

# **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.

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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)**

# Agenda

- | IPR Call
  - | No patents declared
- | YANGsters Status
- | Topics
  - | YANGsters Update
  - | YANG Recap
  - | Thoughts about TAddress/TDomain
  - | ITU-T Q14/15 Coordination Meeting Update
  - | Known YANG issues for coordination
  - | Open Source Pilot
- | Administrative

# YANGsters Update

- | Since March Plenary, Have held 2 meetings
  - | Open issue about liaison cooperation with MEF needs to be started. Looking for a liaison to send .1Qcx and .1ABcu to MEF
  - | Also looking to review MEF YANG work
  - | A review of the liaised BBF work is also TBD

# YANG Recap from Pittsburgh Interim

- | P802.1Qcp
  - | Bridges and Bridged Networks Amendment: YANG Data Model
- | P802.1ABcu
  - | LLDP YANG Data Model
  - | [cu-mansfield-draft-YANG-0518-v01.pdf](#)
- | P802.1Qcw
  - | YANG Data Models for Scheduled Traffic, Frame Preemption, and Per-Stream Filtering and Policing
- | P802.1Qcx
  - | YANG Data Model for Connectivity Fault Management
  - | <http://www.ieee802.org/1/files/public2018/cx-mholness-YANG-model-0518-v01.pdf>
- | P802.1Xck
  - | Port-Based Network Access Control—Amendment 2: YANG Data Model
- | 802.1Qci & P802.1Qcr
  - | Cyclic Queuing and Forwarding along with Asynchronous Traffic Shaping
  - | <http://www.ieee802.org/1/files/public/docs2018/cr-specht-parmodification-0518-v05.pdf>
- | P802.3.2 (IEEE 802.3cf)
  - | YANG Data Model Definitions Task Force
  - | [http://www.ieee802.org/3/cf/public/may18/yang\\_tf\\_agenda\\_01\\_0518.pdf](http://www.ieee802.org/3/cf/public/may18/yang_tf_agenda_01_0518.pdf)
- | NEW PAR
  - | P802.1CBcv (FRER YANG Data Model and Management Information Base Module)
  - | <http://www.ieee802.org/1/files/public/docs2017/cv-draft-PAR-1017-v03.pdf>
- | YANG Catalog
  - | <https://github.com/YangModes/yang>

# TAddress TDomain Issue Refresher

- | IEEE 802.1Q appears to have a tight coupling to SNMP. Using 802.1Q-rev-d2-1.pdf as a reference, there are a number of statements made that tie the standard to SNMP. The crux of the problem is that there is a CFM related TLV that requires the use of an SNMP OID to point to a structure in SNMP that contains a list of the potential address types. For example here is the Managed Object that is used in the TLV and the section specifically about how the management address is defined.

**TAddress**

**TDomain**

```
case udp-ipv4 {
  description
    "Represents an IPv4 UDP transport address consisting of an
    IPv4 address and a port number.";
  reference
    "RFC3419 TRANSPORT-ADDRESS-MIB.transportDomainUdpIpv4";

  leaf domain-udp-ipv4 {
    type yang:object-identifier-128;
    must ". = \"1.3.6.1.2.1.100.1\" {
      description
        "The value of the OID for this domain must be \"1.3.6.1.2.1.100.1\"";
    }
    default "1.3.6.1.2.1.100.1";
    description
      "The domain type transportDomainUdpIpv4 corresponding to OID 1.3.6.1.2.1.100.1";
  }

  leaf udp-ipv4-address {
    type inet:ipv4-address;
    description
      "UDP IPv4 address.";
  }

  leaf udp-ipv4-port {
    type inet:port-number;
    description
      "UDP IPv4 port.";
  }
}
```

# CFM YANG

```
identity type-of-transport-domain {  
    description  
        "Represents the transport service domain type.";  
}
```

```
identity yang-tdomain {  
    base type-of-transport-domain;  
    description  
        "Base identity for a YANG transport service domain.";  
}
```

```
typedef transport-service-domain {  
    // Refer to RFC 2579. This is an OBJECT Identifier  
    // Not sure what to do here!  
    type identityref {  
        base type-of-transport-domain;  
    }  
    description  
        "Denotes a kind of transport service";  
    reference  
        "RFC2579 - Textual Conventions for SMIV2";  
}
```

```
typedef transport-service-address {  
    type string {  
        length "1..255";  
    }  
    description  
        "Denotes a transport service address";  
}
```

# Joey Boyd Example

From NETCONF, the device would receive this configuration.

```
<udp-ipv4-address>192.168.1.100</udp-ipv4-address>  
<udp-ipv4-port>100</udp-ipv4-port>
```

Software could be written to map these values to:

Management Address Domain = 1.3.6.1.2.1.100.1 (corresponding to transportDomainUdpIpv4; the model references this OID)

Management Address = C0 A8 01 64 00 64 (corresponding to the format of TransportAddressIPv4)

# Suggestion

- | Define case statement
- | Apply YANG technique in CFM and LLDP (wherever the TAddress & TDomain concept is needed)

# Q14/15 Experts Interim on YANG

- | ITU-T Q14/15 is holding YANG coordination calls
  - | Conference calls to discuss YANG structure and interoperability between IEEE 802.1, 802.3, and ITU-T Q14/15
  - | Details
    - | account: [tsbsg15@itu.int](mailto:tsbsg15@itu.int)
    - | password: gotosg15
    - | The third Monday of every month March – September inclusive 1300-1400 Geneva Switzerland Time
    - | First meeting was 19 March 2018
- | Extranet Information
  - | Share point site
    - | <https://extranet.itu.int/sites/itu-t/studygroups/2017-2020/sq15/wp3/SG15IEEE/Forms/AllItems.aspx>
  - | Non-members need to create an account at <https://www.itu.int/en/ties-services/Pages/login.aspx> (please choose "I don't know" as ITU status).

# Q14/15 Coordination

- | Main topics are related to how ITU-T YANG models can use IEEE 802.1Qcx CFM capabilities
- | Q14/15 has created a version of 802.1Qcx in Eclipse Papyrus to help ITU-T people understand the CFM and Bridge models from the ITU-T

# Open Source Pilot

- | Overview:

- | <http://www.ieee802.org/1/files/public/docs2017/yang-parsons-open-source-motivation-1217.pdf>

- | Pilot Form

- | <http://www.ieee802.org/1/files/public/docs2017/yangsters-smansfield-meeting-05-pilot-query-1117-v02.docx>

- | Current Status:

- | No recent activity due to resource constraints

# New Information

- | RFC 8343 has been published
  - | A YANG Data Model for Interface Management
- | IETF YANG Design Team
  - | Working on YANG Versioning

# Administrative

- | Website

- | <http://1.ieee802.org/yangsters/>

- | Mailing List

- | [STDS-802-YANG@listserv.ieee.org](mailto:STDS-802-YANG@listserv.ieee.org)

# Upcoming YANGsters Calls

- | Last Wednesday of every month from 9AM (US-Eastern) to 10AM (US-Eastern)
- | Next Call are:
  - | 27 June 2018
- | Web conference: <https://join.me/ieee802.1>
- | Phone numbers: <https://join.me/intphone/684-645-640>
- | By phone:
  - | United States – San Francisco, CA +1.415.594.5500
  - | Canada – Ottawa +1.613.699.9318
  - | Germany – Frankfurt +49.69.9753.3131
  - | Hungary – Budapest +36.1.700.8899
  - | China – Beijing +86.10.8783.3389
  - | United Kingdom – National +44.33.0088.2634
- | Access Code 684-645-640#
- | Request for more calls at the July Plenary Session

# Attendees

## | Meeting Attendees:

- | **Karthik Chandra Bose (Nokia)**
- | Rodney Cummings (NI)
- | **Xiaojing Fan (Fujitsu)**
- | Stephan Kehrer (Hirshmann)
- | **Scott Mansfield (Ericsson)**
- | Glenn Parsons (Ericsson)
- | Duane Remein (Huawei)
- | **Jessy Rouyer (Nokia)**
- | Rami Vishnu (Self – individual)
- | **Rob Wilton (Cisco)**