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# Topics

- What is Qat?
- Concepts
- Interfaces & Propagation
- Status

# What is Qat?

# Synopsis

A protocol that provides end points with the ability to reserve network resource that will guarantee the transmission and reception of data streams across a network with the requested quality of service.

# Acronyms & Definitions

- DMN: Designated MSRP Node (802.1Qat)
- MRP: Multiple Registration Protocol (802.1ak)
- MSRP: Multiple Stream Reservation Protocol (802.1Qat)
- MSRPDU: MSRP Protocol Data Unit (802.1Qat)
- MAD: MRP Attribute Declaration (802.1ak)
- MAP: MRP Attribute Propagation (802.1ak)
- Qat: Stream Reservation Protocol (802.1Qat)
- Qav: Forwarding and Queuing (802.1Qav)
- Talker: A device that produces a data stream
- Listener: A devices that consumes a data stream

# Concepts



# Declarations

- TalkerAdvertise

*“I have a stream if you want it”*

- TalkerFailed

*“I have a stream, but you can’t get it”*

- ListenerReady

*“I (we) want the stream and have network resource available to receive it”*

- ListenerAskingFailed

*“I (we) want the stream, but do NOT have network resources to receive it”*

- ListenerReadyFailed

*“We want the stream and some can receive it and some can NOT”*

# Some Internals

- Simple TSpec (Traffic Specification)
  - Bandwidth in Kbytes/second
  - Frame Rate in frames/second
- Shared Medium DMN (Designated MSRP Node)
  - A MSRP “proxy” for the shared media network
  - Qat uses the DMN to map shared media QoS protocols to/from MSRP
  - Double transmit bandwidth concerns

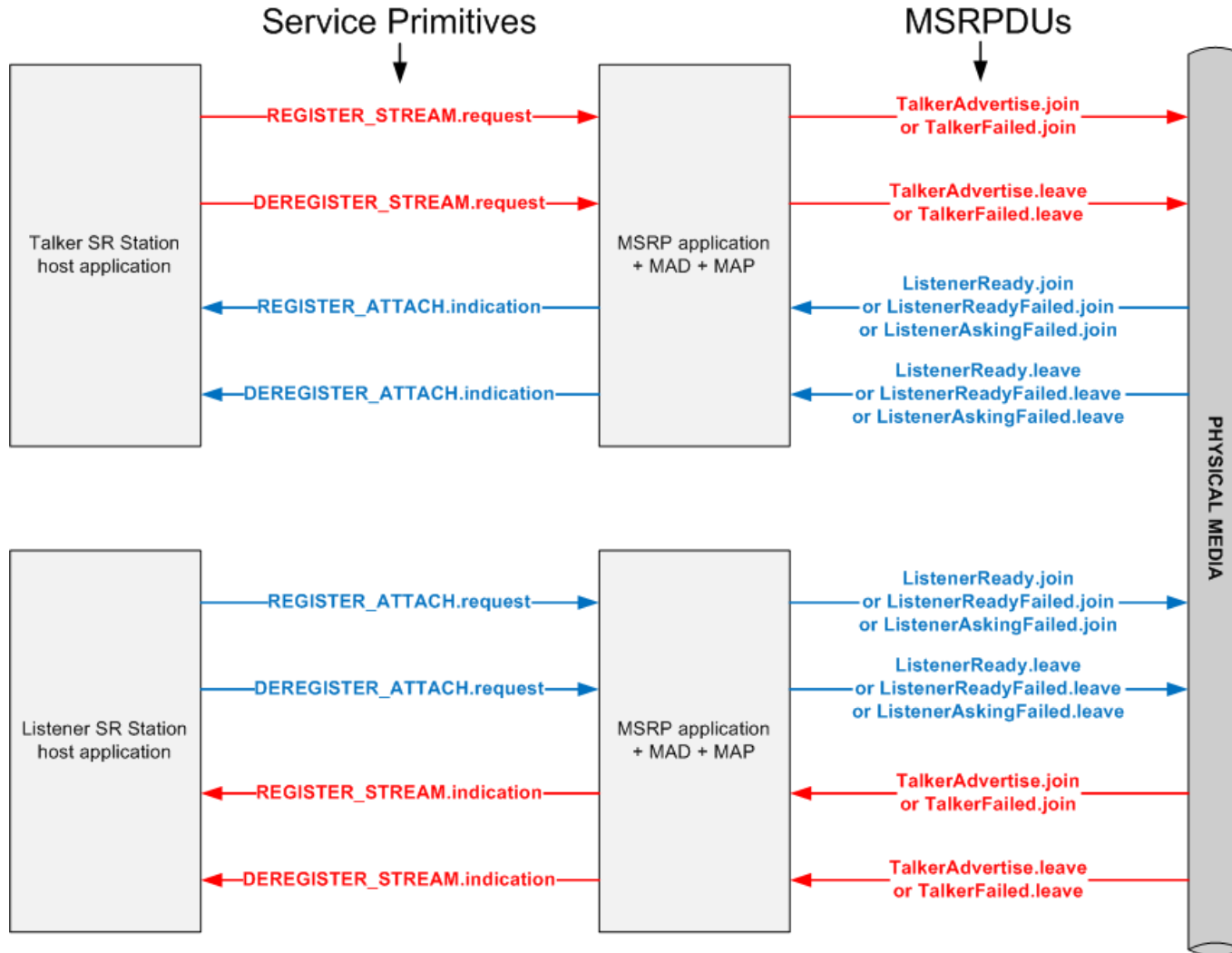


# Bandwidth Allocation Algorithm

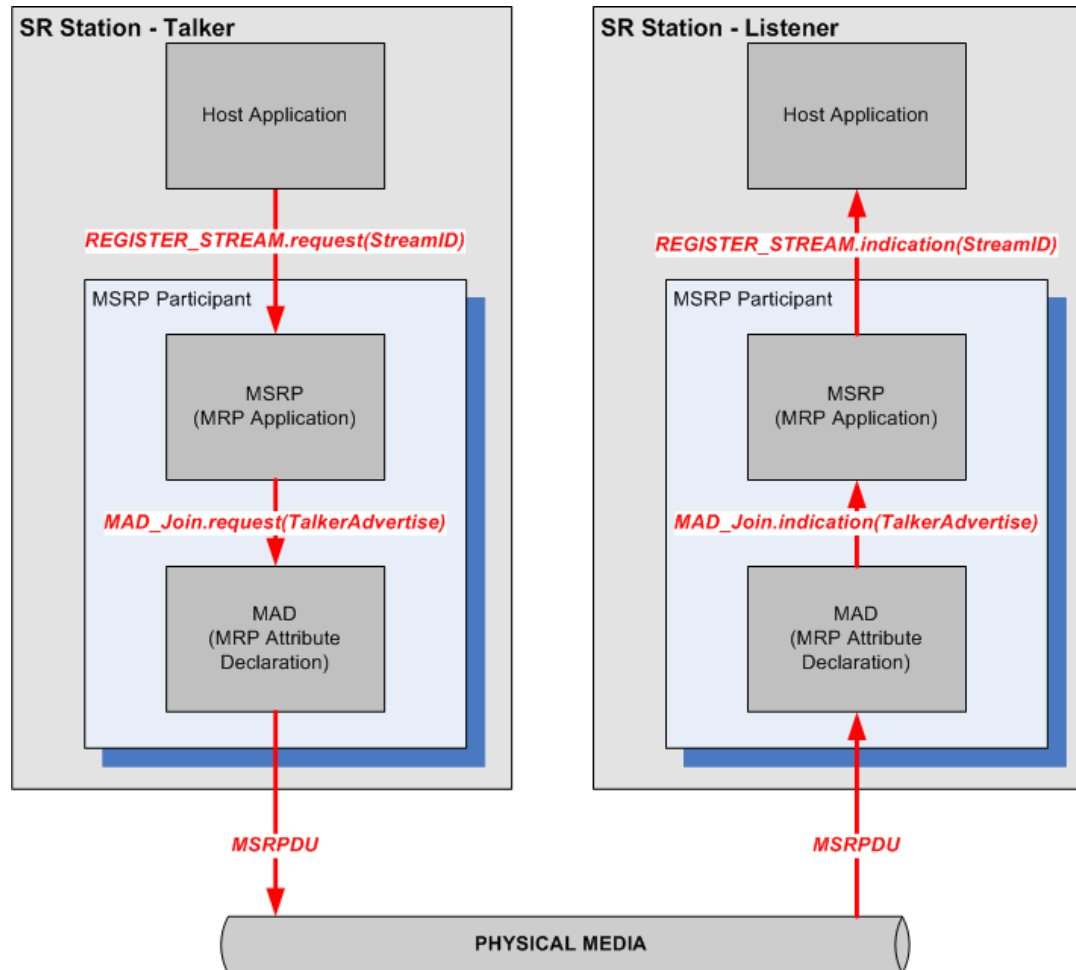
- Who gets the bandwidth?
  - Streams with Active Listeners
  - Streams have a Rank for importance
    - 911 call
    - Safety announcements, etc
  - First-come first-served
  - StreamID is the tie-breaker
- Streams with no Active Listeners do not reduce available bandwidth

# Interfaces & Propagation

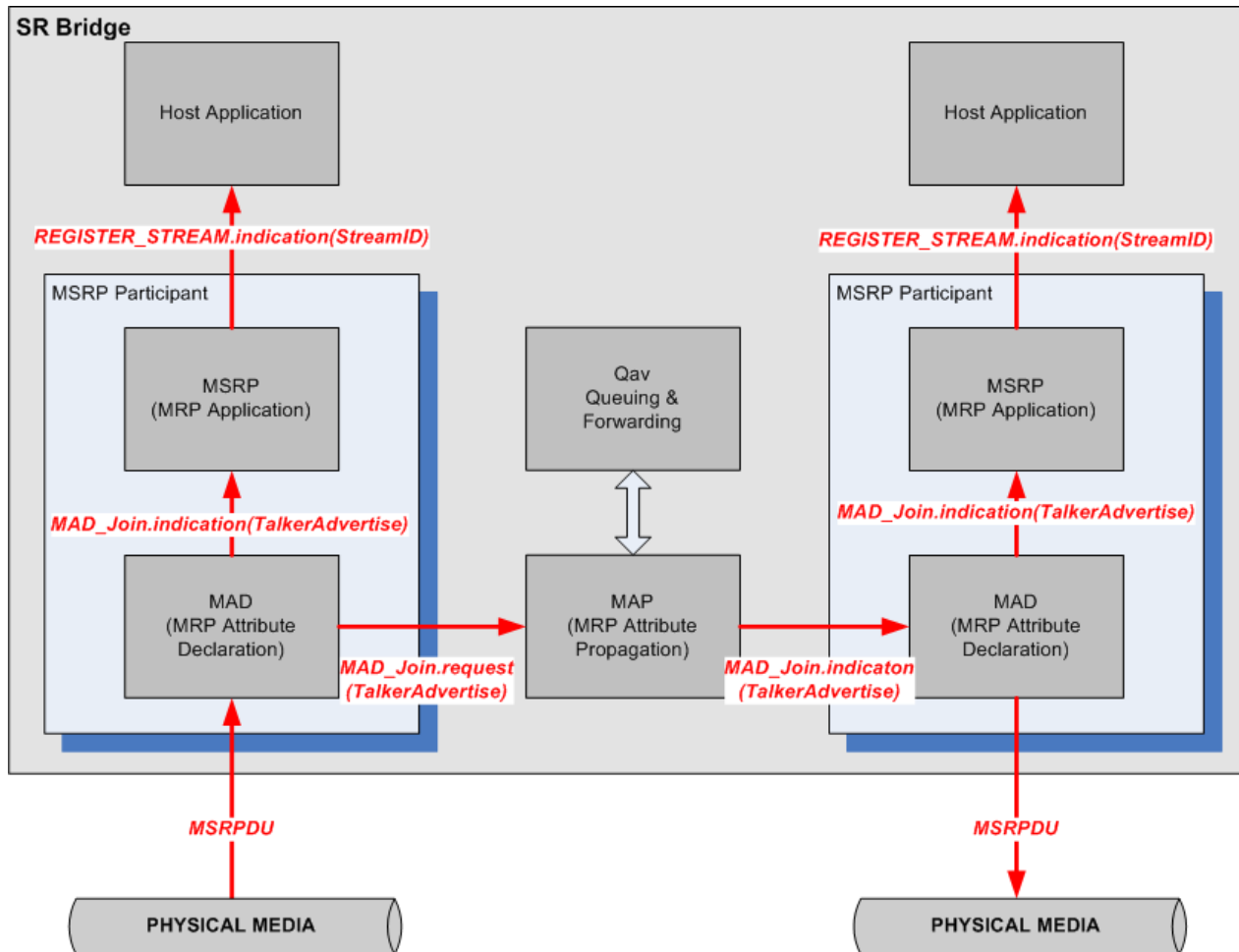
# MSRP interfaces



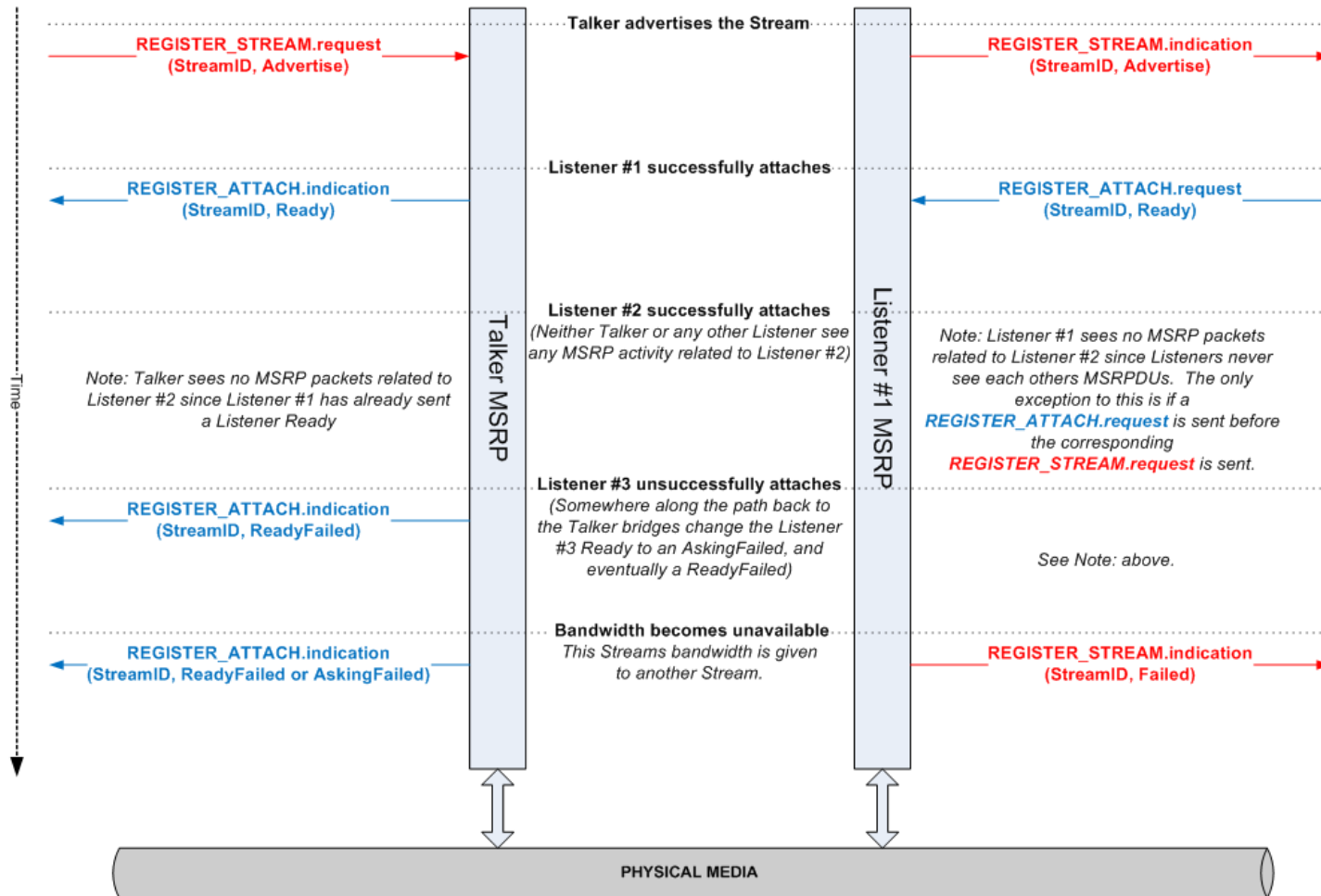
# SR Station Attribute Propagation



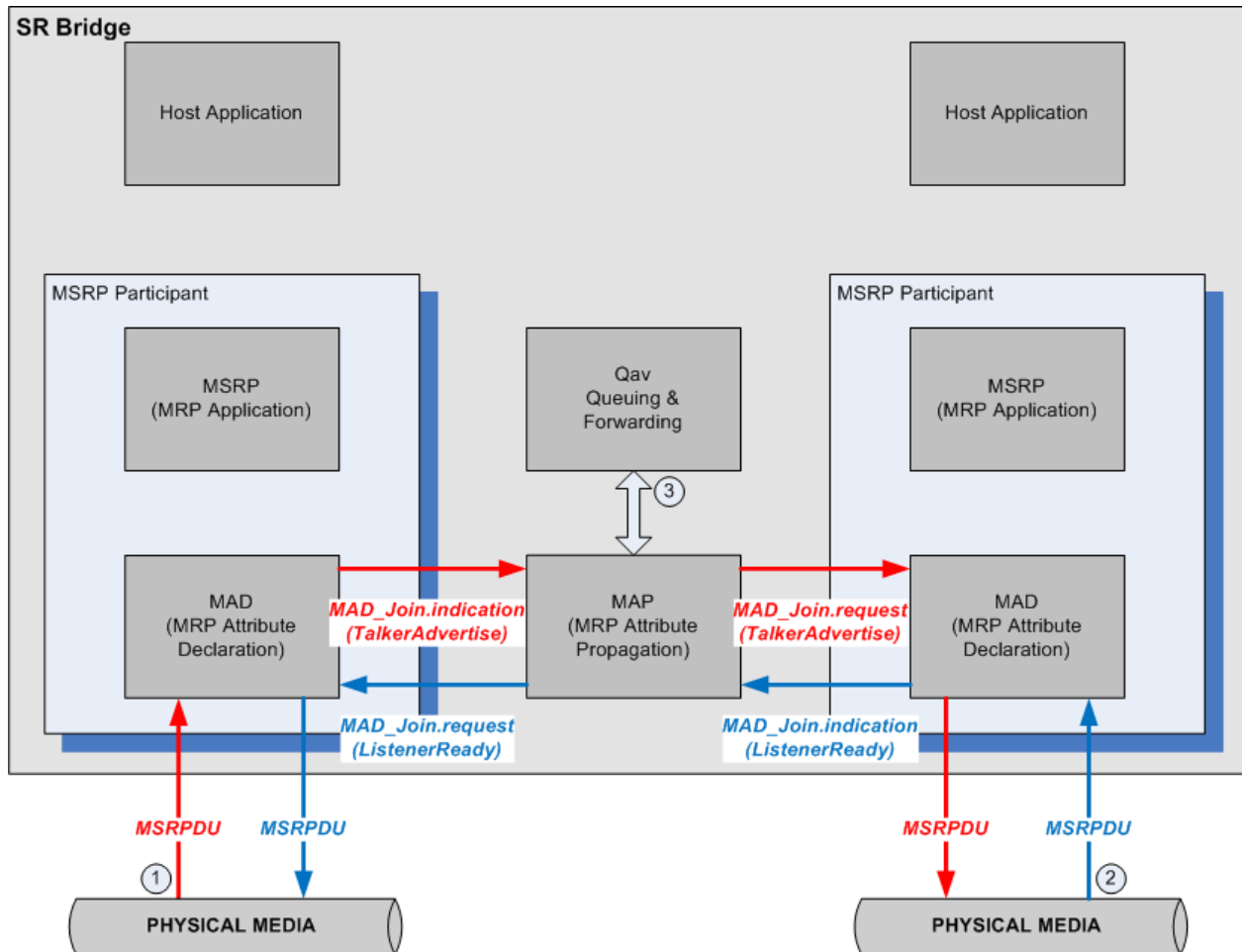
# Bridge Attribute Propagation



# MSRP Service Primitives

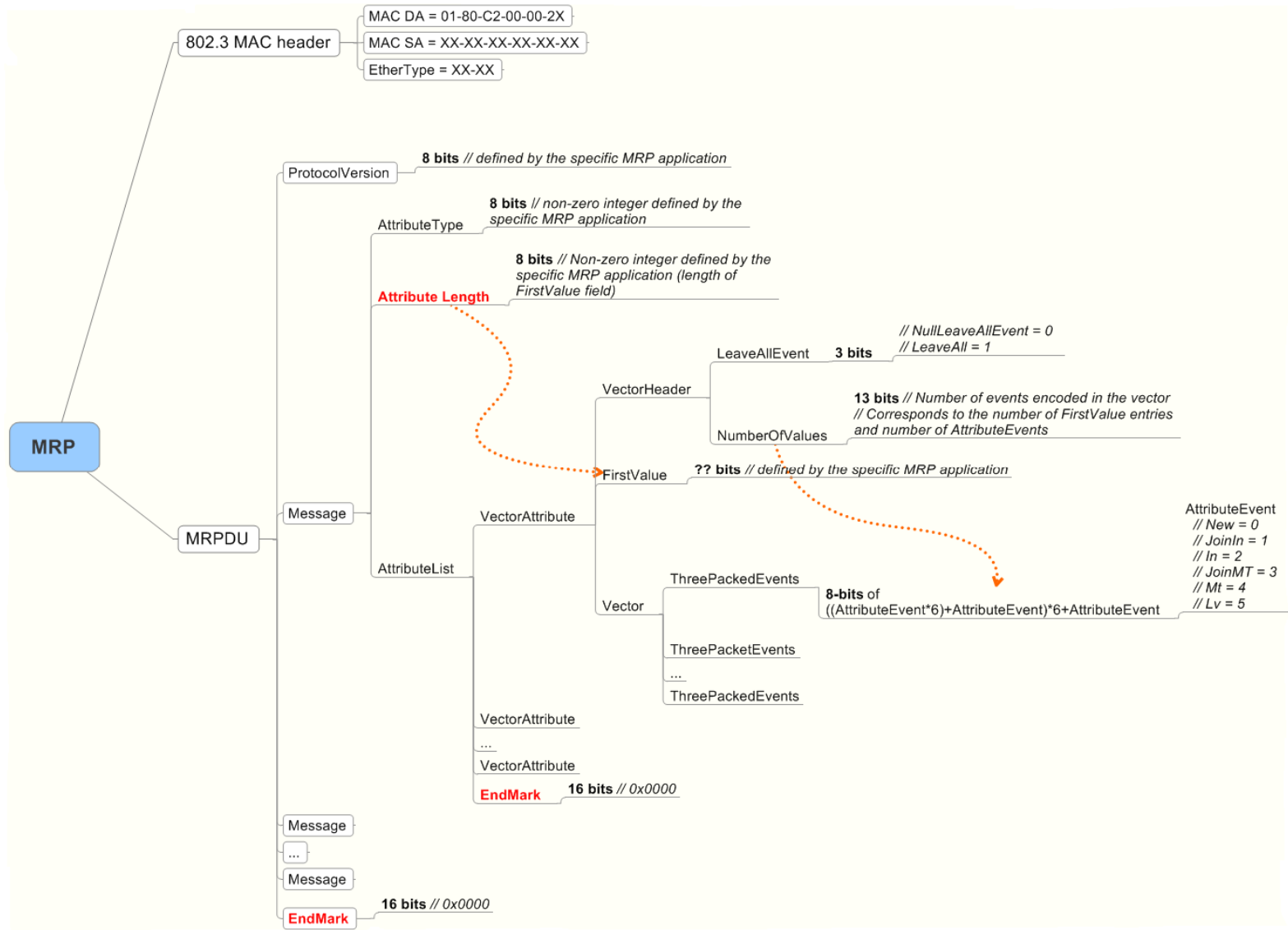


# Bridge Forwarding a Stream



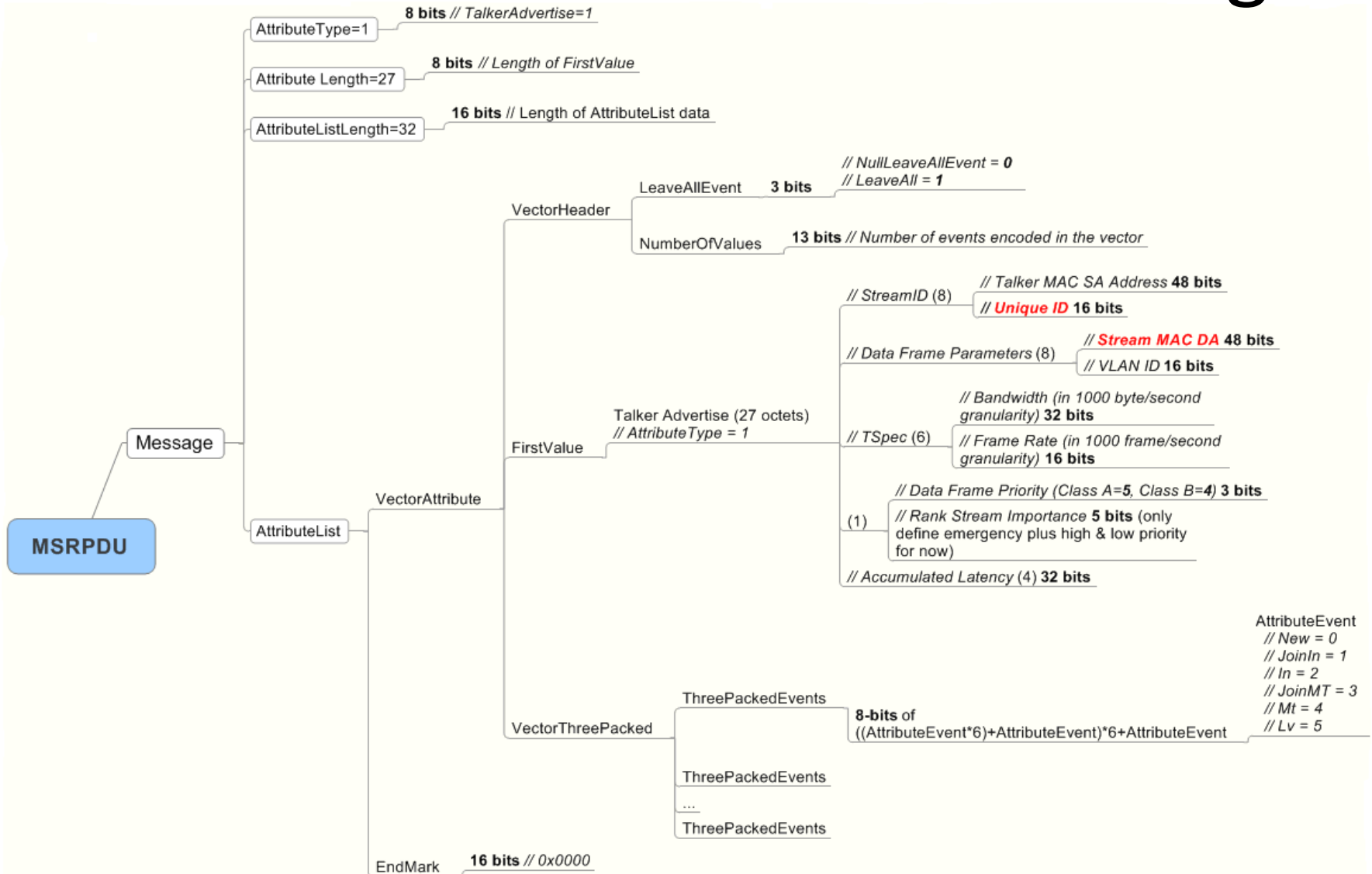


# MRPDU





# MSRPDU TalkerAdvertise Message



# Status

# Today's Status

- Service Primitives are documented
- MSRPDUs are documented
- CSN Shared Media DMN documented
- Bandwidth Allocation Algorithm is documented
- Need:
  - MIB, PICS, Conformance, Management
  - 802.11 DMN documentation

Thanks!