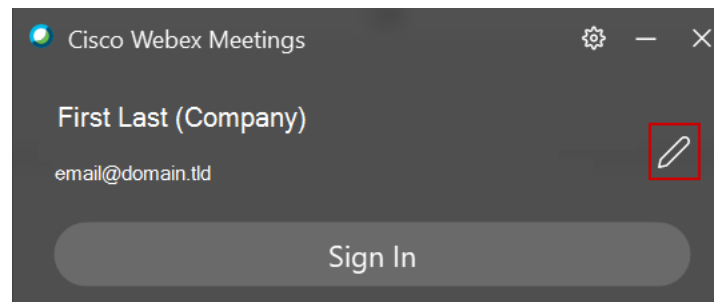
- Go to the "Display hidden icons" arrow in the Windows task bar



- Right-click on the Webex icon and select "Open Cisco Webex Meetings"

### Step 2


- In the Webex Windows that opens, Click on the pencil icon next to your display information



- (May need to Exit Webex via the cog wheel and restart it to see the pencil icon.)

# Back to Agenda

## Agenda

- | 7 July 2020 (week 28) 
  - | Preamble (5)
    - | [admin-WG+TG-intro-0620.pptx](#)
  - | Update on Hot Issues (30)
    - | Splitting functionality out of EVB to support managed objects for ECP
    - | Metadata
    - | NMDA Compliance Check
    - | Transmission Selection Algorithm
      - | (out of time: discuss on Maintenance)
  - | Continue Maintenance Discussion ()
  - | AoB