



IEEE P802.1DP - Per Stream Shaping

Per Stream Queues and Shaping for Aerospace Profile P802.1DP

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Objective

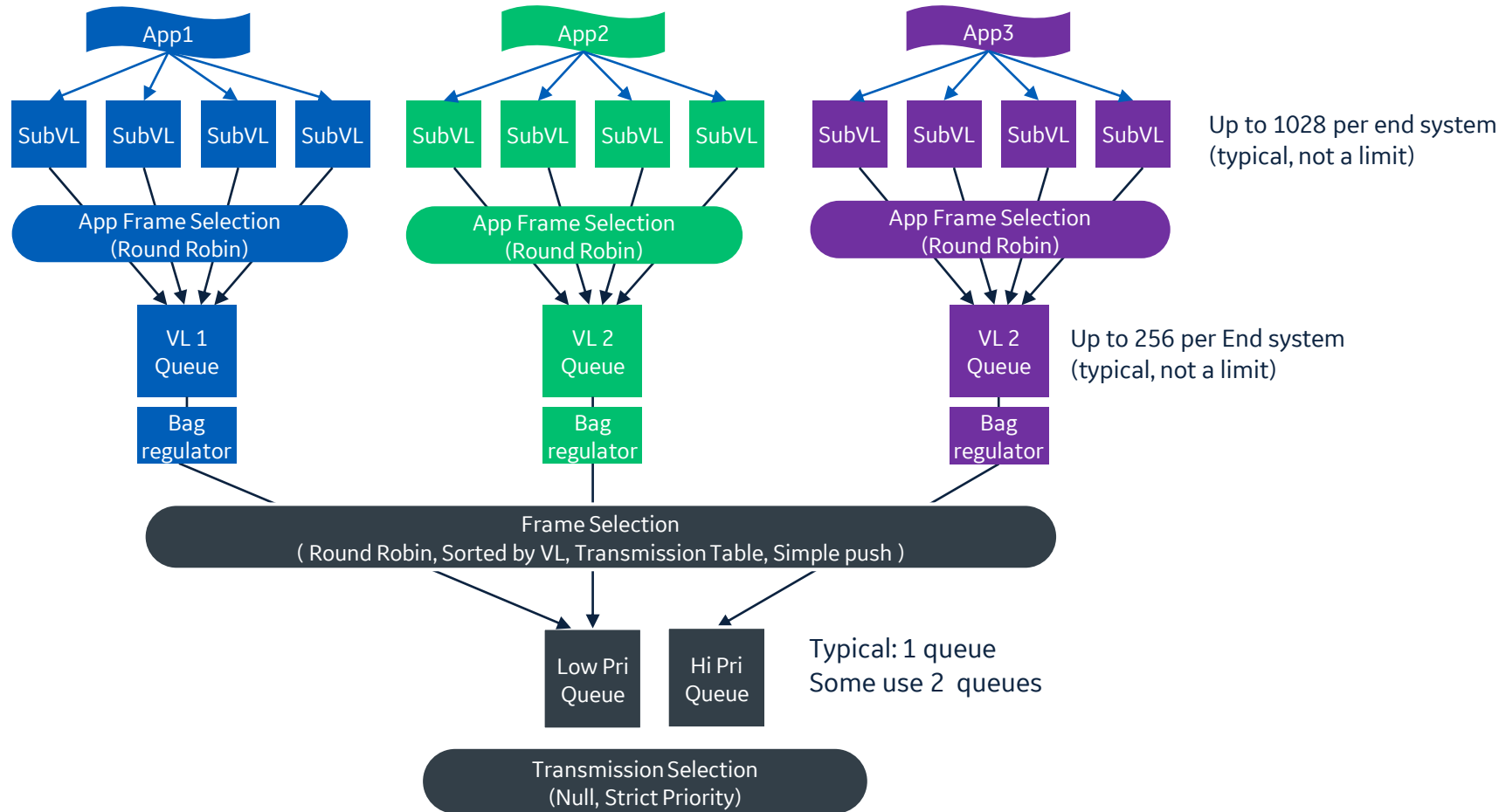


- ***Present a requirement of per-stream shaping for aerospace use cases***
- ***Proposal to include per-stream shaping in DP conformant end station components***
- ***Group discussion***



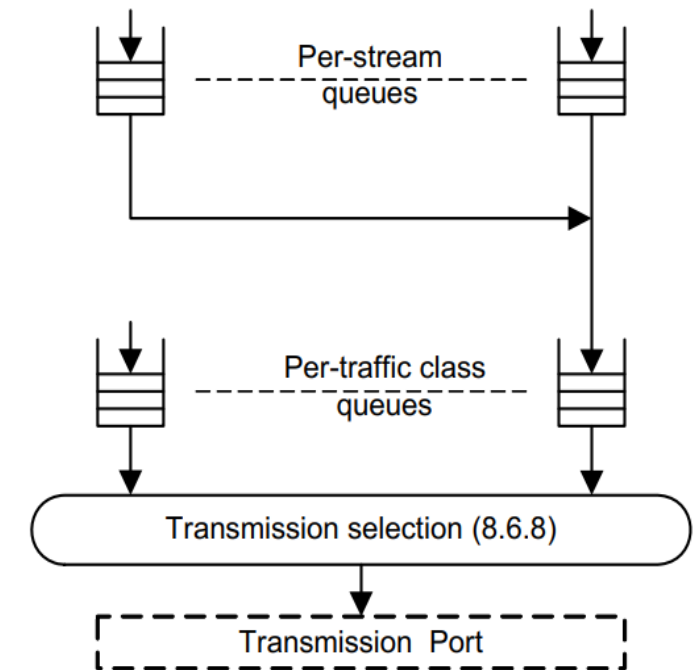
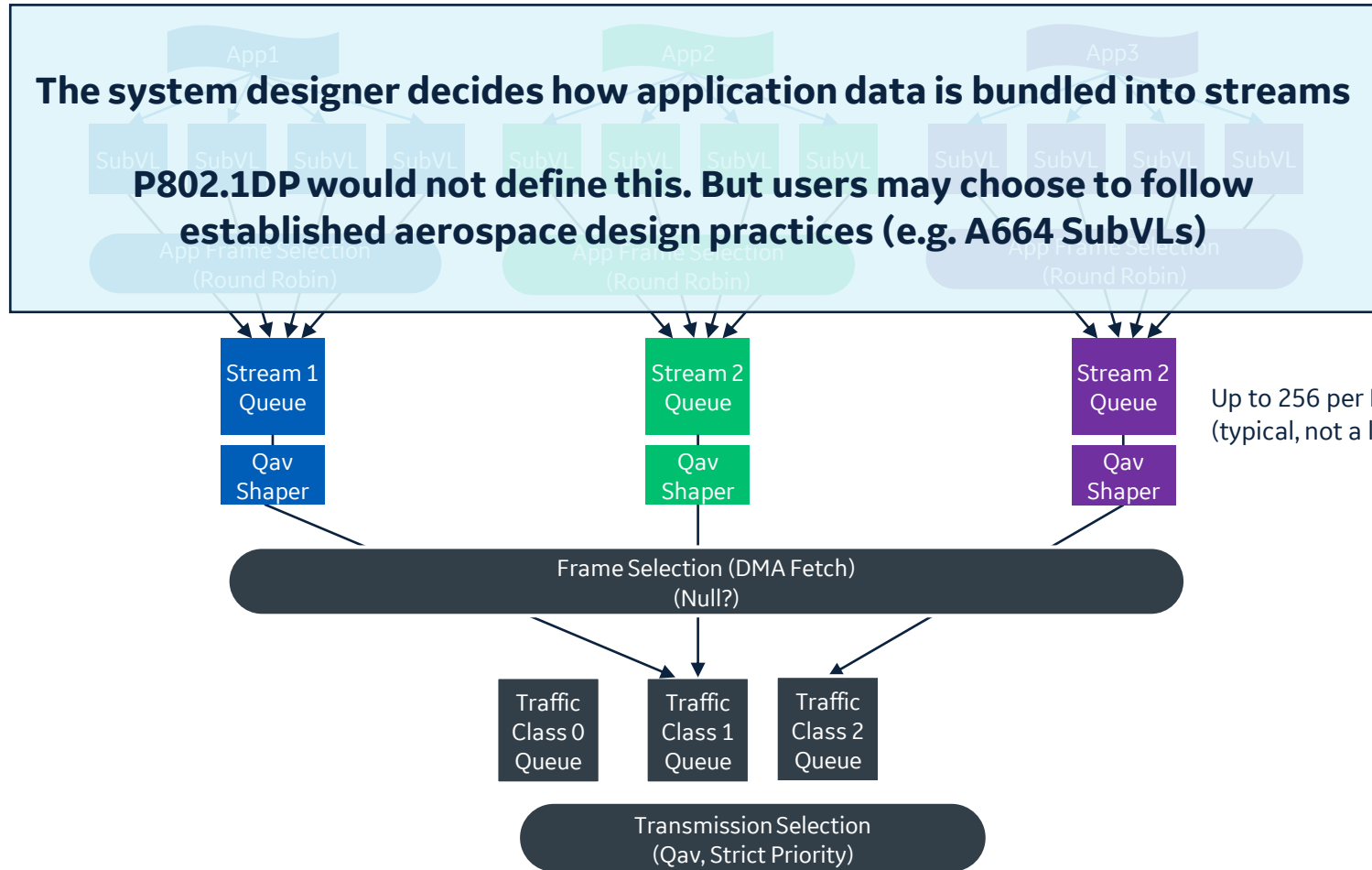
History of per-stream shaping at end stations in Aerospace

Asynchronous applications and shaping in ARINC664 Part 7 (AFDX)



<https://www.ieee802.org/1/files/public/docs2021/dp-jabbar-endsystem-shaping-0921-v00.pdf>

Previously proposed DP solution



<https://www.ieee802.org/1/files/public/docs2021/dp-jabbar-endsystem-shaping-0921-v00.pdf>

Per Stream Shaping



- For DP asynchronous profile, per-stream CBSA is a valid/important use case
- For DP synchronous profile, asynchronous applications (especially legacy) could be transmitted as scheduled traffic with per-stream shapers.
 - Yes, that increases latency due to lack of synchronous apps
 - Desirable to avoid certifying a system with multiple shapers
- The above use cases require per-stream queues and shaping
- Hiding requirements from vendors/suppliers is not a good idea

Per Stream Shaping - Next Steps



Proposal:

- Add a section to clause 7.2 on per stream queues and shaping
- Add conformance statements to clause 5 and PICS in Annex A calling for conformant components to support at least x per-stream shapers

Discussion:

- **How** to require per stream queues for DP conformant end station components?
 - Informative guidance is not desirable
- **When** to add? Modify DIS for Draft 2.0? Rouge comment?