MMRP vs. Current SRP Registration Proposal (SRPreg)

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Why use SRPreg?

- SRPreg defines who listens to a stream while MMRP defines who is a member of a multicast group
  - With MMRP we must qualify registration with the reservation to determine where to forward the stream
- SRPreg only propagates along the path between listener and talker
  - MMRP propagates to all bridges in context
- SRPreg may result in a simpler filtering database
  - With MMRP bridges must look at both group membership and reservation status

Why use MMRP? (1 of 3)

- Already defined, no need to work through a new MRP application definition
- Streams were one of the original motivations of MMRP so SRPreg might meet organizational resistance which could delay standard
- Additional impact of including bridges not on path between listener and talker is minimal
  - If port participates in any stream then additional overhead is just processing registration/deregistration messages at stream setup and teardown
  - If port does not participate in any streams then it is likely not busy enough to notice a background 1 Hz packet rate or the stream setup and teardown processing

Why use MMRP? (2 of 3)

- Inclusion of both stream ID and talker MAC address (not to mention an opaque token) in SRPreg means that you will not be able to pack more than one action into a vectorAttribute in a MRPDU. This increases the size of the packet and at around 60 streams means that there will be more that one packet each second.
  - I am aware of an application that requires 1024 streams which would mean about 17 or 18 full sized packets per second background rate.
  - MMRP can accommodate 4K consecutive stream IDs in one packet (if our stream IDs are allocated from a single pool this should apply)

Why use MMRP? (3 of 3)

- Defining SRPreg means that there is one more protocol that bridges have to support
  - Using MMRP (which will already be present) for stream registration means AV bridges will be less complex and less expensive (even when the addition to the filtering database is added)

My Personal Conclusion

- I think that the efficiency argument for SRPreg is not compelling in a lightly loaded network, and is invalid in a busy network.
  - SRPreg does not scale well
- The savings in the filtering database for SRPreg may be only an artifact of specification
  - Actual implementations my not be impacted
- The argument about needing to qualify the registration with the reservation is really just the filtering database argument
- I think we should chose to use MMRP as is.