IEEE 802.1Q YANG Model Proposal Overview

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Introduction

- Introduce YANG module definitions for configuration management of subset of IEEE 802.1Q-2011 VLAN-aware Bridges
- IEEE 802.1Q feature subset selected to
  1) Introduce YANG modeling within 802.1Q
     - Start with a fairly well defined and smallish scope to get the ball rolling
  2) Provide a foundation for future YANG module definitions within 802.1Q
  3) Not overlap with existing 802.1Q YANG modules definitions by other SDOs
- IEEE 802.1Q feature subset being considered includes:
  - Base VLAN Bridges
  - Provider Bridges

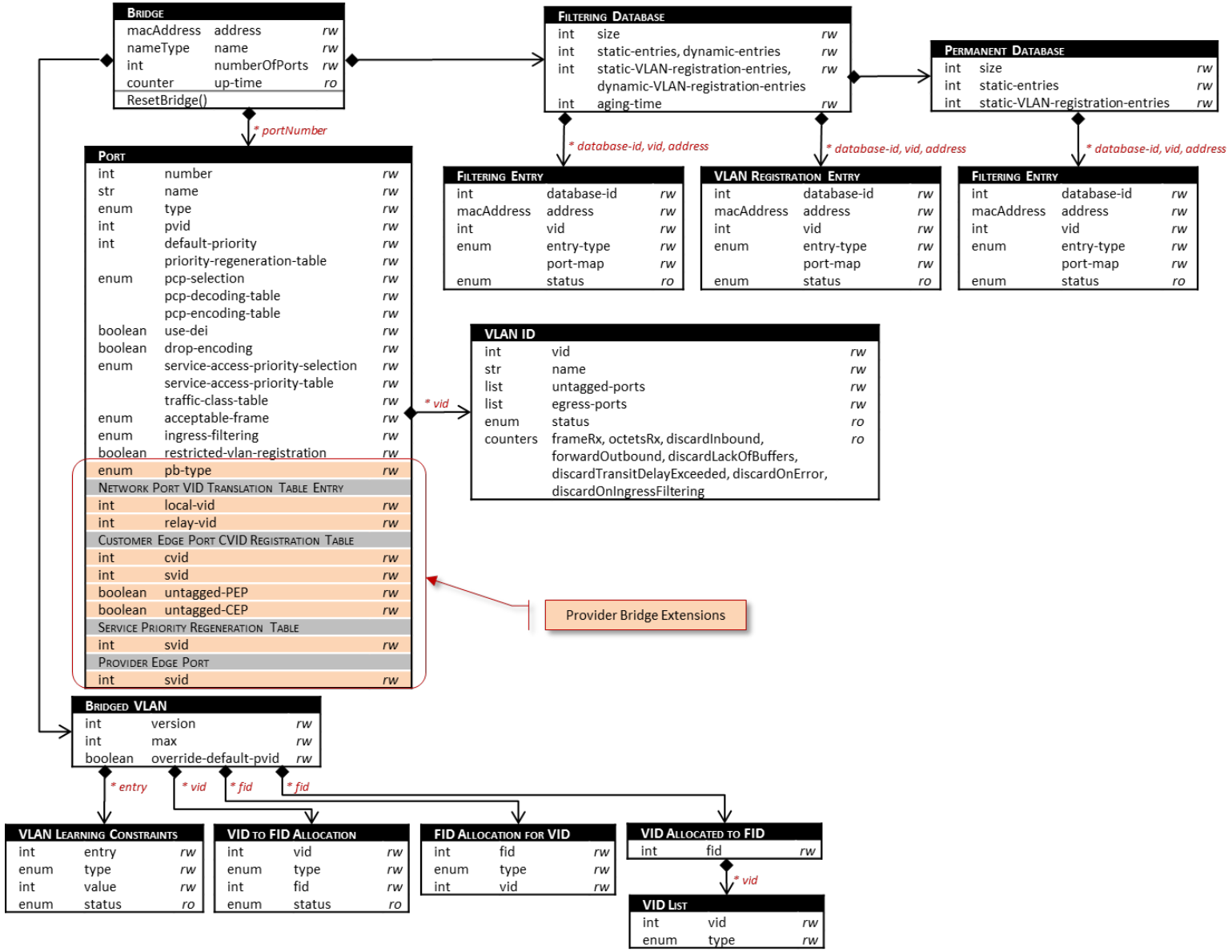
Introduction

- IEEE 802.1Q feature subset not initially being considered includes:
  - Bridge protocol entities
  - MRP and MMRP entities
  - CFM and DDCFM entities
  - Backbone edge & core bridge entities
  - PBB-TE entities
  - TPMR entitles
  - Forwarding and queuing for time-sensitive stream entities
  - Congestion notification entities
  - SRP entities
- There is no intention nor objective to change the existing management model defined in IEEE 802.1Q-2011 (e.g., Clause 12)

802.1Q Base VLAN Bridge & Provider Bridge Model

- IEEE 802.1Q feature subset (Base VLAN Bridge and Provider Bridge) data model representation derived from Clause 12 specifications
  - Bridge features such as “port-and-protocol-based VLAN classification” and “extended filtering services” are not included in the [current] model

802.1Q Base VLAN Bridge & Provider Bridge Model



YANG Model Definition

- Accompanying document found here, (which is located in public folder http://www.ieee802.org/1/files/public/docs2015/) provides actual YANG module definitions with further details
  - Much work is needed to further refine the proposed YANG module definitions
  - However, this is a tangible starting point that we can use to move forward and progress this work

YANG Model Definition

- Generally accepted practice is to “augment” the IETF Interface Management YANG data model (defined in RFC7223) with feature specific interface/port configuration (and state) data
- The Bridge Port data “sub-tree” is modelled to be an “augmentation” of the IETF Interface Management YANG data model
- Additionally, the Provider Bridge configuration (and state) data is modelled as an “augmentation” of the Bridge Port
- It is anticipated that other 802.1Q Bridges (e.g., Provider Backbone Bridges, etc.) would also be an “augmentation” of the Bridge Port