Flow Meter
contribution to IEC/IEEE 60802

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8.6.5.1.3 Flow meter instance table

The flow meter instance table contains a set of parameters for each flow meter instance. The parameters for each flow meter instance are as specified in *Bandwidth Profile Parameters and Algorithm* in MEF 10.3, plus some additional parameters, as follows:

a) *Flow meter instance identifier.* An integer value identifying the flow meter instance.
b) *Committed information rate (CIR)*, in bits per second.
c) *Committed burst size (CBS)*, in octets.
d) *Excess Information Rate (EIR)*, in bits per second.
e) *Excess burst size (EBS) per bandwidth profile flow*, in octets.
f) *Coupling flag (CF)*, which takes the value 0 or 1.
g) *Color mode (CM)*, which takes the value *color-blind* or *color-aware*.
h) *DropOnYellow*, which takes the value TRUE or FALSE. A value of TRUE indicates that yellow frames are dropped (i.e., discarded); a value of FALSE indicates that yellow frames will have the drop_eligible parameter set to TRUE.
i) *MarkAllFramesRedEnable,* which takes the value TRUE or FALSE. A value of TRUE indicates that the MarkAllFramesRed function is enabled; a value of FALSE indicates that the MarkAllFramesRed function is disabled. The default value of MarkAllFramesRedEnable is FALSE.
j) *MarkAllFramesRed*, which takes the value TRUE or FALSE. If MarkAllFramesRedEnable is TRUE, a value of TRUE in MarkAllFramesRed indicates that all frames are dropped (i.e., discarded). If MarkAllFramesRed is False, it has no effect. The default value of MarkAllFramesRed is FALSE; if the operation of the flow meter causes any frame to be discarded, then MarkAllFramesRed is set TRUE.

NOTE—Envelope and Rank, as defined in MEF 10.3, are not used for PSFP; i.e., PSFP uses the reduced functionality algorithm described in 12.2 of MEF 10.3.

RED text: Mandatory
BLACK text: Optional

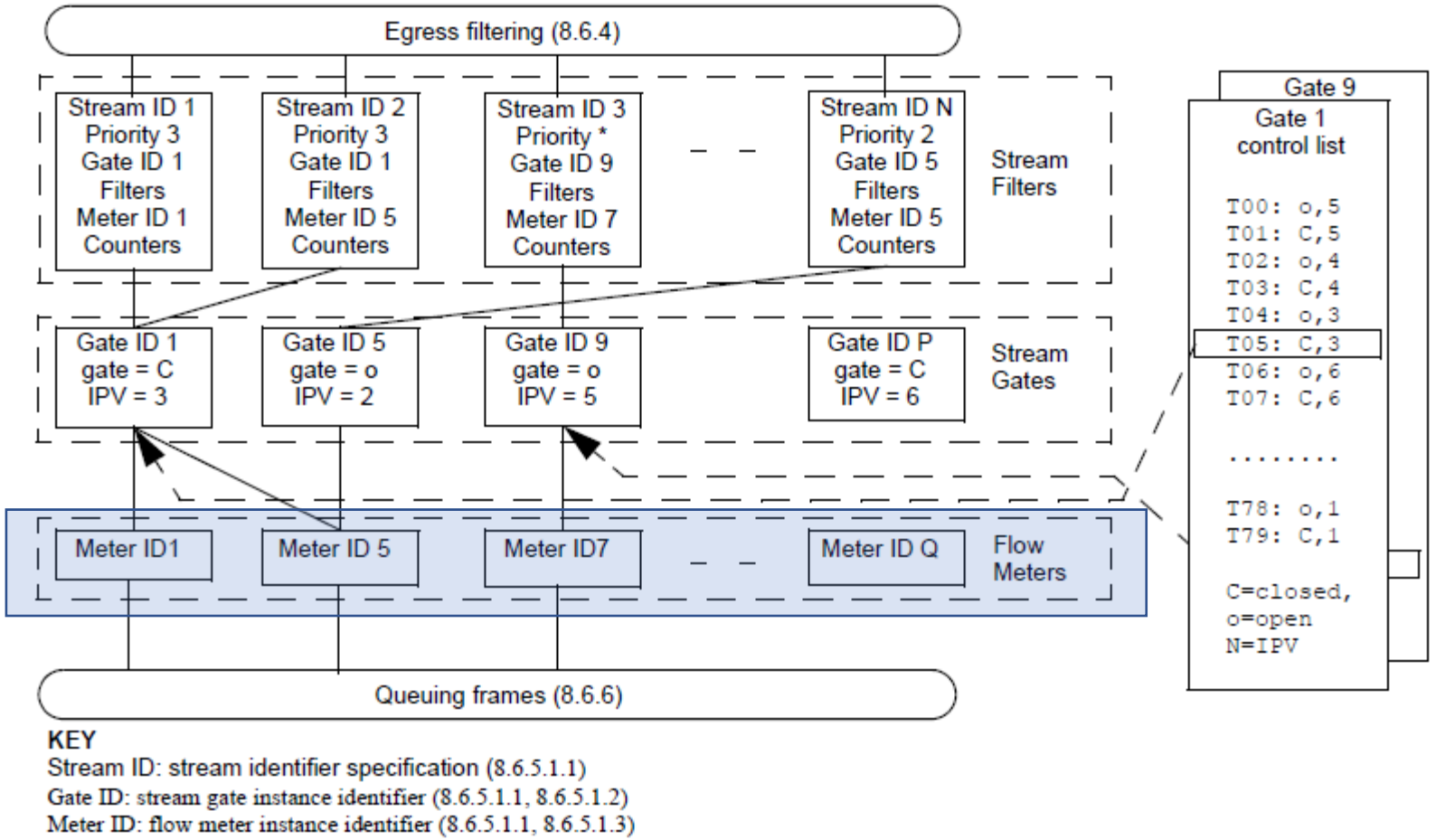

Figure 8-13—Per-stream filtering and policing

Meter ID: flow meter instance identifier (8.6.5.1.1, 8.6.5.1.3)

8.6.5.1.1 Stream filter instance table

The stream filter instance table consists of an ordered list of *stream filters* that determine the filtering and policing actions that are to be applied to frames received on a specific stream. Each stream filter contains the following elements:

a) A *stream filter instance identifier*. This is an integer value that uniquely identifies the filter instance, and acts as an index to the table. The ordering of the identifier values defines the ordering of the list of stream filters; smaller identifier values appear earlier in the ordered list.

b) A *stream_handle specification*. This can be either of the following:
1) A single stream_handle value, as specified in IEEE Std 802.1CB
2) A wild-card value that matches any stream_handle value

c) A *priority specification*. This can be either of the following:
1) A single priority value
2) A wild-card value that matches any priority value

d) A *stream gate instance identifier.* Identifies the stream gate instance (8.6.5.1.2) that is used by the stream filter. A stream gate can be in one of two states:
1) Open: Frames pass through the gate.
2) Closed: Frames do not pass through the gate.

e) Zero or more *filter specifications*. The actions specified in a filter specification can result in a frame passing or failing the specified filter. Frames that fail a filter are discarded. The filter specification can include other actions, such as setting the drop_eligible parameter to TRUE. The following filter specifications are currently defined:
1) *Maximum SDU size*. Frames that exceed this SDU size do not pass the stream filter; frames that do not exceed this SDU size can pass the stream filter if all other filter conditions are met.
NOTE 1—The Maximum SDU size is defined per stream and can therefore differ from the queueMaxSDU specified in 8.6.8.4. As queueMaxSDU is applied after the stream filters, it is possible that a frame that passes the Maximum SDU size stream filter will later be discarded because its SDU size exceeds queueMaxSDU.
2) *Flow meter instance identifier*. The identifier of an instance of a flow metering function as specified in 8.6.5. The flow meter instance is an index into a *flow meter instance table* (8.6.5.1.3) that specifies the operating parameters for each flow meter instance. Flow metering is always applied after any other filter specifications that could result in frame discard.

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8.6.5.1.1 Stream filter instance table

The stream filter instance table consists of an ordered list of *stream filters* that determine the filtering and policing actions that are to be applied to frames received on a specific stream. Each stream filter contains the following elements:

f) Frame counters
1) A count of frames matching both the stream_handle and priority specifications
2) A count of frames that passed the stream gate
3) A count of frames that did not pass the stream gate
4) A count of frames that passed the Maximum SDU size filter
5) A count of frames that did not pass the Maximum SDU size filter
6) A count of frames that were discarded as a result of the operation of the flow meter

g) A *StreamBlockedDueToOversizeFrameEnable* parameter, which takes the value TRUE or FALSE. A value of TRUE indicates that the StreamBlockedDueToOversizeFrame function is enabled; a value of FALSE indicates that the StreamBlockedDueToOversizeFrame function is disabled. The default value of StreamBlockedDueToOversizeFrameEnable is FALSE.

h) A *StreamBlockedDueToOversizeFrame* parameter, which takes the value TRUE or FALSE. If StreamBlockedDueToOversizeFrameEnable is TRUE, a value of TRUE in StreamBlockedDueToOversizeFrame indicates that all frames are to be dropped (i.e., the stream filter behaves as it would if the maximum SDU size were to be set to 0 octets). If StreamBlockedDueToOversizeFrame is FALSE, it has no effect. The default value of StreamBlockedDueToOversizeFrame is FALSE; if any frame is discarded because it exceeds the Maximum SDU size for the stream, then StreamBlockedDueToOversizeFrame is set TRUE.

RED text: Mandatory
BLACK text: Optional