Multiple Stream Reservation Protocol D1.0

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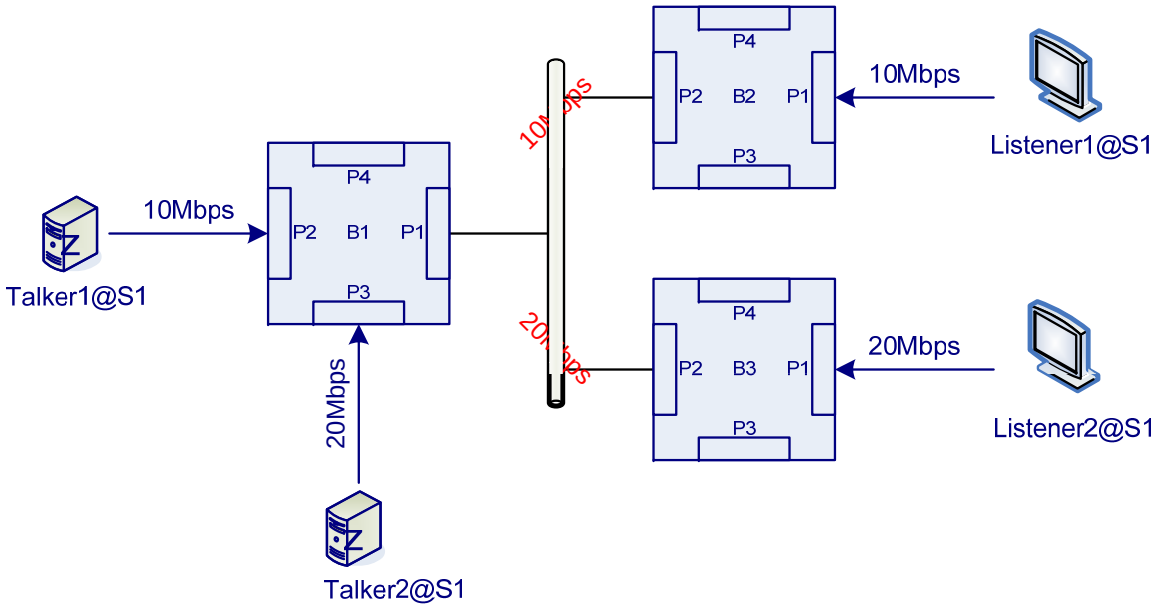
Multiple Talkers Assumptions

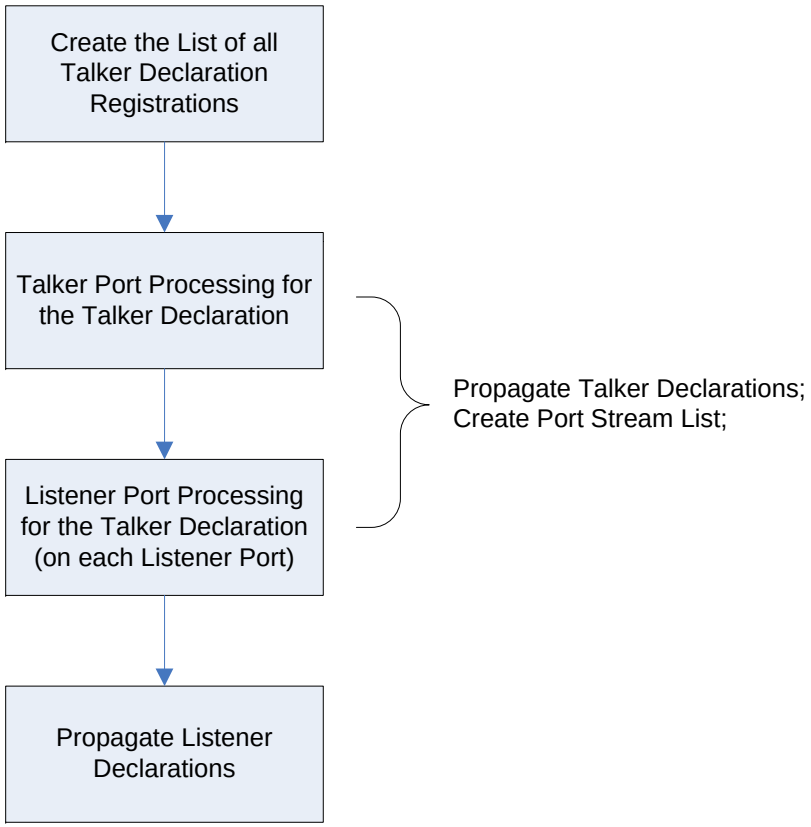
- Each Talker sends its Offering Declaration
  - Offering Declarations for the same Stream but from different Talkers may carry different TSpecs.
- Bridges process those Talker Declarations separately
  - Talker Declarations for the same Stream will not be merged
  - Those Declarations may carry different result status, since they come from different Talkers and path, and may carry different TSpecs.
  - But only a single resource allocation will be done for a Stream on a certain Port even there are multiple Talker Declarations present.
- Listeners will receive each Talker Declaration separately
  - Talker Declarations for the same Stream will not be merged.
  - Those Declarations may carry different result status, since they come from different Talkers and path, and may carry different TSpecs.
  - A Listener should pick the Talker Offering Declaration with the ‘largest’ TSpec to construct the Listener Declaration.

Merge Listener Declarations

- Listener Declarations for the same Stream will be merged. The merged TSpec is the minimum of the TSpecs
  - But the merging is different from RSVP which “carries a flowspec that is the ‘largest’ of the flowspec requested by the next hops to which the data flow will be sent”.
  - This is to guarantee that the Talker will not send a Stream that will interfere other Streams on a downstream link.

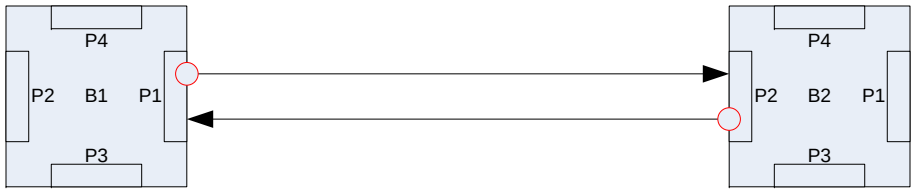


Basic workflow

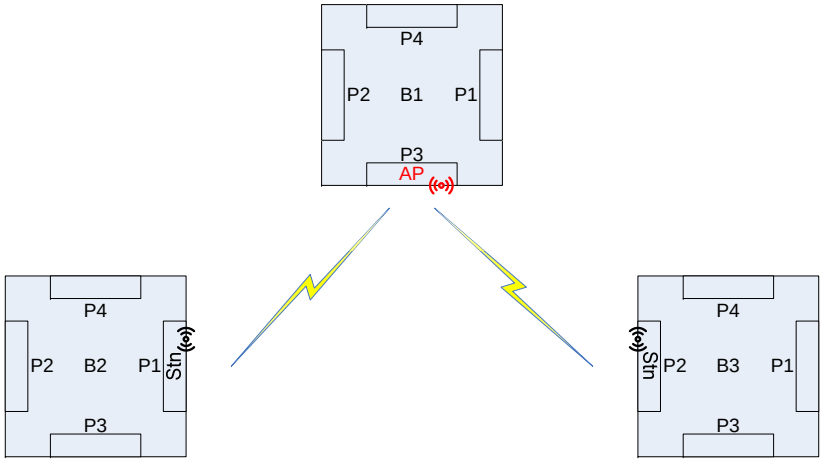


DMN (Access Control) Port and Non-DMN Port

- A Non-DMN Port shall only receive the MSRP PDUs transmitted by DMN Ports, and ignore the MSRP PDUs transmitted by other Non-DMN Ports.



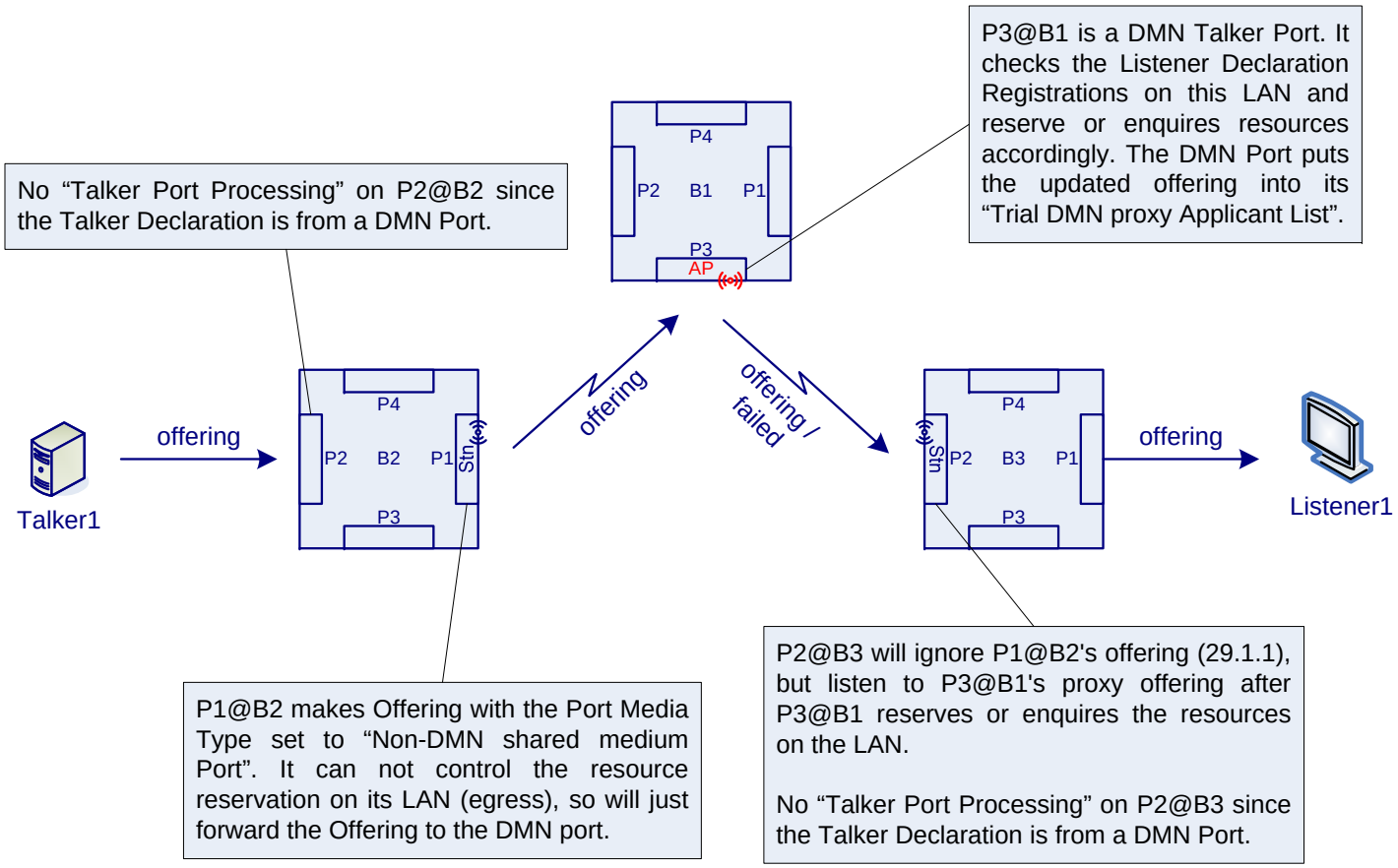
Full-duplex Link: Both ends are Access Control Port



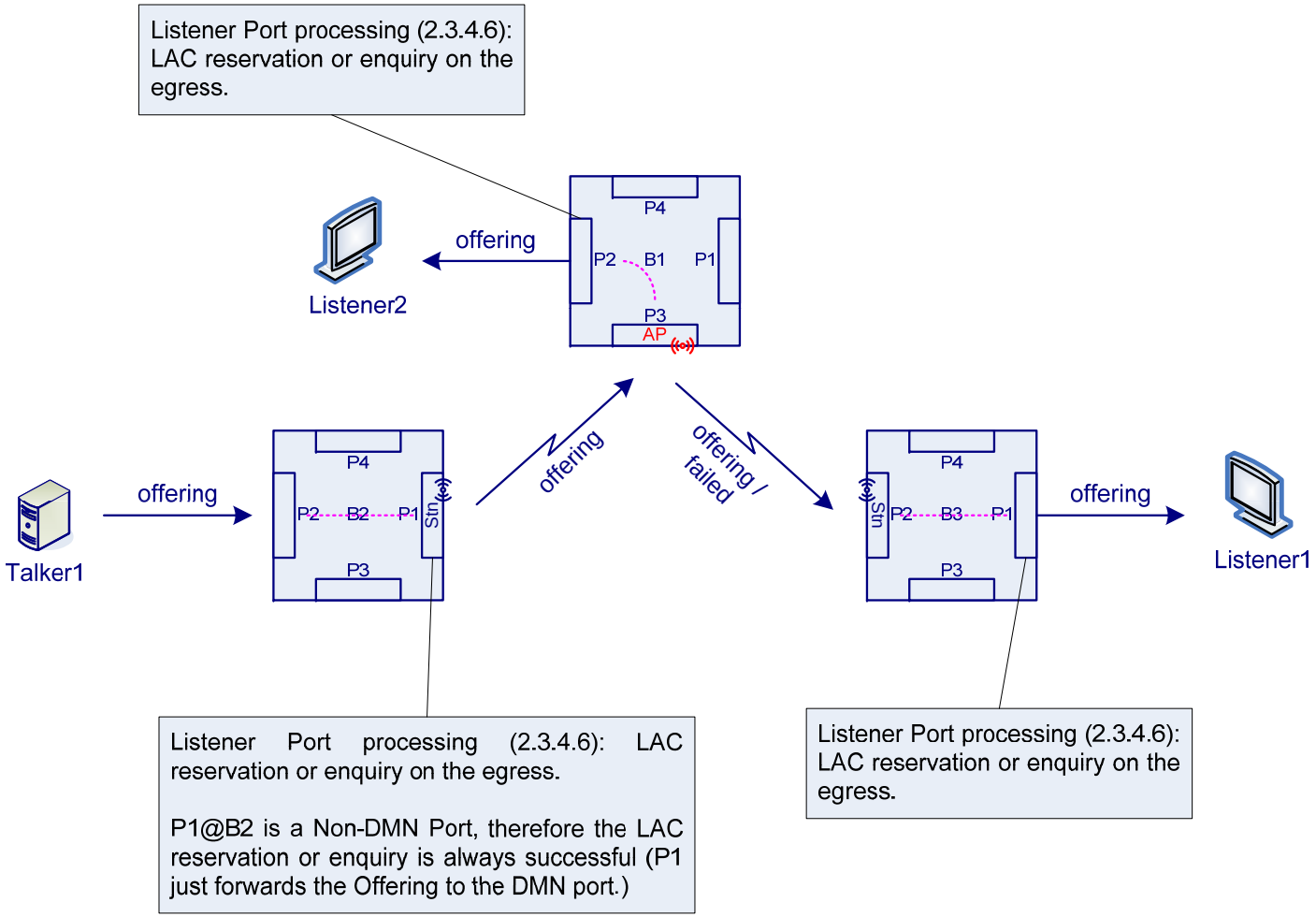
802.11 wireless media: the AP Port is the Access Control Port

DMN Talker Port Processing (29.3.4.4.e, 29.3.4.5)

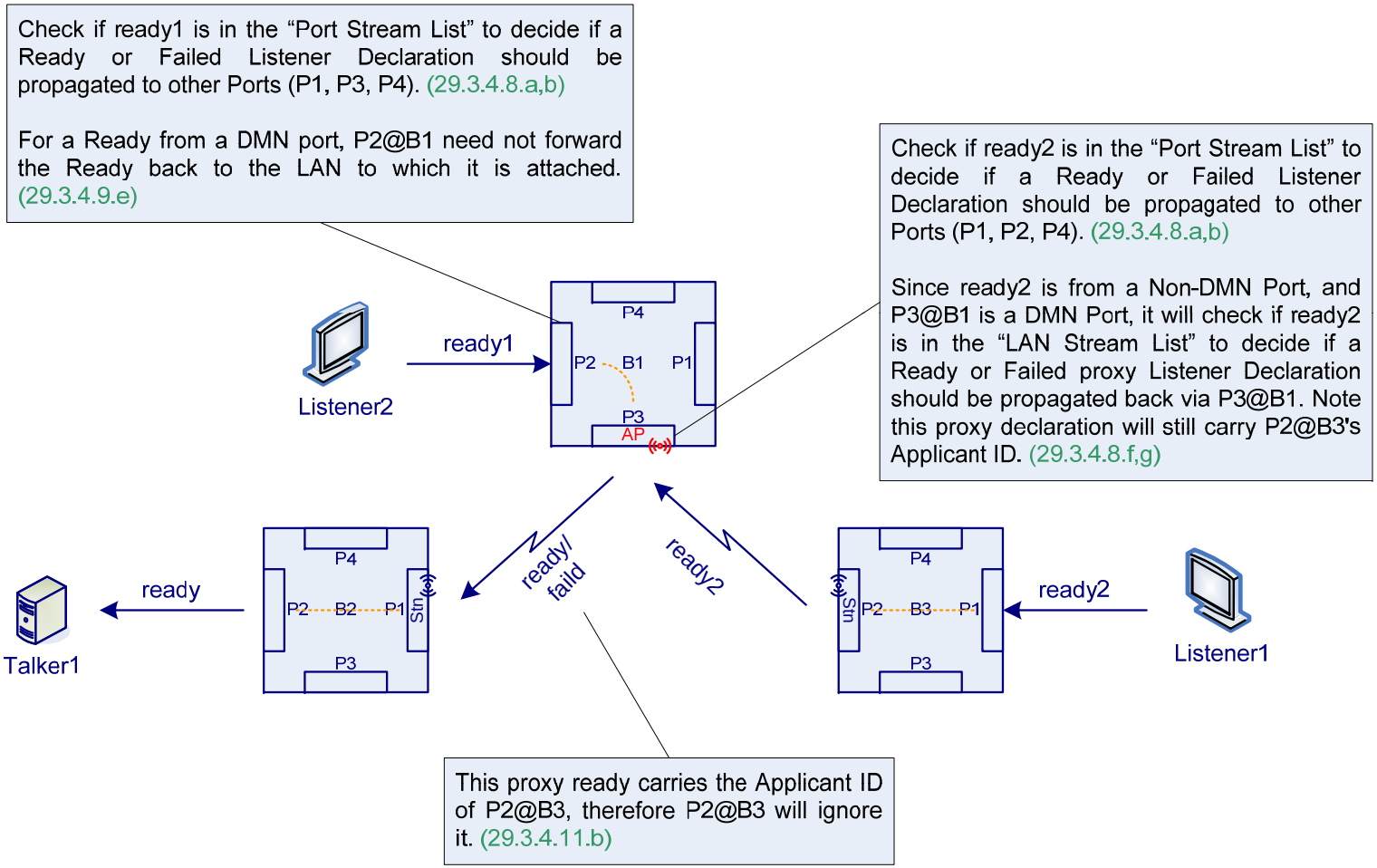
- Only performed on the shared media LAN



Listener Port processing (29.3.4.4.f, 29.3.4.6)



Propagate Listener Declarations (24.3.4.8)

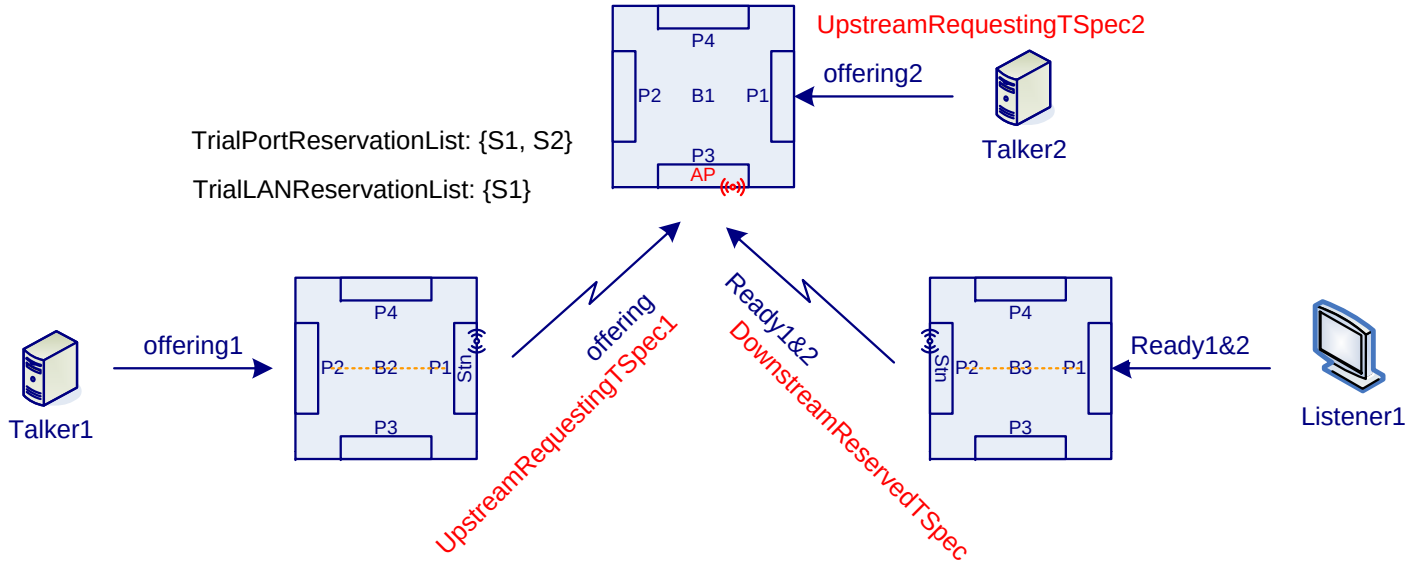


LAC-RESERVE.request

- LAC-RESERVE.reqeust {
  - StreamIdentifier,
  - StreamMACaddress,
  - StreamVID,
  - StreamPCP,
  - UpstreamRequestingTSpec,
  - DownstreamReservedTSpec,
  - TrialPortReservationList,
  - TrialLANReservationList,
  - ReservationLAN

  }

LAC-RESERVE.request



UpStreamRequestingTSpec1 <= DownstreamReservedTSpec:
Reserve the resources on the shared media LAN (may need to reserve the resources on both the direction to and from the AP) for S1.

UpStreamRequestingTSpec1 > DownstreamReservedTSpec:
No need to reserve resources since downstream can not support Talker1 's request; just enquire the resources to update the status of the Talker Declaration (may need to check the resources on both the direction to and from the AP).

UpStreamRequestingTSpec2 <= DownstreamReservedTSpec: *Reserve the resources on the shared media LAN (only on the direction from the AP to the stn) for S2.*

UpStreamRequestingTSpec2 > DownstreamReservedTSpec:
No need to reserve resources since downstream can not support Talker2's request; just enquire the resources to update the status of the Talker Declaration (only on the direction from the AP to the stn).

LAC-CONFIG.request

- LAC-CONFIG.reqeust {
  StreamIdentifier,
  StreamMACaddress,
  StreamVID,
  StreamPCP,
  PortStreamList
  }

- The LAC-CONFIG.request primitive takes the Port's Port Stream List as its input parameter. It updates the Port's Transmission Selection parameters, and the Reserved Address Registration entries in the Filtering Database from the information in the Port Stream List, which is computed during the MAP processing.