802.1Qau Draft 1.0 Ballot Issues

Version 1

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Vote summary and Issues

Vote summary

- Ballot results:
  Yes: 0 No: 17 Abstain: 35
- Ballot comments: 210
  E: 39 T: 37 G: 0
  ER: 52 TR: 81 GR: 1
- This result is expected, of course, since this was the first Task Group ballot.

Issues

- The following list of issues are those such that:

  More than one commenter raised the issue.

  The proposed resolution requires looking at more than one comment.

- There are a number of issues that were either raised by only one commenter, or the resolution is in only one comment.
- Whether a given comment is or is not listed in the Issues list is a rather arbitrary choice made by the editor, and is not a reflection on the perceived worth of the comment.

Issues

- Station Input segregation (see discussion, below)

  3, 6, 166

- Per-CN Class flows (see discussion, below)

  45, 68, 69, 73, 88, 135, 151, 202

- CNM extension

  95, 96

- CNM size

  89, 177

- Configuration difference

  84, 198

Issues

- LLDP TLV

  97, 142

- Edge Port vs. Edge Control Point

  43, 44, 46, 70, 147

- Table 30-1

  28, 78, 100, 149

- Clause 30 rework

  9, 21, 25, 27, 29, 30, 32, 34, 35, 37, 63, 79, 80, 113, 150, 178, 190, 210

End station diagram issues: Input

Issue: End station Fig. 31-2: Input

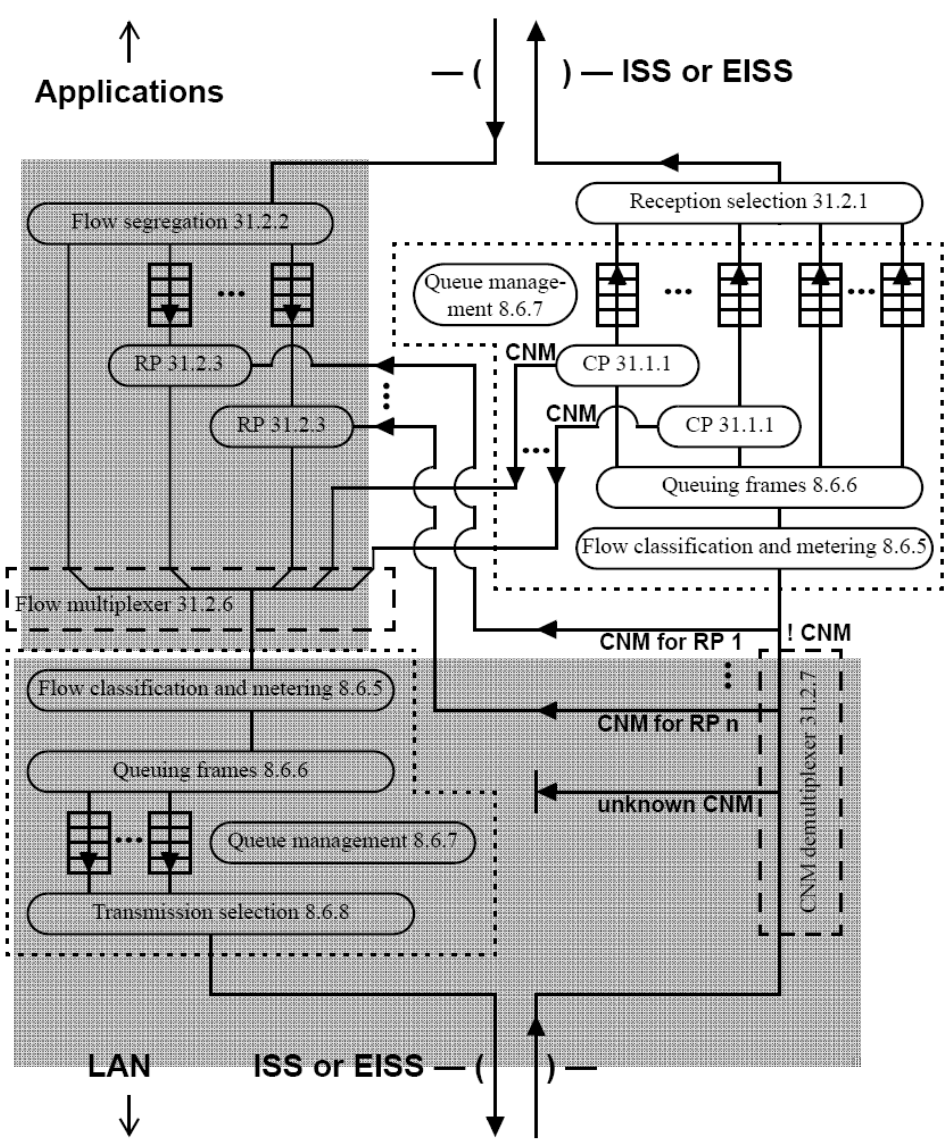


Figure 31-2—Congestion aware queue functions in a station

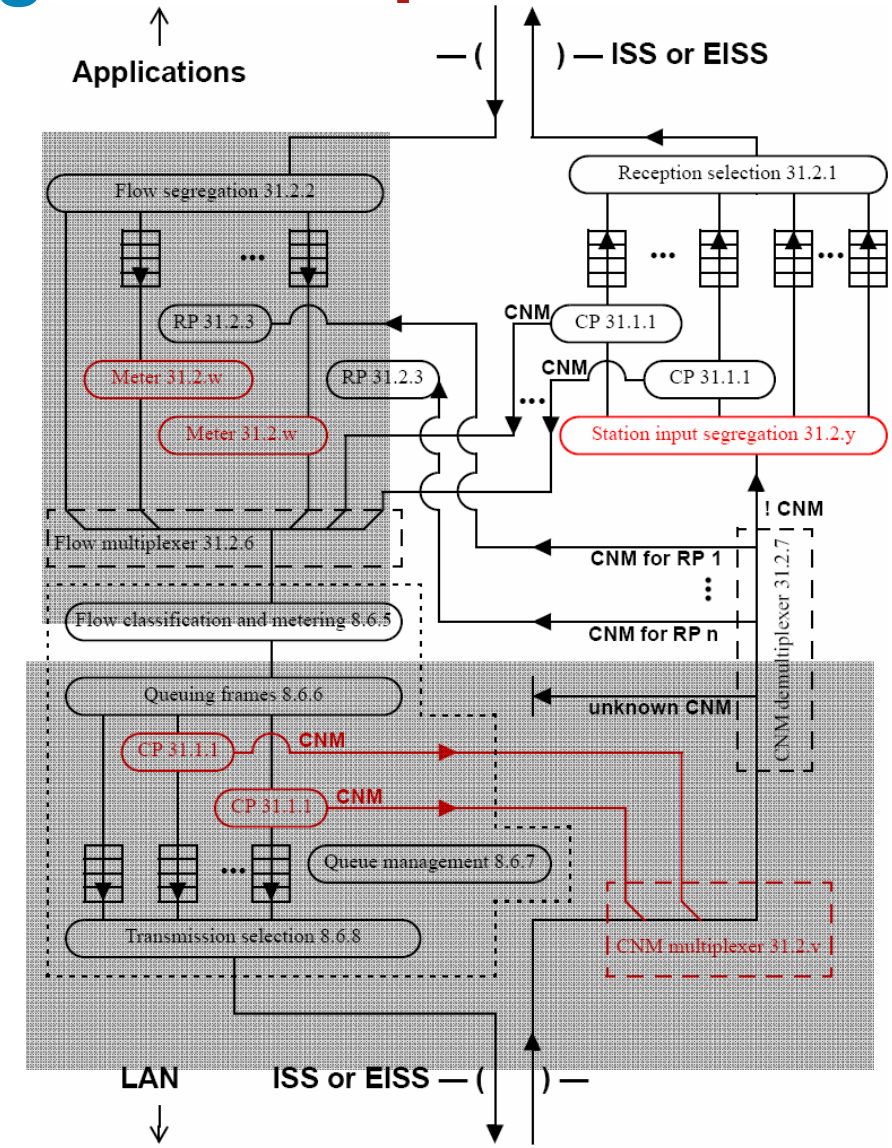
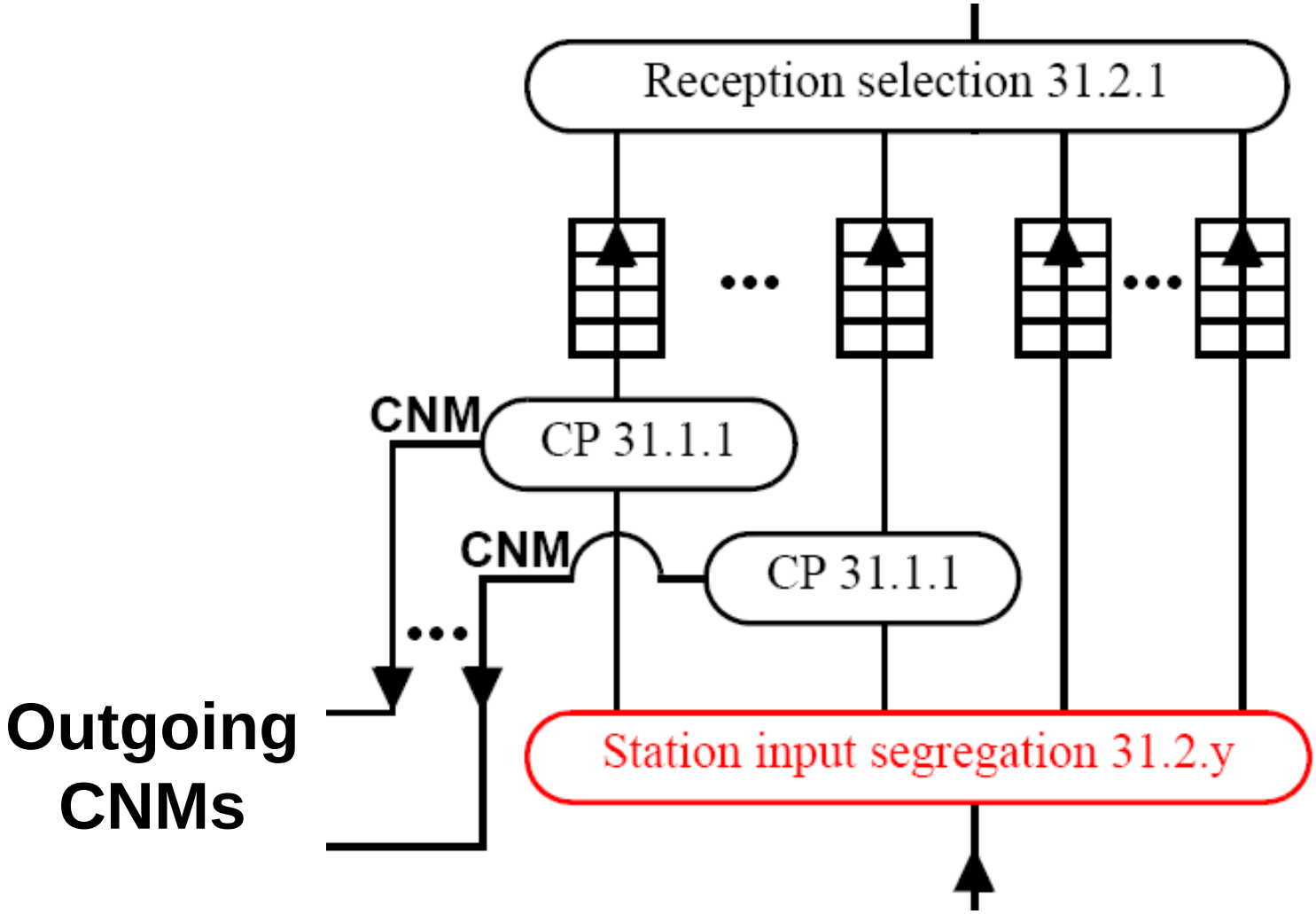


Figure 31-4—Congestion aware queue functions in a station

Issue: End station Fig. 31-2: Input

- In Draft 1.0, the end station must have the same per-priority queues and CPs that a Bridge must have.
- But, an end station may not need to issue CNMs based only on priority; it may have the ability to issue CNMs based on any other granularity, e.g. per-application.
- Therefore, we will not specify how the end station segregates traffic among CPs.

Issue: Station Input Segregation



- Fragment of Draft 1.0 Figure 31-2

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End station diagram issues: Output

Issue: End station Fig. 31-2: Choice 1

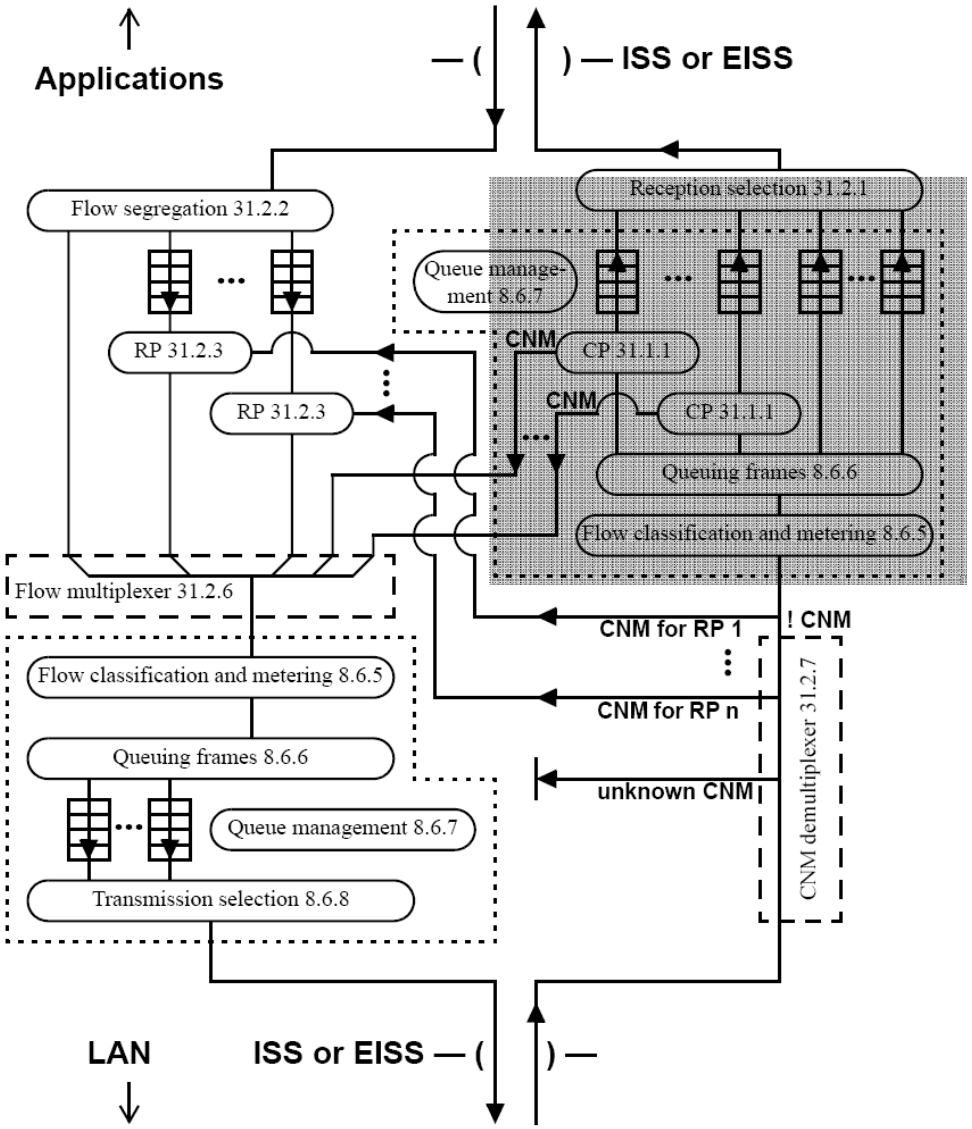


Figure 31-2—Congestion aware queue functions in a station

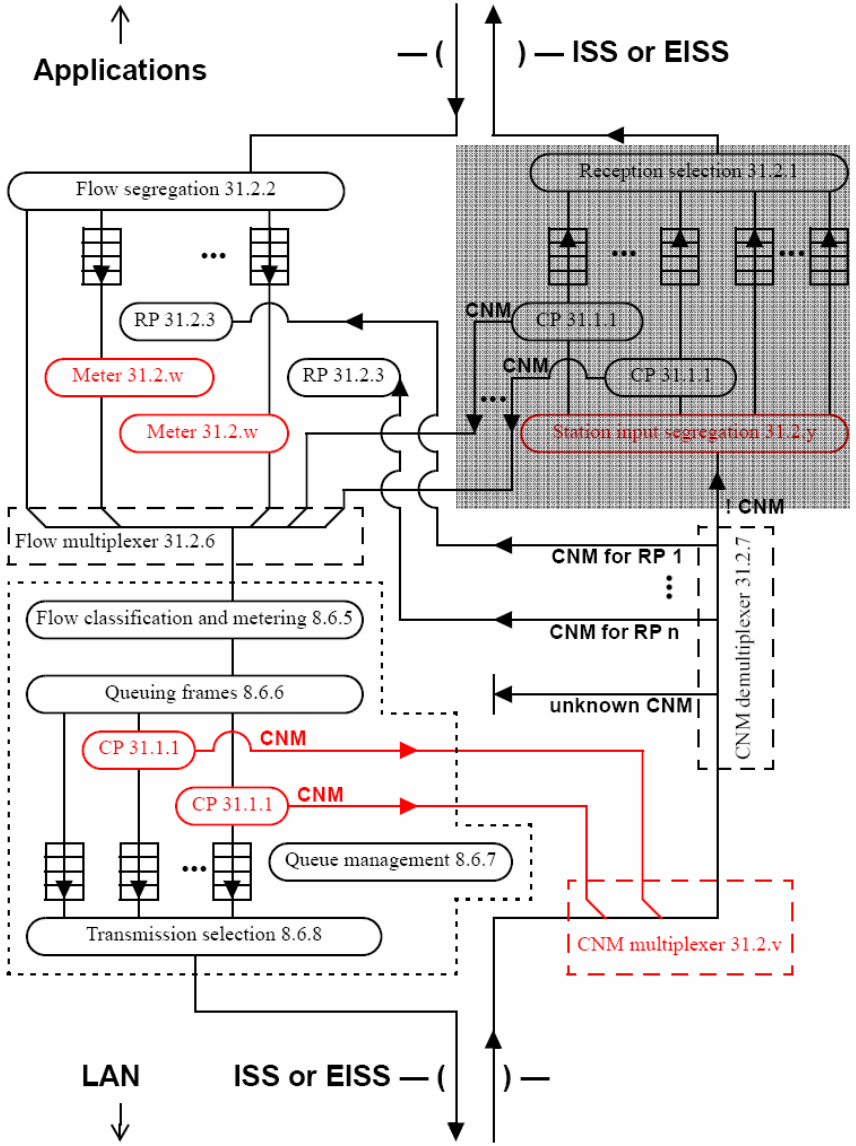


Figure 31-4—Congestion aware queue functions in a station

Issue: End station Fig. 31-2: Choice 1

- In Draft 1.0, a Flow queue can have an attached RP.

  The RP state machine determines the current flow rate.

  But, there is no function specified to actually drain the queues at that flow rate.

- Therefore, we transmit CNMs internally, to prevent priority queue overflow.
- This may use a faster sampling rate (e.g., 25% instead of 1%).
- From outside the box, it is impossible to tell whether the CNMs are actually generated.

Issue: End station Fig. 31-2: Choice 2

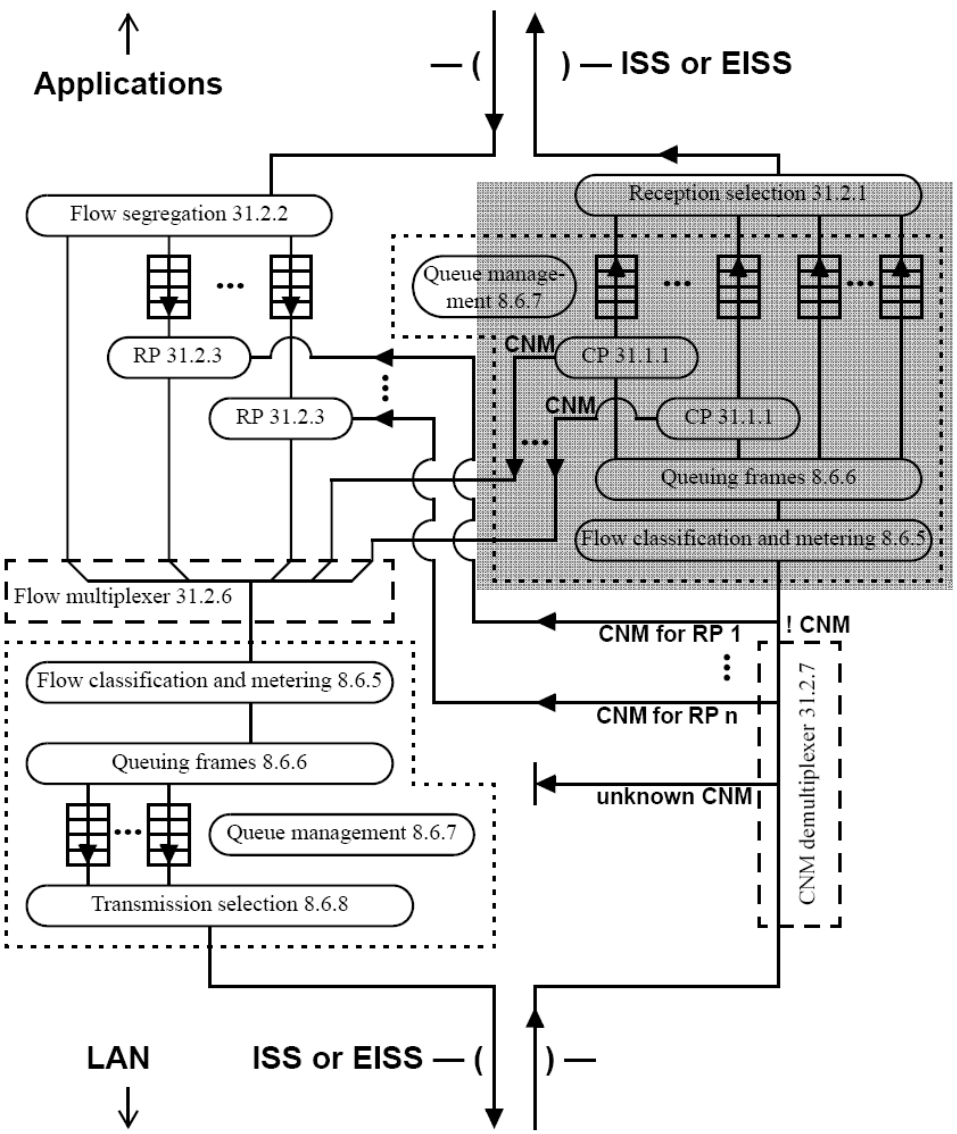


Figure 31-2—Congestion aware queue functions in a station

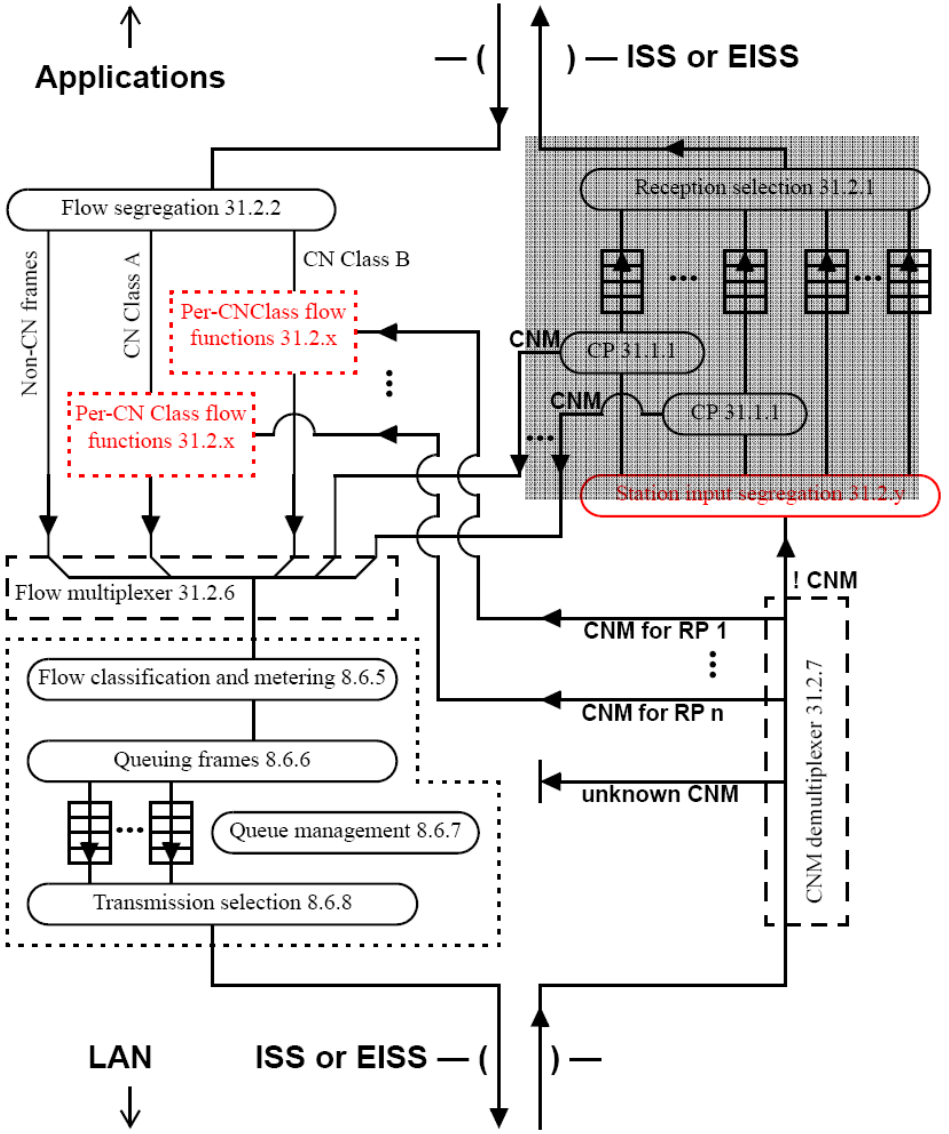
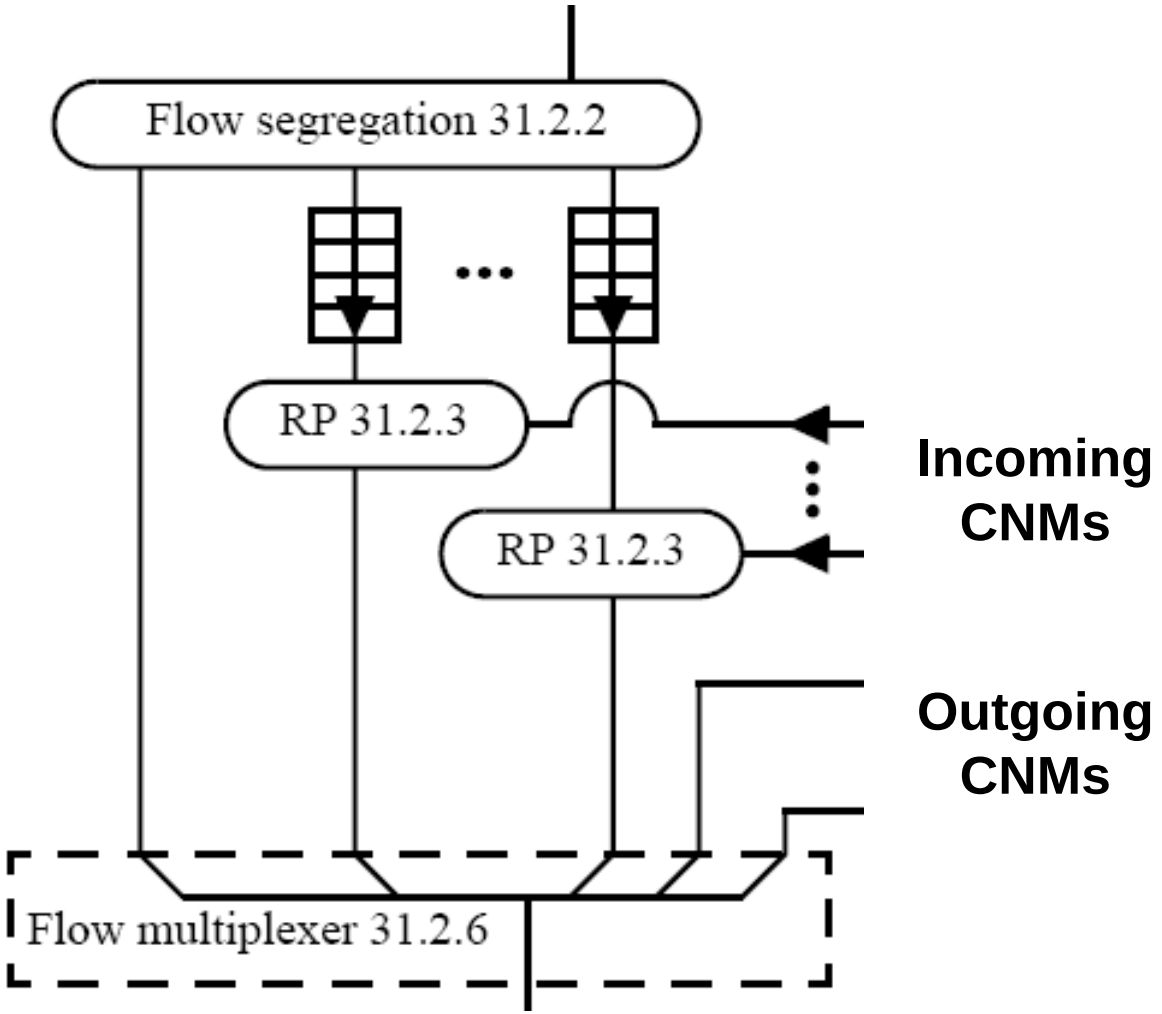


Figure 31-2—Congestion aware queue functions in a station

Issue: End station diagram, Fig. 31-3



- Fragment of Draft 1.0 Figure 31-2

Issue: Per-CN Queue flows

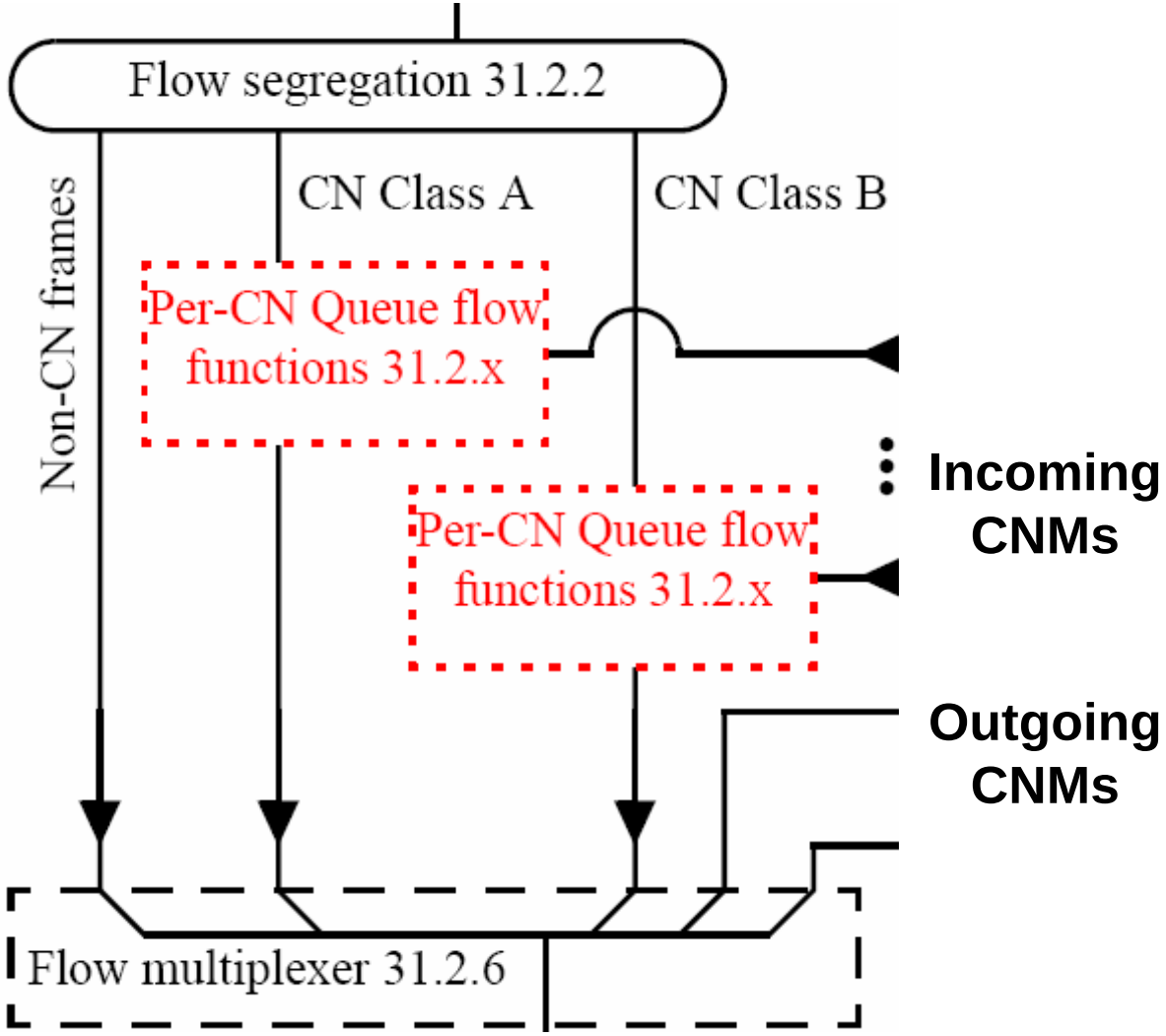
- In Draft 1.0, a Flow queue can have an attached RP.

  The RP state machine determines the current flow rate.

  But, there is no function specified to actually drain the queues at that flow rate.

- Therefore, we split the RP functions up by CN queue, one Per-CN queue function per CN priority queue.

Issue: End station diagram, Fig. 31-3



- Revised fragment of Figure 31-2

Issue: Per-CN Queue flows

- Non-CN traffic bypasses the Per-CN Queue flow functions.
- There is one Per-CN Queue flow function for each CN priority queue.
- More than one CN Class can be directed to the same priority queue.

Issue: Per-CN Queue function

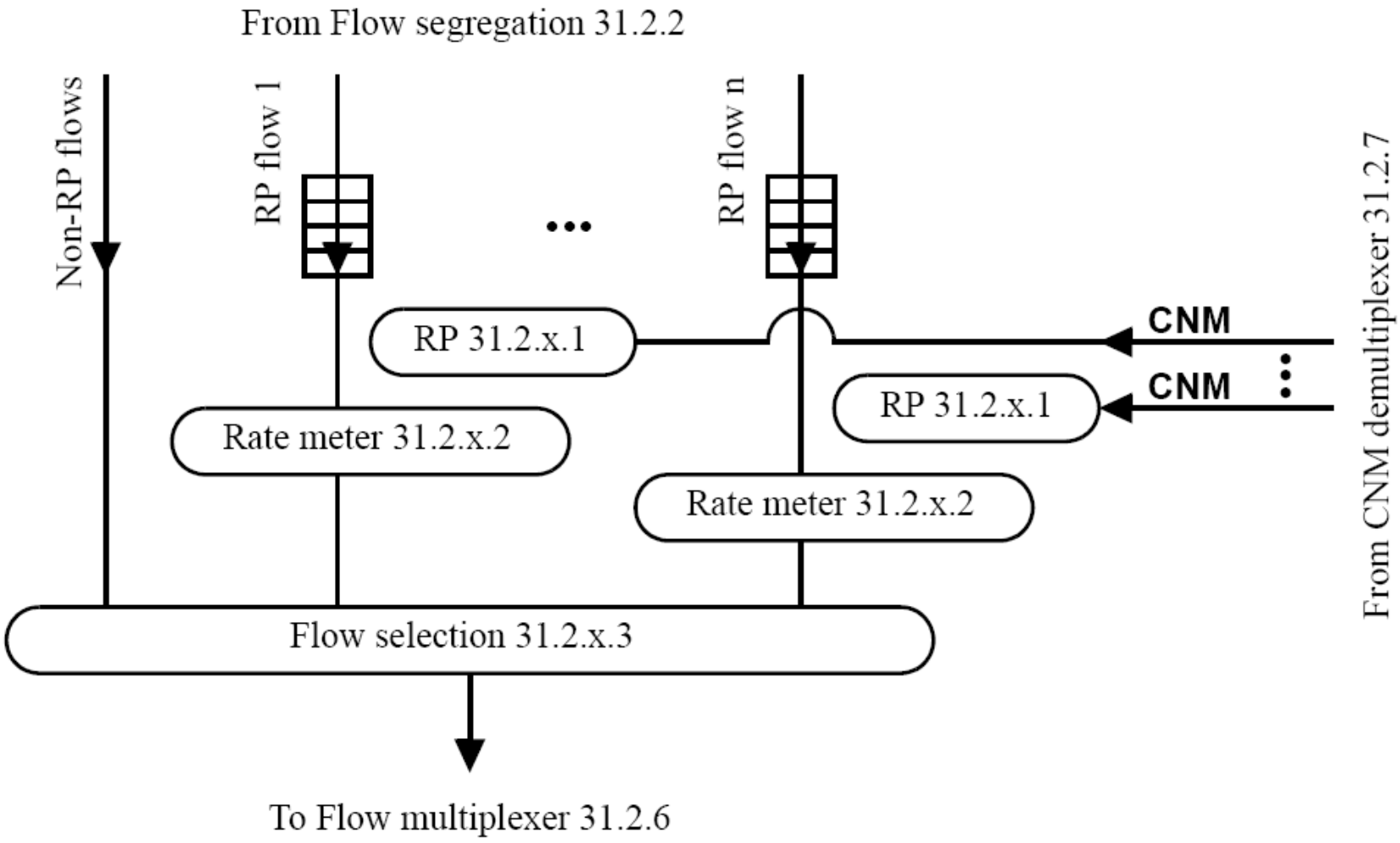


Figure 31-3—Per-CN queue flow functions in a station

Per-CN Queue function: Rate meter

- Rate Meter offers frames to lower layers at the rate specified by the RP.
- If it is time to offer a new frame, but the old frame has not yet been taken, then the transmit rate clock freezes until the old frame is taken, and the new frame becomes the old frame.

Per-CN Queue function: Flow selection

- The Flow selection function never takes a frame if its corresponding CN priority queue has more than one frame in it.
- Flow selection takes frames in the following order:

  Frames not controlled by an RP are taken first.

  If there are no frames that are not controlled by an RP, the controlled frames are taken in proportion to the RPs' current transmit rates.

Issue: End station Fig. 31-2: Choices

- Do we do:

  Choice 1 (Internal CNMs); or

  Choice 2 (Disconnect actual transmit rate from RP transmit rate).