Introduction to Draft 0.1 of IEEE P802.1DC Quality of Service Provision by Network Systems

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P802.1DC draft status

- Next draft is in progress. The initial outline, presented in dc-finn-proposed-text-0518-v01, has held up reasonably well, but is evolving.
- The editor has found two key elements with which to drive the progress of P802.1DC, which are presented in the following slides.
- Because no forwarding (output port selection) decisions are made, and because 802.1CB includes IP/TCP address information, the result will be useful to a wide range of relay systems even though it is restricted to making use of 802.1Q.
- The editor expects to have a first Task Group ballot following the November, 2018 meeting in Bangkok.

QoS Provision Model: the simplified equivalent to 802.1Q, 8.6 The forwarding process
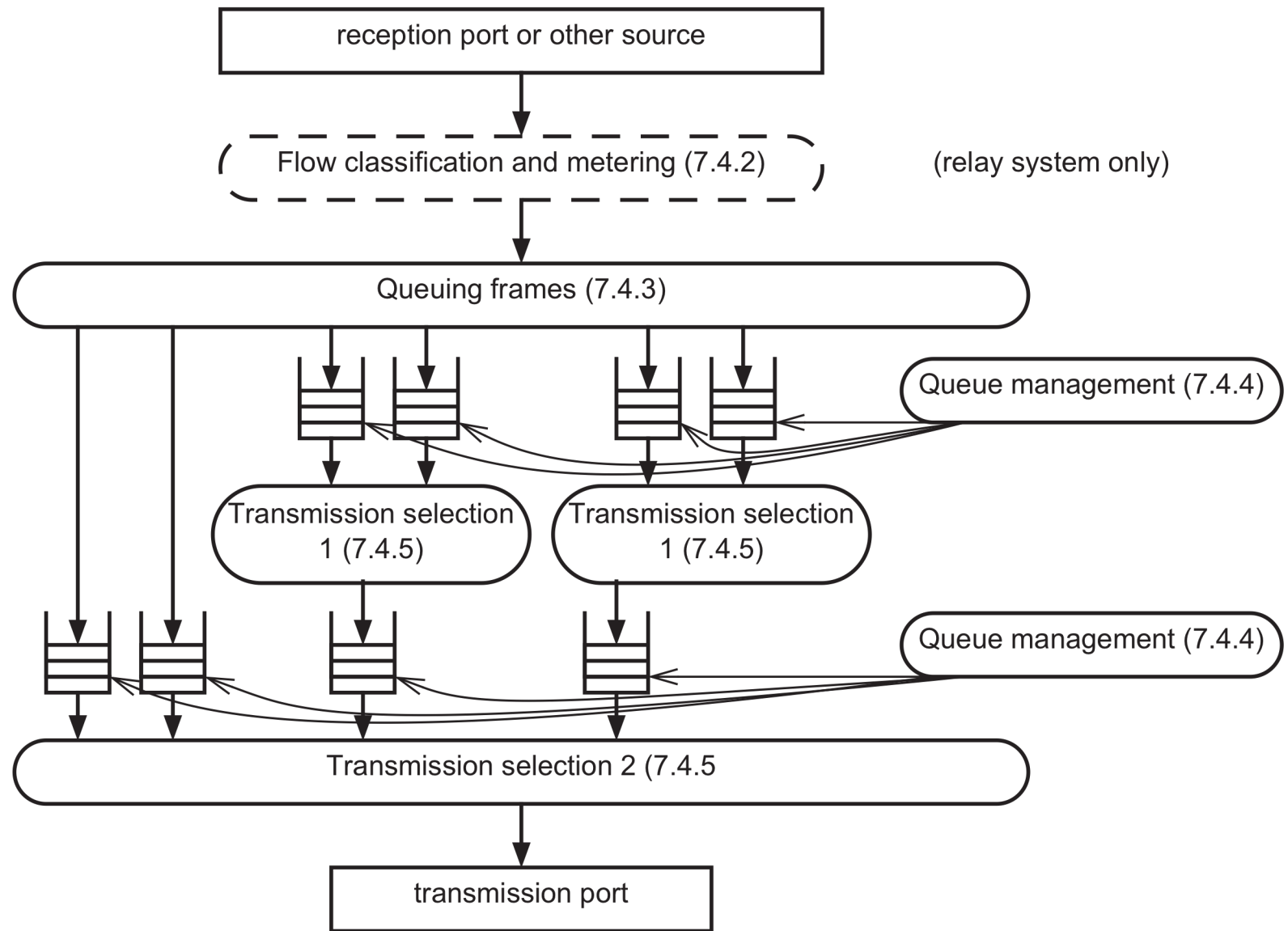

Figure 7-1—Network system QoS functions in forwarding process

QoS Provision model

- The intention is that the preceding figure illustrates what parts of the 802.1Q forwarding process are and are not relevant to a QoS-only **relay system**.

- Removing "Flow classification and metering" leaves just those parts that are relevant to an **end system**.

- "Or other source" is the application in an end station.

- The upper level queues of the two-level queue structure in the preceding figure is very similar to 802.1Q Figure 34-1. It is, in effect, a graphical expansion of the "ATS Shapers (8.6.5.3.3)" box in Figure 8-12 of P802.1Qcr D0.5, and may be useful for P802.1Qcr.

QoS Provision Model: frame parameters

parameter	defined in	port selection	stream identification	direct QoS relevance	modifyable by QoS
destination_address	ISS	Yes	Yes	no	no
source_address	ISS	Yes	Yes	no	no
mac_service_data_unit	ISS	no	Yes	no	no
priority	ISS	no	Yes	Yes	Yes
drop_elibible	ISS	no	no	Yes	Yes
vlan_identifier	EISS	Yes	Yes	no	no
frame_check_sequence	ISS	Yes	no	no	no
service_access_point_identifier	ISS	Yes	no	no	no
connection_identifier	ISS	Yes	no	no	no
stream_handle	802.1CB	no	Yes	no	no
other uses of connection_identifier	ISS	Yes	no	no	no
flow_hash	EISS	Yes	no	no	no
time_to_live	EISS	Yes	no	no	no
internal priority value specification (IPV, 7.4.2)	PSFP	no	no	Yes	Yes
IP source address	802.1CB	Yes	Yes	no	no
IP destination address	802.1CB	Yes	Yes	no	no
IP differentiated services code point (RFC791, RFC2460)	802.1CB	Yes	Yes	no	no
IP next protocol	802.1CB	Yes	Yes	no	no
IP transport source port number	802.1CB	Yes	Yes	no	no
IP transport destination port number	802.1CB	Yes	Yes	no	no

QoS provision model: parameters

- The preceding Table is the beginning of the normative description of the "reception port" block of the QoS provision model.
- More than the ISS and EISS parameters are described; the extra parameters are relevant to 802.1CB stream identification.
- Some parameters (e.g. service_access_point_identifier) are relevant only to output port selection in a bridge, so are irrelevant to the QoS provision model. Others are relevant to stream identification or class of service selection. Some can be modified as part of the QoS process.

Thank you