
Use MMRP as-is in SRP

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2007.1

Current SRP draft (D0.3)

□ Two phases

- Listeners register their presence.
- Talker initiate the admission control operations.

□ Documented as a new application of MRP (like MMRP and MVRP)

- Could also be considered as a combination of:
 - a registration protocol as a new application of MRP
 - dealing with registration and de-registration events (clause 10.3.4)
 - a reservation protocol
 - dealing with reservation messages and reservation timers (clause 10.4)

Current Registration Protocol

□ Different from MMRP in:

▪ Attribute

- MMRP defines two types of attributes:
 - *Group membership information*. This indicates the presence of MMRP participants that are members of a particular Group (or Groups), and carries the group MAC Address(es) associated with the Group(s).
 - *Group service requirement information*. This indicates that one or more MMRP participants require Forward All Groups or Forward Unregistered Groups to be the default Group filtering behavior.
- Current SRP draft defines only one type of attribute.
 - *Stream membership information*. Stream ID, Talker MAC address and Higher Level Tag are included.

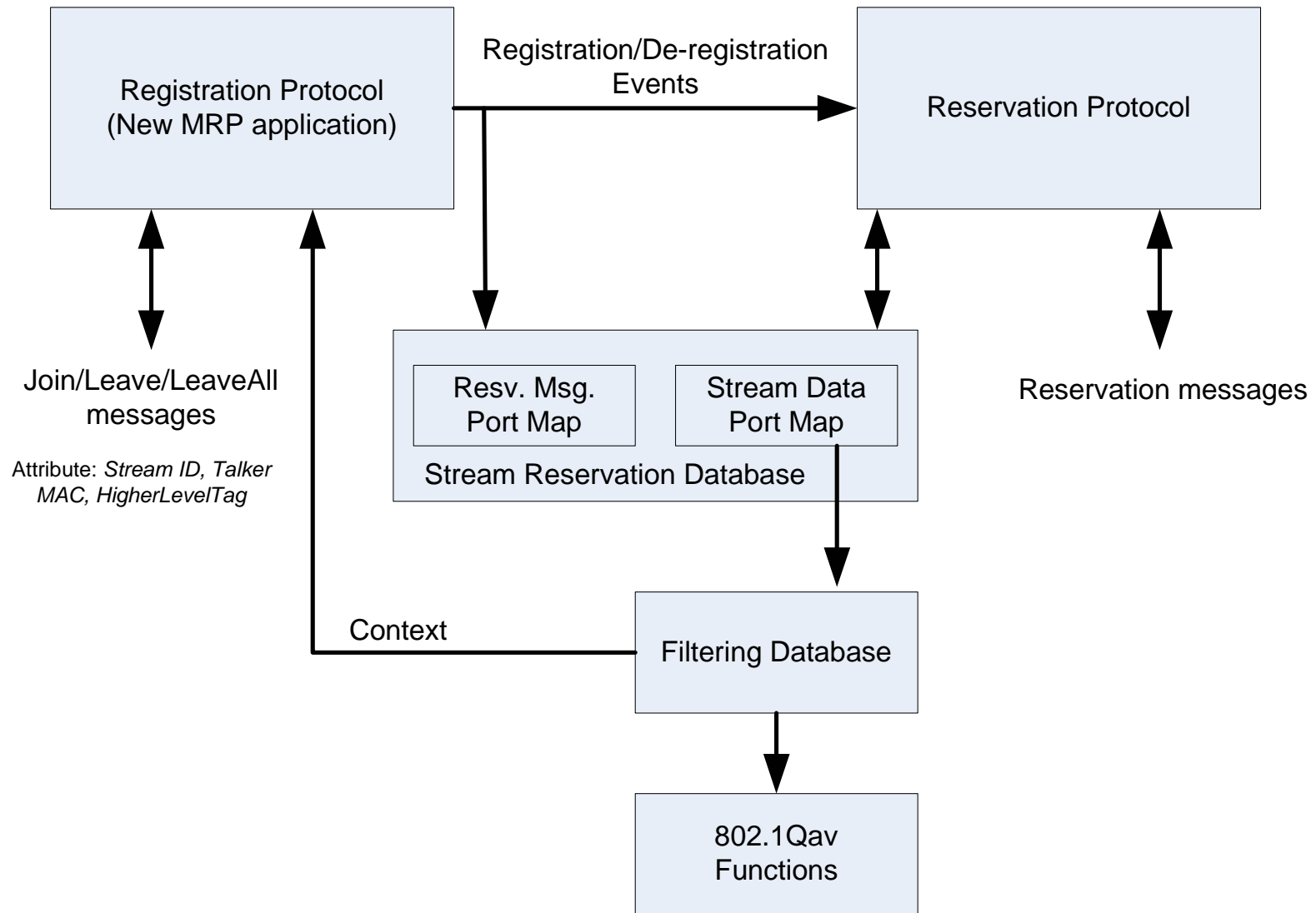
▪ Context

- MMRP uses the set of VLAN Contexts that correspond to the VLANs that are supported by the VLAN Bridged Local Area Network.
- Current SRP draft uses a subset of the basic context, taking into consideration the Talker MAC Address, to optimize the propagation of MAD_Join.request and MAD_Leave.request.

▪ Response to registration/de-registration events

- In MMRP, the registration/de-registration events result in the creation or updating of Group Registration Entries in the Filtering Database.
- In current SRP draft, the registration/de-registration events only result in the creation or updating of entries (especially the Reservation Message Port Map part) in the Stream Reservation Database, but not in the Filtering Database.
 - The rationale here is that the stream entries in Filtering Database shall indicate the result of admission control; 802.1Qav will simply use the Filtering Database for its forwarding operation decision.

Current SRP draft (D0.3)



Use MMRP as-is in SRP

□ Use MMRP complete unchanged as registration protocol

- In SRP document, only reservation protocol will be specified.
 - MMRP provide registration/de-registration events to the reservation protocol.

□ Changes to current SRP draft

▪ Attribute

- Only Stream ID can be included in Group membership information Attribute.
 - Talker MAC address and Higher Level Tag will not be included.
 - » No optimization on propagation of MAD_Join.request and MAD_Leave.request.
 - » Will not be able to register a higher layer stream ID rather other a MAC address.

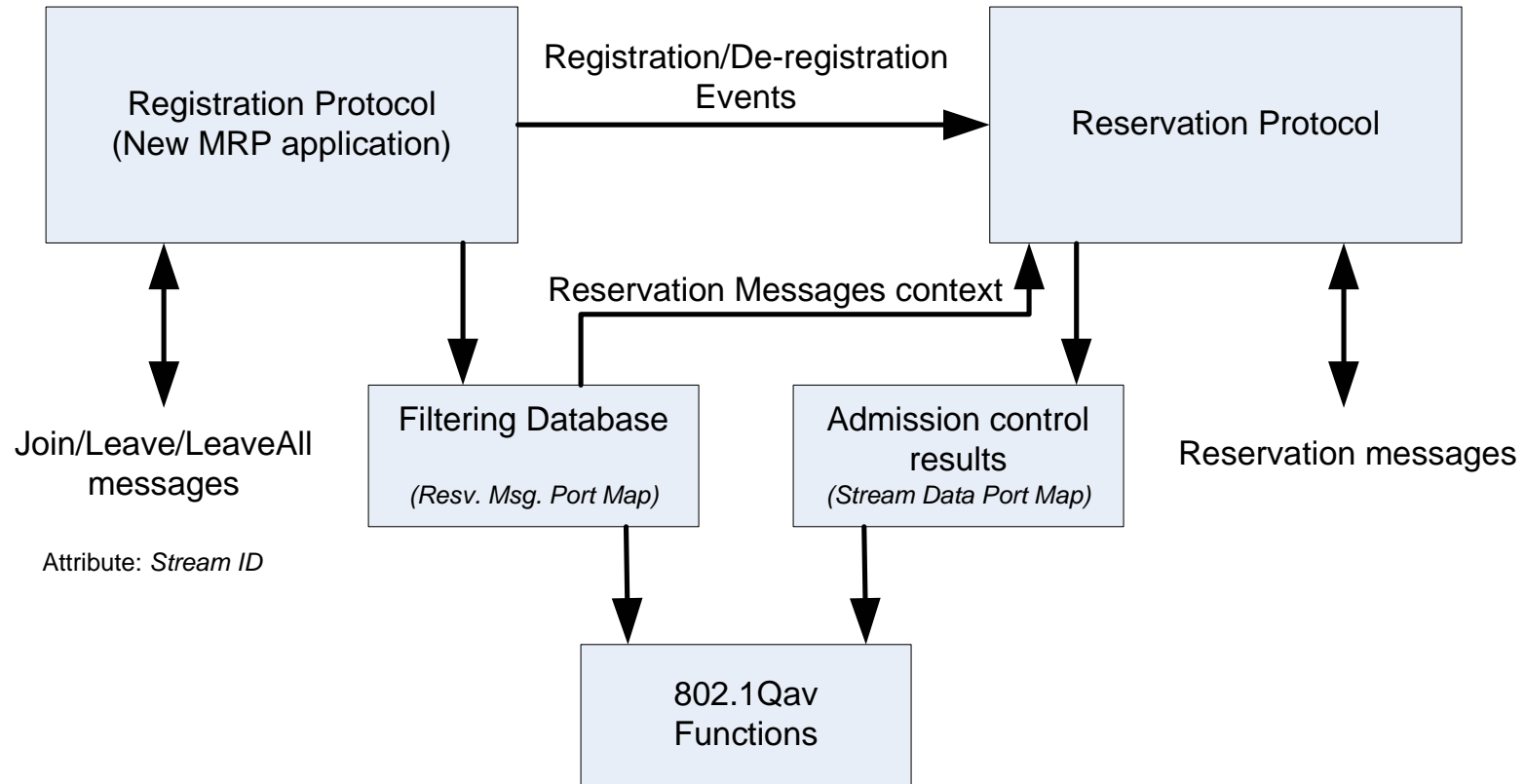
▪ Context

- Base VLAN Contexts will be used.
 - No optimization on propagation of MAD_Join.request and MAD_Leave.request.
 - » Every bridge will have to keep an active MMRP state machine for every registering stream in the network, even this stream does not traverse this bridge

▪ 802.1Qav interaction

- Stream entries in Filtering Database indicate only the registration of a downstream listener
 - Bridge shall not forward AVB stream data frames based on the Filtering Database stream entries only.
 - 802.1Qav will need another separate database which indicates the result of admission control. This database will be updated by the reservation protocol.

Use MMRP as-is in SRP



Comparison and Summary

□ Current draft proposal

▪ Pros

- Optimization of registration event propagation
 - Less signaling transmission overhead to the network
 - Less signaling processing overhead to the bridges
- Interaction mechanism between 802.1Qav forwarding engine and FDB is the same as current implementations
- Extensions to the registration PDUs enable more flexibility
 - For example, initiating the registration with a higher layer application ID rather than L2 stream ID

▪ Cons

- Need to define both the registration protocol and reservation protocol

□ New proposal

▪ Pros

- Only need to define the reservation protocol
 - Simplify the documentation work

▪ Cons

- Registration events are flooded
 - More signaling transmission overhead to the network
 - More signaling processing overhead to the bridges
- Implementation of 802.1Qav forwarding engine will be more complicated