P802.1Qbh Multicast Overview

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Multicast Groups and Primary Ports

- Multicast Group: set of C-VLAN component ports connected to a given PM S-VLAN component

- Multicast Group Primary Port: the port within a multicast group over which communication with the top level Port Extender takes place. Traffic emitted on this port leaves the controlling bridge without an S-TAG

- Multicast traffic is forced to exit the primary port and filtered from all other ports in the Multicast Group.

  Port extenders perform replication based on M-TAG
Overview of Filtering Specification

- A Port Map of potential ports is created
- Port map is reduced (i.e. filtered) based on entries in the Filtering Database indexed by MAC / VID
  
  Separate rules apply based on whether the MAC is a group or individual address
  
  In either case, dynamic and static entries may apply

- The results of the static and dynamic entries is combined
- Egress ACLs are applied
- Final port map results
How Filtering is Typically Implemented

- Look up of MAC / VID produces either destination port or index into a list of port maps
- If index produced, port map is retrieved
- Egress ACL applied to either single destination port or to the set of ports in the Port Map
- Final destination port or port map results
Overview of Filtering Specification with Remote Replication

- A Port Map of potential ports is created
- Port map is reduced (i.e. filtered) based on entries in the Filtering Database indexed by MAC / VID
  - Separate rules apply based on whether the MAC is a group or individual address
  - In either case, dynamic and static entries may apply
- The results of the static and dynamic entries is combined
- Egress ACLs are applied
- Final port map results
How Filtering is may be Implemented with Remote Replication

- Look up of MAC / VID produces either destination port or index (i.e. MCID) into a list of port maps
- If index produced, port map is retrieved
- Egress ACL applied to either single destination port or to the set of ports in the Port Map
  - MCID becomes part of ACL decision tree (transparent to user)
  - Further pruning of the Port Map by the ACL is accomplished by replacing the MCID
- Final destination port or MCID results