

MSRP Redundant Stream Reservation Protocol Proposal

Contributed by Philippe Klein, PhD

Broadcom

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Proposal Aims



- Keep a clear separation between reservation and path selection
- Minimize the modifications to the current MSRP reservation protocol
- Rely on Short Path Bridging (801.1Qca) to select the best and constrained paths for the streams
- Leave the redundancy scheme and its characteristics as a listener's choice

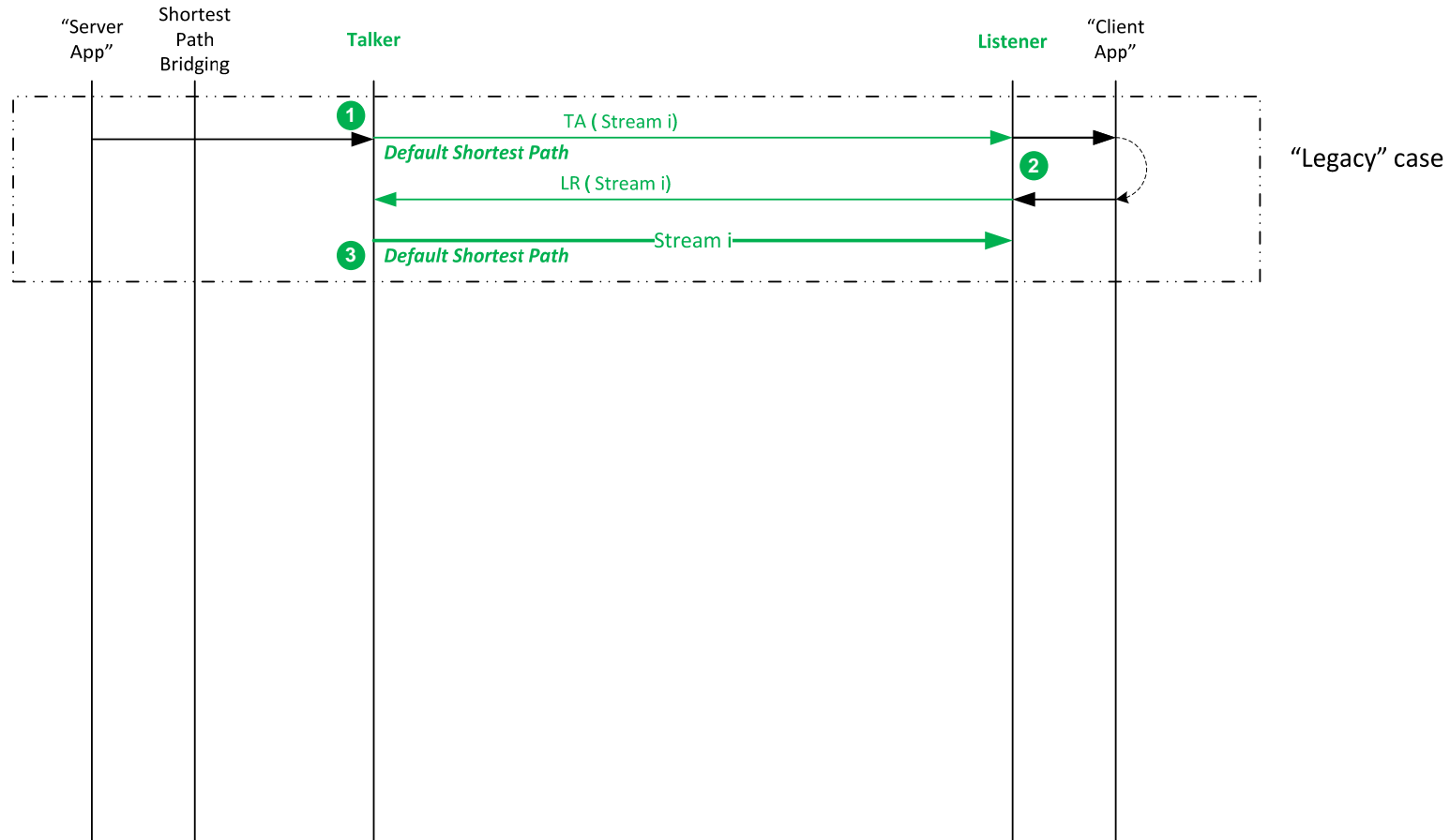
Proposed Scheme



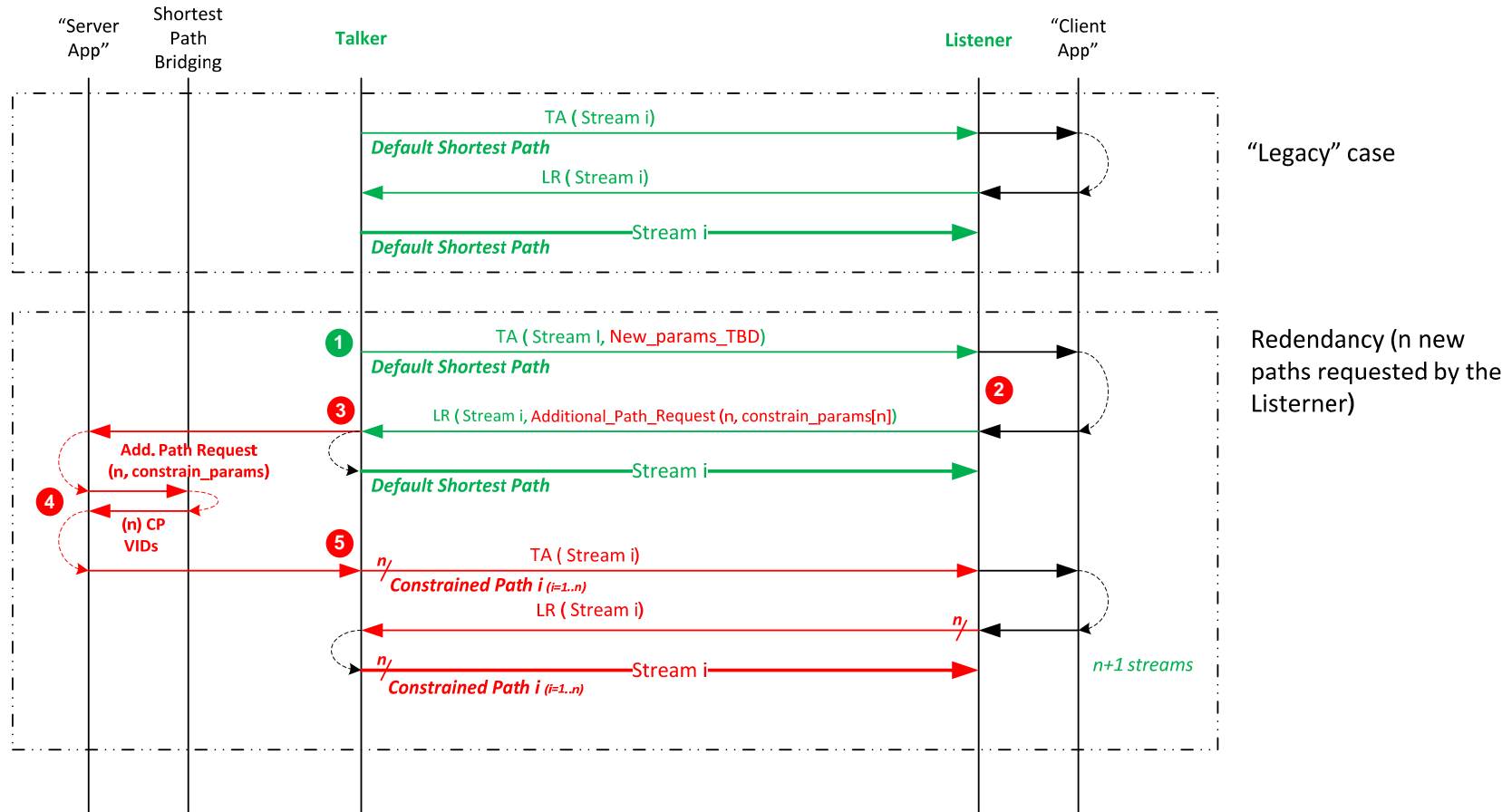
- Extend the Listener Ready message to allow a Listener to request the Talker to advertise the **same stream (same stream ID)** thru alternate paths computed by SPB
- As a result, the redundancy for a given stream could be created.
- *Disclaimer: This proposed scheme does not try answer the redundant scheme requirements of all the TSN market segments (in particular industrial control & automotive,..)*

The next 3 slides illustrate this proposed scheme

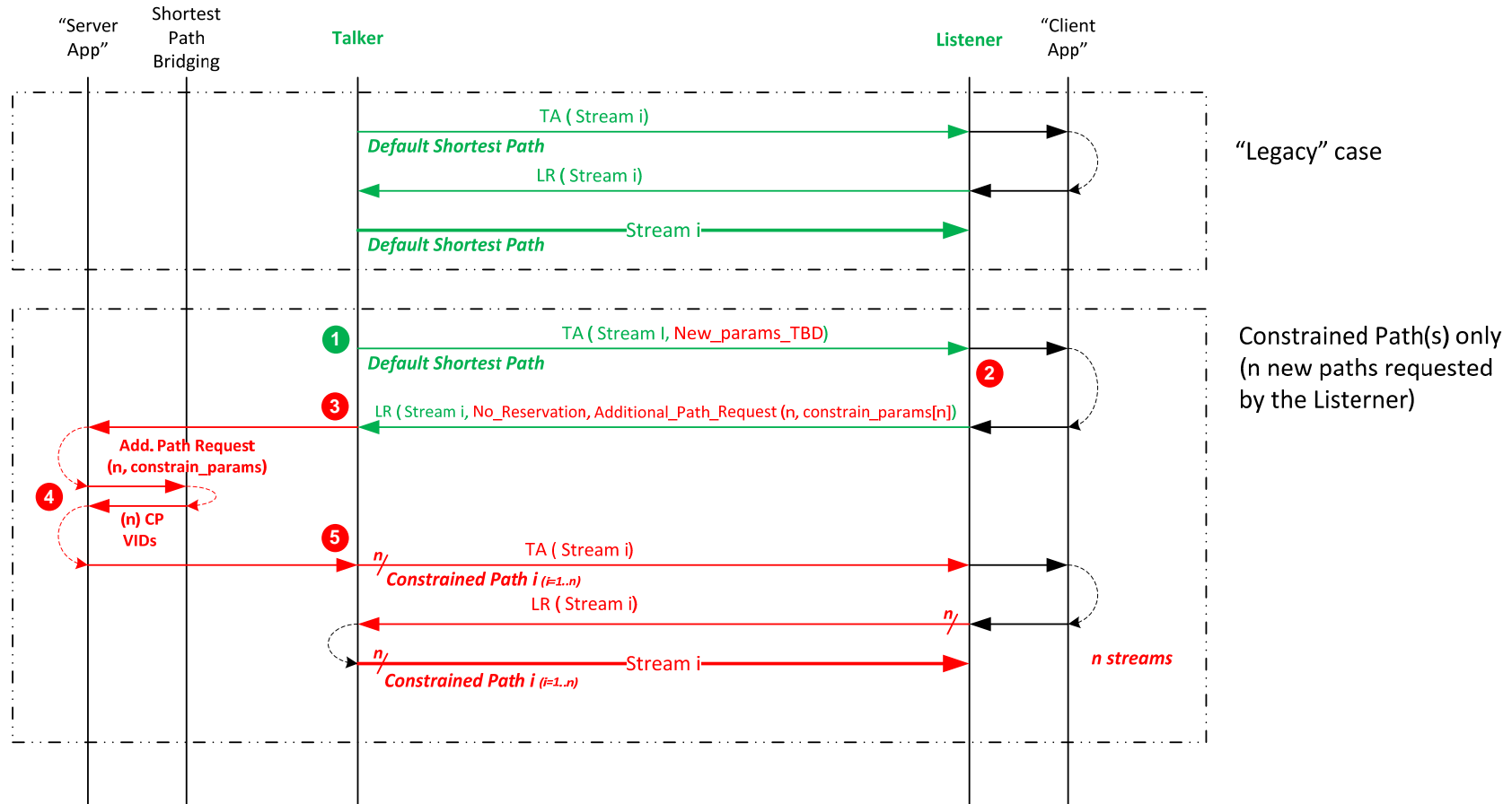
MSRP – “Legacy” scenario



MSRP 1+n Redundant Streams



MSRP – n Constrained Streams only



- TA: New parameters
 - TBD (i.e. redundant path request failure indication)
- LR (either MSRP , IS-IS or a mixed bag of both ?):

The parameter data structure should support the case where multiple LRs from multiple listeners for the same stream are merged together

The listener could optionally indicate its constrain parameters for the default shortest path to allow the network resource to be optimized

- Array of Listener IDs
- Per Listener ID:
 - Reservation/No_Reservation flag (for default shortest path)
 - Constrain parameters for default shortest path
 - Nbr of requested additional paths
 - Per requested path: constrain parameters (TBD)

▶ Path Recovery After Failure



- To avoid re-executing the whole n_way exchange after a path failure, the redundancy requests per Stream_ID could be stored in the Talker DB
- Details and other alternatives however are subject to further studies

Thank You



philippe@broadcom.com