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Olsen et al.

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(54) **HIERARCHICAL QOS BEHAVIORAL MODEL**

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(51) **Int. Cl.**
H04L 12/56 (2006.01)

(52) **U.S. Cl.** **370/412**; 370/428

(58) **Field of Classification Search** 370/412, 370/395.4, 395.43, 468, 428, 392, 395.21; 709/232

See application file for complete search history.

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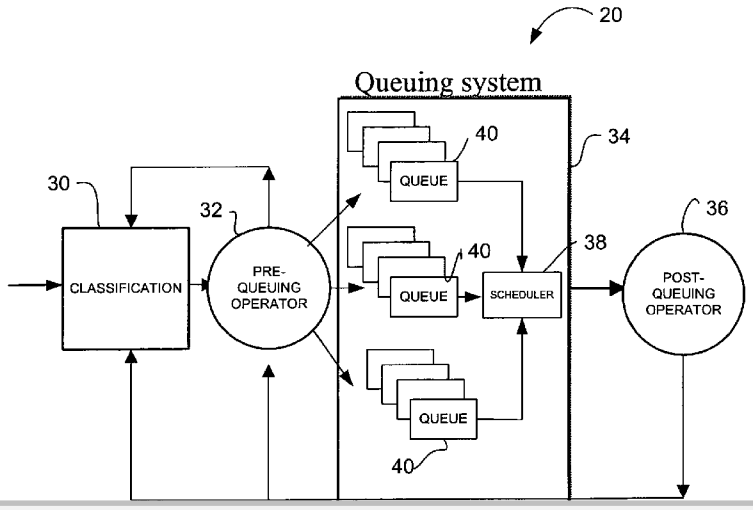
(57) **ABSTRACT**

A hierarchical traffic management system and method (i.e., a QoS behavioral model) are disclosed herein. The system includes a classifier operable to identify and classify incoming traffic streams and a queuing system. The queuing system includes a plurality of queues and is operable to apply scheduling policies to the traffic streams. The queues of the queuing system each include enqueue attributes configured to control a depth of the queue and dequeue attributes configured to control scheduling of the queue. The dequeue attributes include minimum bandwidth, maximum bandwidth, excess bandwidth, and priority, wherein each of the queues has one or more of the dequeue attributes defined.

27 Claims, 6 Drawing Sheets



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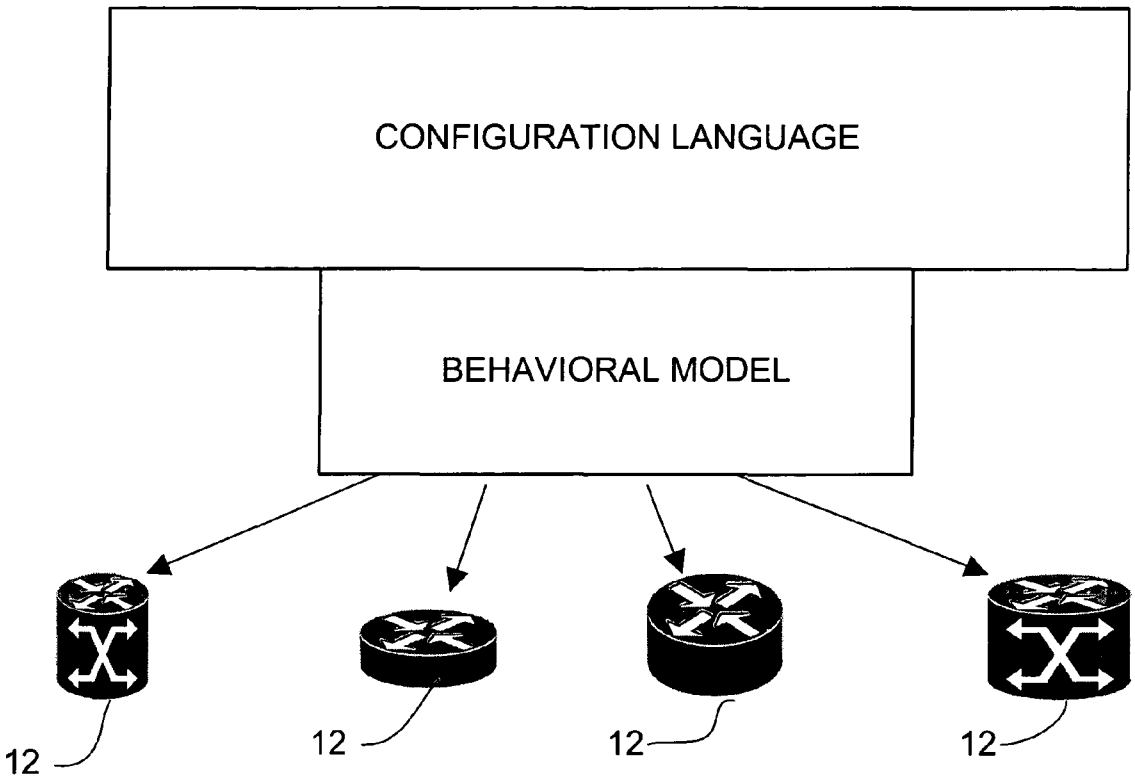

FIGURE 1

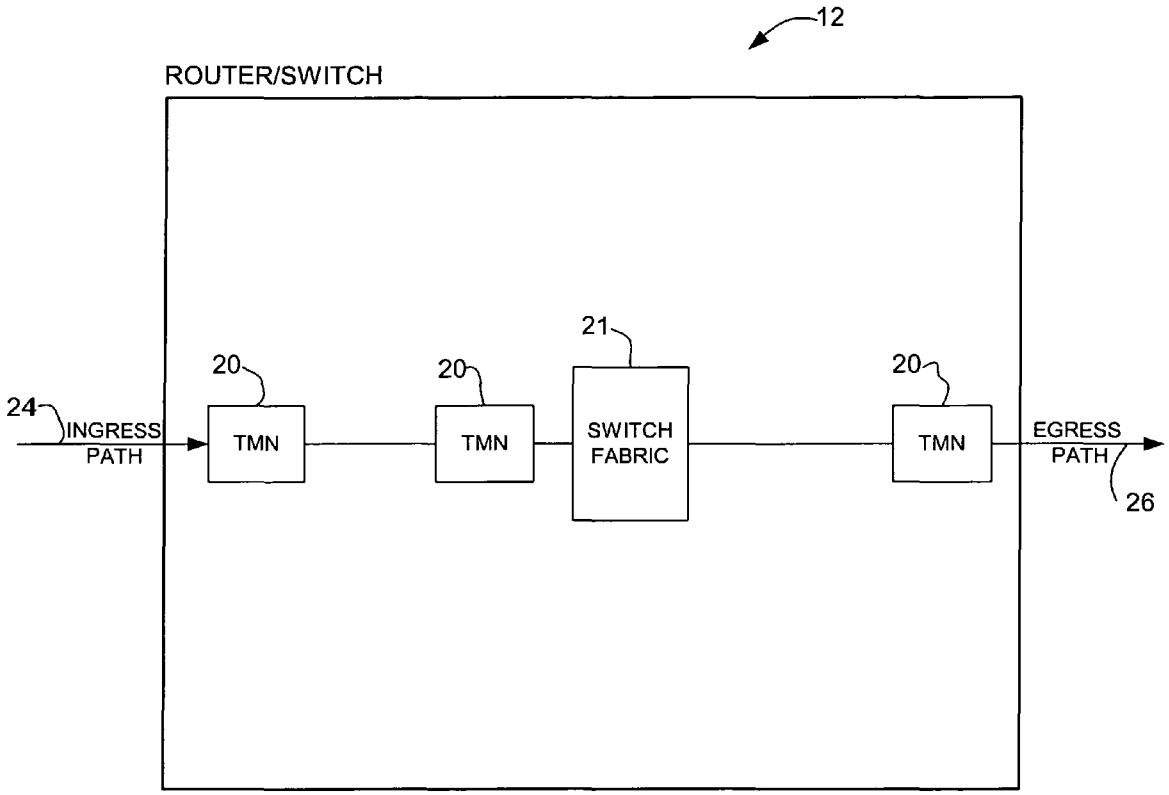

FIGURE 2

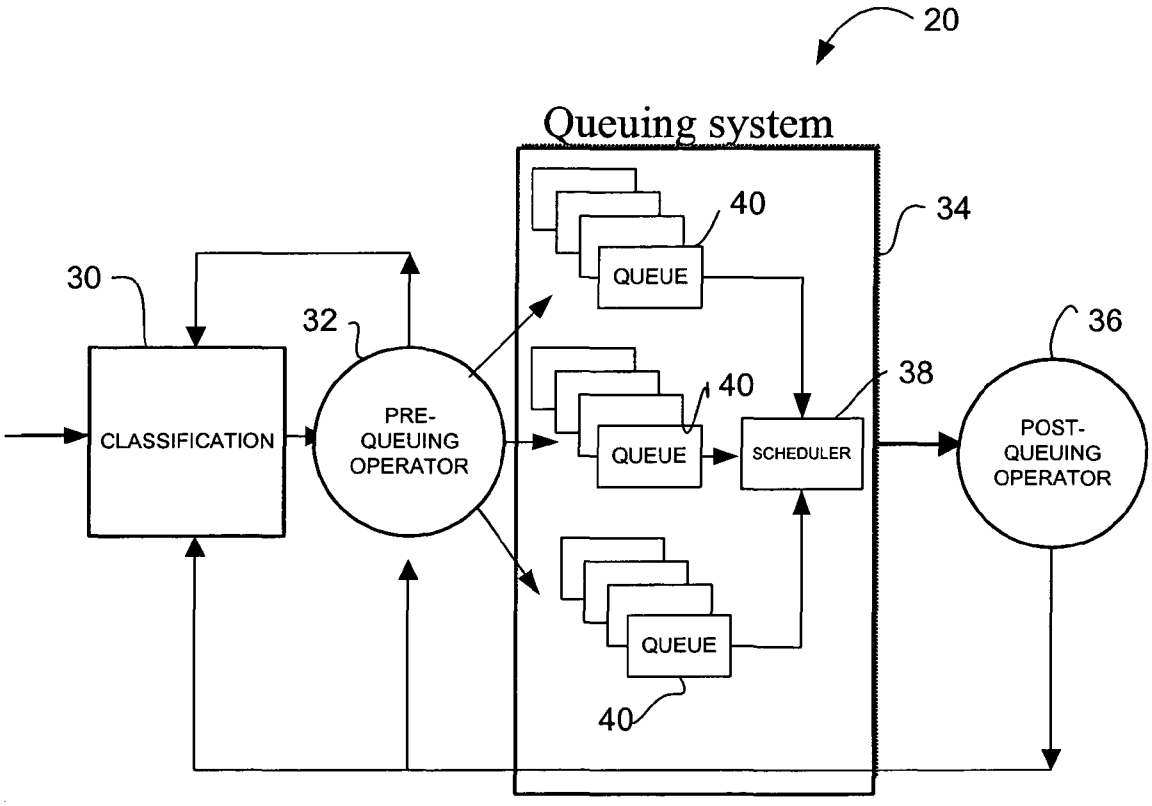

FIGURE 3

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