

# Text Contribution for P802.1Qdq

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Satoko Itaya, Toru Osuga, Takeshi Matsumura (NICT),

Akio Hasegawa (ATR),

Hiroki Nakano (CAHI Corporation)

# What do we propose to update?

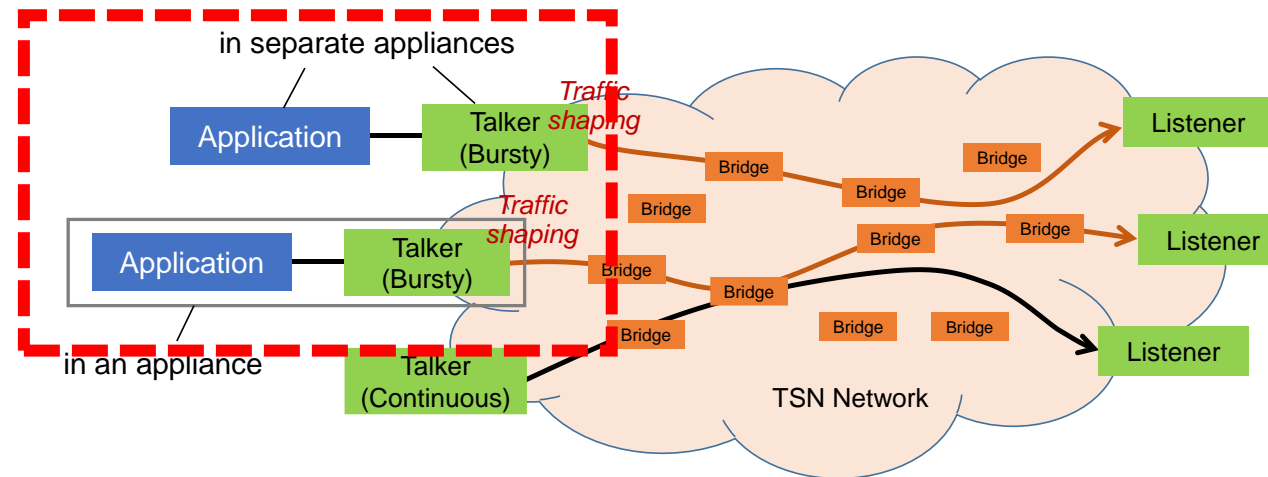
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- Base proposal
  - <https://www.ieee802.org/1/files/public/docs2021/dq-itaya-cas-text-contribution-0721-v1.pdf>
- 1. Figure Y-1 “An example of network structure under consideration”
  - To clarify what we explain, we propose to replace Y-1 with a new figure that is simpler than the original one.
- 2. Clause Y.3.2 “Dynamic Reservation…”
  - Generalize discussion rather than SRP-specific logic.
  - Refer to “802.1Qdq Reservation Logic” introduced in Figure Y-1’

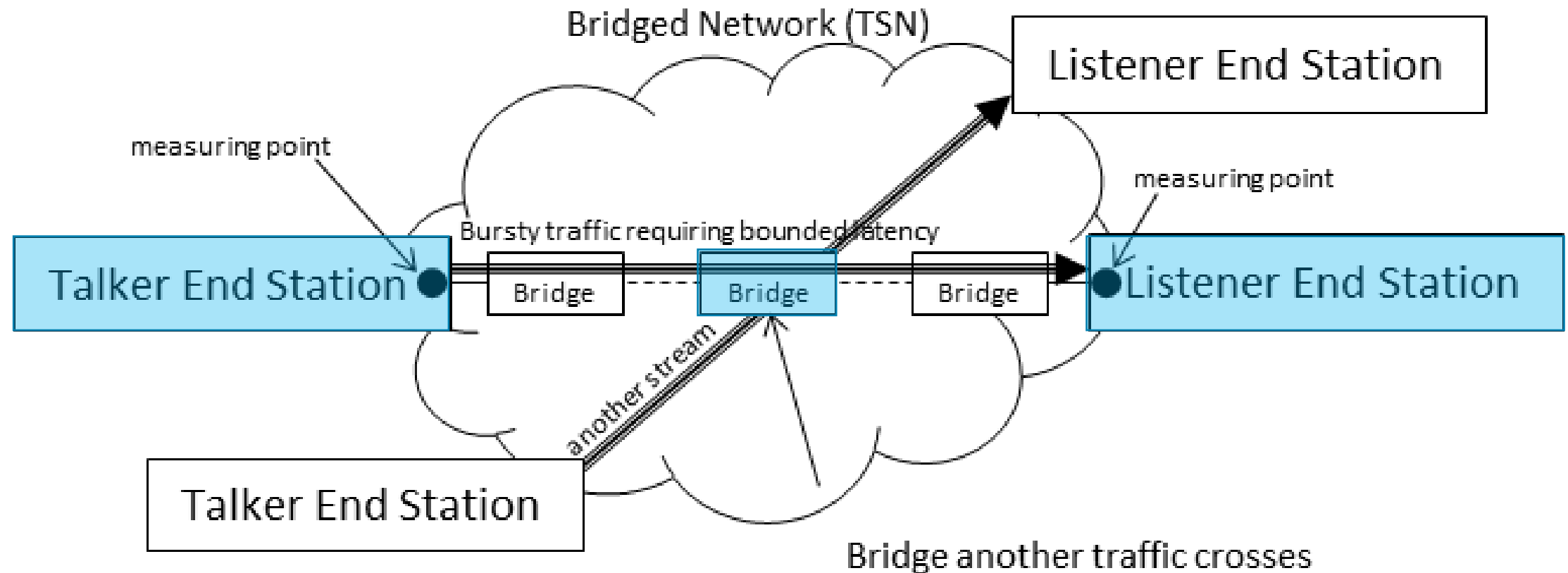
# 1. Review of Figure Y-1

- There are many contents mixed in a one figure.
- Relation between “Application” and “Talker” is illustrated in Figure Y-1’, so it is not required here.

Remove because Figure Y-1’ also explains this



# Proposal of New Figure Y-1



- P802.1Q clause 3 defines Talker as “The end station that is the source or producer of a stream.” Nevertheless, we use “Talker End Station” in this figure to clarify it is an end station, not a bridge.
- We focus on latency between measuring points in Talker and Listener.

## 2. Rewriting concept of Clause Y.3.2

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Original Y.3.2 on the contribution in July

SRP

Proposal in this contribution

General discussion

In case of manual calculation

In case of SRP

Refer to “802.1Qdq Reservation Logic”  
according to Figure Y-1’

Can add other cases if necessary

# Rewrite Y.3.2

Add general discussion

- Y.3.2 Dynamic Reservation ~~with SRP~~

Add Remove

Generally speaking, a process establishing a reservation often consists of multiple steps. A common case is that a path is searched first and then that some calculations and configurations are made according to the path. As mentioned in the previous clause, Accumulated Latency depends on a path from Talker to Listener, therefore, it is obtained after the path is determined. Of course, it shall be obtained prior to calculation.

In case of manual calculation, this principle is also applicable, that is, the TSN network planner/administrator determines a path for a reservation first, and then calculate the parameters of the reservation, e.g. bandwidth.

Add manual case

# Rewrite Y.3.2 (cont.)

SRP case, Refer to “802.1Qdq Reservation Logic” according to Figure Y-1’

Add Remove

- Y.3.2 Dynamic Reservation ~~with SRP~~  
...(continued from the last slide)

In case of SRP (IEEE Std 802.1Qcc-2018, Clause 35), a Talker Advertise message searches paths and the corresponding Listener Ready message confirms the reservation. The Listener Ready message also carries information of the path to the Talker, including Accumulated Latency. The UNI (User Network Interface) is used to exchange information related to Accumulated Latency information between 802.1Qdq Reservation Logic (Figure Y-1’) Talker and the corresponding Talker function. The 802.1Qdq Reservation LogicThe application uses the MaxLatency element of the UserToNetworkRequirements group (IEEE Std 802.1Qcc-2018, Clause 46.2.3.6.2) and the AccumulatedLatency group (IEEE Std 802.1Qcc-2018, Clause 46.2.5.2) in order to obtain accumulatedLatency from the Talker via UNI. The UNI specification requires the Talker to send a Talker Advertise message and to collect Listener Ready messagesrequest joining a target stream. Once a Listener Ready message reaches Talker, the path of the reservation is determined and accumulatedLatency is reported via UNI to the 802.1Qdq Reservation Logic. However, SRP is not capable to update parameters of the reservation confirmed by the Listener Ready message. To work with SRP, the reservation is dropped first and then a new reservation with new parameters shall be requested via UNI from the 802.1Qdq Reservation Logic. That is, the Talker cannot obtain the information before requesting to join a stream. Therefore, the Talker has to request to join a stream first with a tentative TSpec. The tentative parameters of the first Talker Advertise are TSpec is derived assuming the accumulatedLatency which can be set by implementer’s choice, such as determining by the network administrator, and adopting a value of zero as simple recommendation. the 802.1Qdq Reservation LogicTalker requests to join again with the amount obtained by the first request. The first calculated reservation and the second one is not guaranteed to return the same values of the accumulatedLatency and the 802.1Qdq Reservation LogicTalker will try to join with different parametersTSpec and MaxLatency based on the previously obtained accumulatedLatency repeatedly until successful joining the target stream. This method can be applied to the Stream Reservation Protocol. (IEEE Std 802.1Qcc-2018, Clause 35).

**Any comment?**

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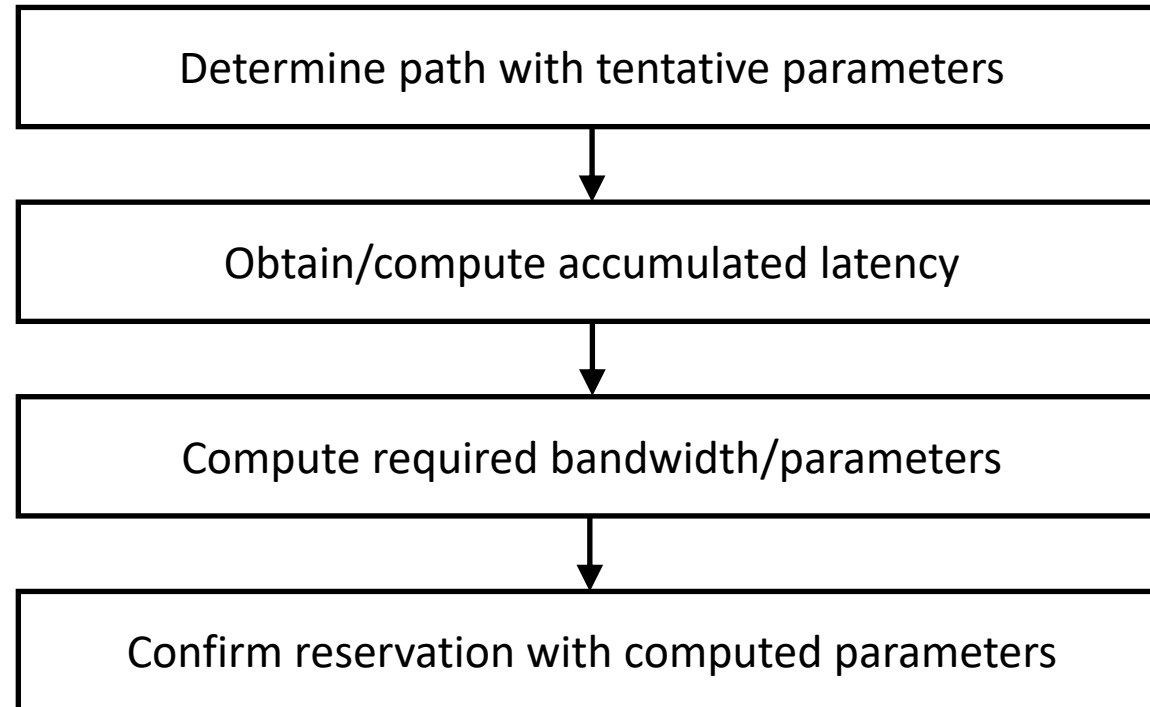


# Backup

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# 802.1Qdq Reservation Logic flow

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# 802.1Qdq Reservation Logic flow with SRP

