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(54) Title: BANDWIDTH MANAGEMENT AND ACCESS CONTROL FOR AN ATM NETWORK

(57) Abstract

A bandwidth management system (120) manages a plurality of virtual data connections within a communications network. The system includes an input (122) for receiving data cells, wherein each cell is associated with a particular one of the virtual connections. The system also includes a cell pool, coupled to the input for storing the cells, first and second queues (126-128) for ordering the virtual connections, and an output (137) for transmitting cells from the cell pool. The relative position of a virtual connection in the first queue is determined by an eligibility variable that varies according to an anticipated data rate associated with the particular virtual connection and according to an amount of time that the particular virtual connection has been in the first queue. The relative position of a virtual connection in the second queue varies according to a predetermined quality of service that is assigned to each of the virtual connections.

