

IEEE 802.1Qcp YANG Update Summary

IEEE 802.1Qcp YANG Data Model
802.1WG
08-11 Sep 2015

- Updated IEEE 802.1Q YANG module provided
 - Deposited in 802.1Q [public] folder at <http://www.ieee802.org/1/files/public/docs2015/>
 - A set of 802.1Q YANG modules have been defined
 - IEEE 802.1Q “Generic 802.1Q Bridge” YANG module (“new-mholness-8021q-bridge-yang-0815-v02.yang”)
 - IEEE 802.1Q “Generic 802.1Q Bridge Type Definitions” YANG module (“new-mholness-8021q-types-yang-0815-v01.yang”)
 - IEEE 802.1Q “Two Port MAC Relay Bridge” YANG module (“new-mholness-8021q-tpmr-yang-0815-v02.yang”)
 - IEEE 802.1Q “Customer VLAN Bridge” YANG module (“new-mholness-8021q-vlan-bridge-yang-0815-v02.yang”)
 - IEEE 802.1Q “Provider Bridge” YANG module (“new-mholness-8021q-pb-yang-0815-v02.yang”)
 - IEEE types YANG module (“new-mholness-ieee-types-yang-0815-v02.yang”)



Overview



- YANG module structural definitions adheres to IEEE 802.1Q-2014 Clause 12 Bridge Management
- YANG modules compile clean and adhere to IETF YANG module guidelines (e.g., RFC 6087 — Guidelines for Authors and Reviewers of YANG Data Model Documents), where applicable



Outstanding Areas

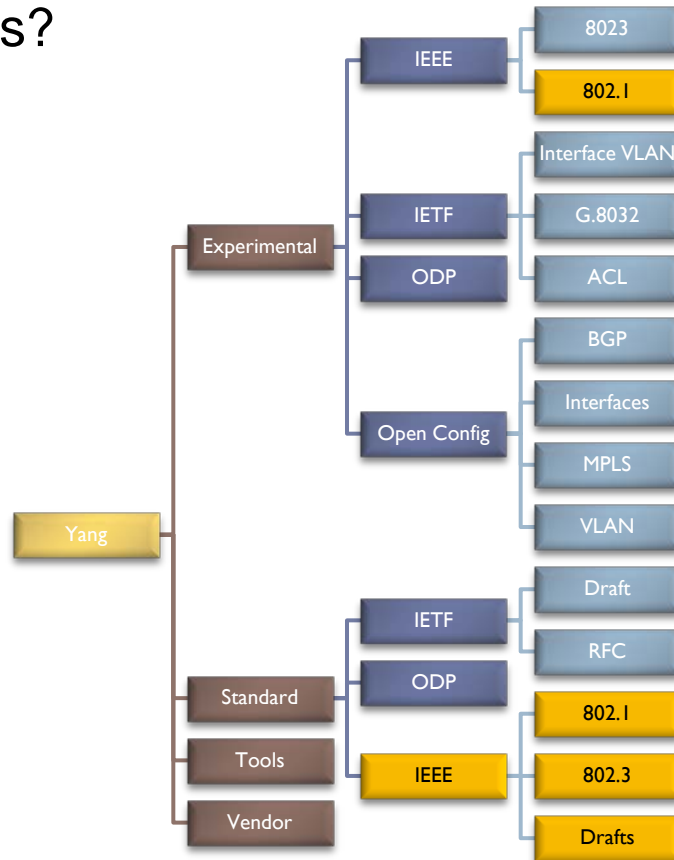
1. Namespace definition used by the IEEE 802 YANG module definitions
2. Should IEEE align with the IETF YANG module definition formatting rules?
 - For example, should maximum line length be 70 characters?
 - Full adherence to IETF draft rfc6087bis (e.g., found at <https://tools.ietf.org/html/draft-ietf-netmod-rfc6087bis-04>)
3. IEEE ownership of the IEEE-TYPES YANG module
 - In addition, both YANG modules *ietf-yang-types* as well as *ieee-types* define the mac-address type

Outstanding Areas



4. Placement of the YANG modules within GitHub (<https://github.com/YangModels/yang>)

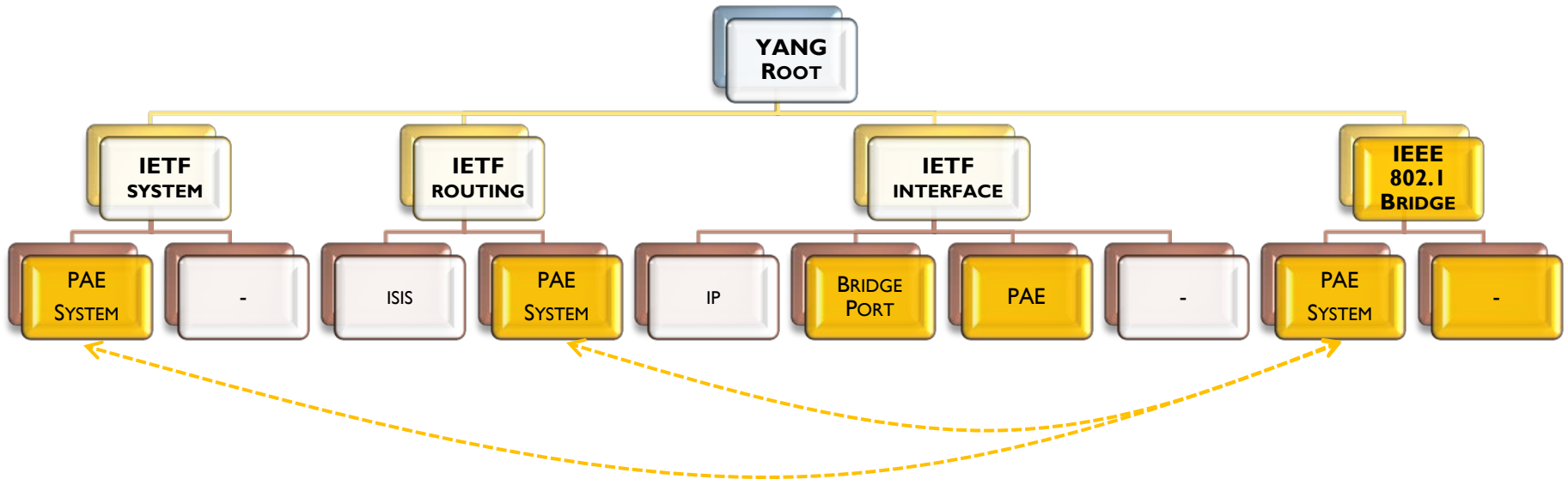
- Which directory within GitHub should we use for the IEEE 802.1 YANG drafts?



Outstanding Areas



5. General YANG structure: Should the definition of the BRIDGE node be within a generalized YANG hierarchy?
- That is, should it “augment” a root YANG root node (e.g., system)?
 - Or should we create an IEEE-Bridge (or something similar) root node in the YANG hierarchy?



Outstanding Areas



6. General YANG model “default” settings (assuming there should be a default configuration value)
 - a) Should traffic class enabled have default of *True*?
 - b) Should MMRP enabled status have default of *True*?
 - c) Should default priority associated with the BRIDGE PORT be *0*?
 - d) Should default PCP selection be *8P0D*?
 - e) Should use DEI have a default of *False*?
 - f) Should drop encoding have a default of *False*?
 - g) Should acceptable frames have a default of *admit-all-frames*?
 - h) Should enable ingress filtering have a default of *False*?
 - i) Should restricted VLAN registration have a default of *False*?
 - j) Should VID translation table have a default of *False*?
 - k) Should egress VID translation table have a default of *False*?
 - l) Etc.



Outstanding Areas



7. Should “BRIDGE PORTS” be an augmentation of the IETF INTERFACE model?
8. Rationalization of YANG model definitions for applications
 - a) LAG interfaces
 - b) Two-Port MAC Relay Bridges
 - c) Customer VLAN Bridges
 - d) Provider Edge Bridges
 - e) CFM Interactions
 - f) Etc.
9. What is the correct association (or ownership relationship) of the BRIDGE VLAN object to the BRIDGE or BRIDGE COMPONENT?



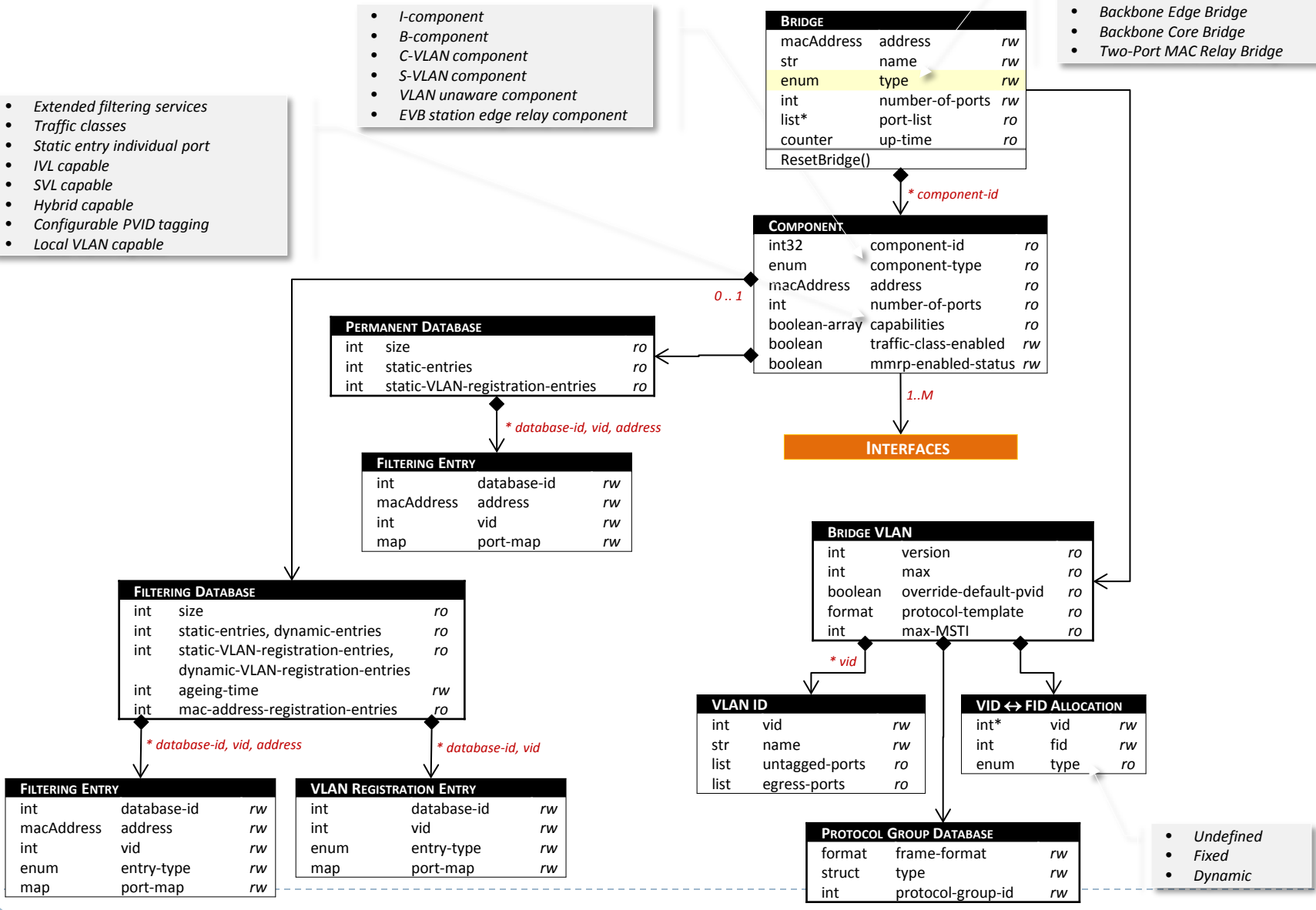
IEEE 802.1Q-2014 BRIDGE Model



- Extended filtering services
- Traffic classes
- Static entry individual port
- IVL capable
- SVL capable
- Hybrid capable
- Configurable PVID tagging
- Local VLAN capable

- I-component
- B-component
- C-VLAN component
- S-VLAN component
- VLAN unaware component
- EVB station edge relay component

- Customer VLAN Bridge
- Provider Bridge
- Provider Edge Bridge
- Backbone Edge Bridge
- Backbone Core Bridge
- Two-Port MAC Relay Bridge



- Undefined
- Fixed
- Dynamic

Outstanding Areas



10. When configuring a BRIDGE, should the BRIDGE/COMPONENT object point to the INTERFACES (i.e., BRIDGE PORTS) or should the INTERFACES (i.e., BRIDGE PORTS) point to the BRIDGE/COMPONENT or both?