METHOD FOR PROCESSING EARLY ARRIVAL MESSAGES WITHIN A MULTINODE ASYNCHRONOUS DATA COMMUNICATIONS SYSTEM

ABSTRACT

A message-passing protocol for accommodating early arrival messages is disclosed. The protocol includes transmitting the message from sender (14) to receiver (16) without waiting for a request for the message from the receiver (16); determining at the receiver (16) if a receive buffer has been posted for the message; and if the receive buffer has not been posted for the message, then either truncating the message by storing its message header in an early arrival queue at the receiver and discarding its data or allocating a temporary receive buffer at the receiver to hold the message data. Upon the receiver being ready to post a receive buffer for an early arrival message, the receiver checks the early arrival queue for the corresponding message header, and if the message header is in the early arrival queue and the message data has been discarded, then the receiver sends a pull request to the sender to retransmit the message to the receiver.

No Figure