

Recent AAA2C Shaper Discussion

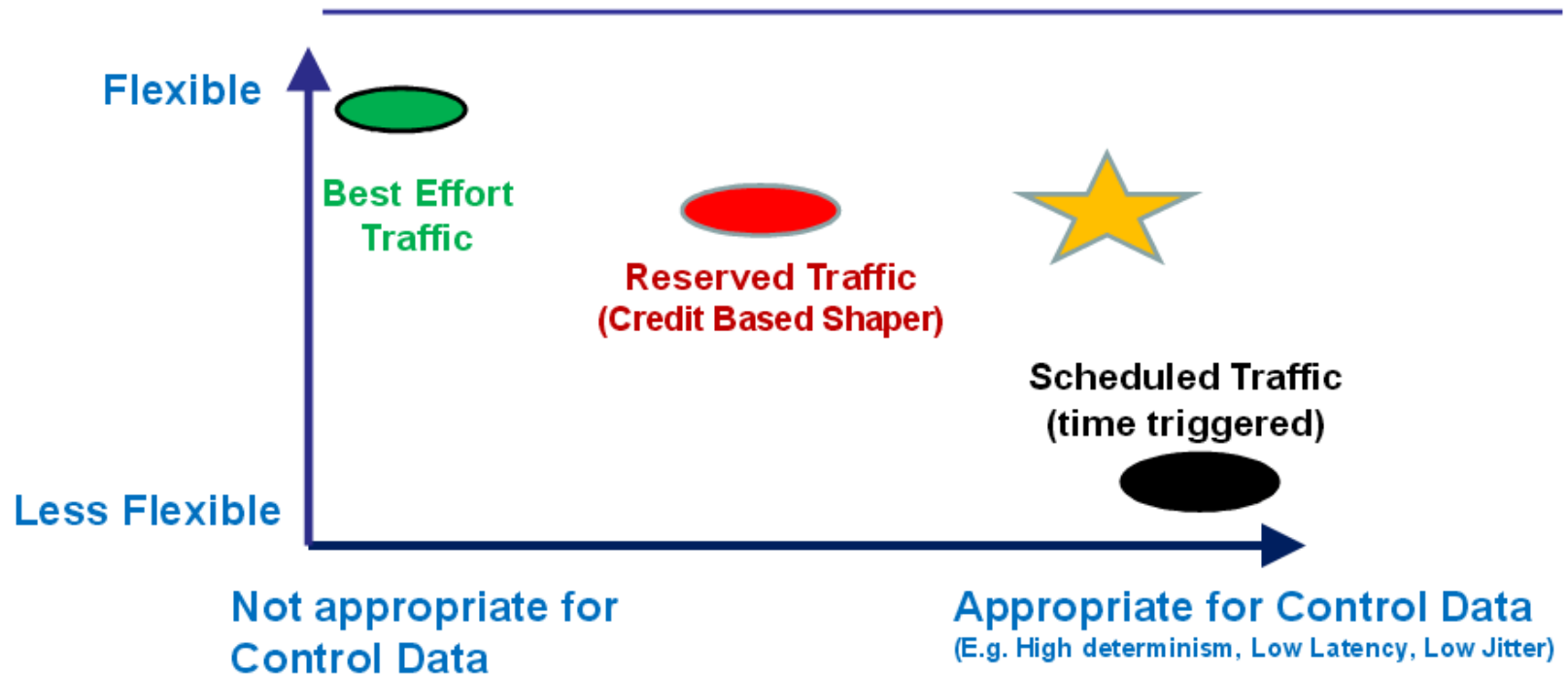
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From Geneva Presentation on AAA2C

- <http://www.ieee802.org/1/files/public/docs2013/new-tsn-jochim-aaa2c-requirements-for-control-traffic-0713-v01.pdf>

Flexible Control Traffic Class



- IEEE 802.1 TSN is currently working on proposals for additional traffic types with the desired properties: **Flexible AND Appropriate for Control Data** ★
- AAA₂C input on requirements / desired properties.

From Recent AAA2C Call (1 of 2)



Results (7/8)



- The AAA2C group discussed preferences and requirements from a user's perspective.
- The group did not discuss potential implementations and is aware of the fact that some of the requirements may be conflicting requirements.
- In case some of the AAA2C requirements are competing requirements that cannot be all be fulfilled by one single traffic class, the next slide gives an indication which limitations of an implementation the AAA2C group would be more / less willing to accept.

From Recent AAA2C Call (2 of 2)

Results (8/8)



Willingness to accept different types of limitations:

Higher
Willingness

Lower
Willingness

- *Max. link utilization not as good as it could be.*
- *Minimum latency is not as good as it could be.
(Related to Req. S6)*
- *Latency turns into a rather complex function of parameters like “Topology, Number of hops, etc.”
Tools are required for analyzing latencies.
(Related to Req. S8)*
- *Latency guarantees may occasionally be violated.
(Related to Req. S4)*

My Recommendations

- Future proposals for new shaper / scheduler shall provide
 - Clear algorithm for egress
 - Clear algorithm for worst-case latency
 - Ideally per-stream
- One example thus far...
 - Peristaltic shaper
 - <http://www.ieee802.org/1/files/public/docs2013/avb-tj-peristaltic-shaper-in-clause-8-style-0313-v1.pdf>