03:02

POLLING

★ The polling protocol requires one of the nodes to be designated as a Master node (Primary station).

★ The master node polls each of the nodes in a round-robin fashion.

★ In particular, the master node first sends a message to node 1, saying that it (node 1) can transmit up to some maximum number of frames.

★ After node 1 transmits some frames, the master node tells node 2 it (node 2) can transmit up to the maximum number of frames.

★ The master node can determine when a node has finished sending its frames by observing the lack of a signal on the channel.

NESO ACADEMY

04:40

POLLING

★ The procedure continues in this manner, with the master node polling each of the nodes in a cyclic manner.

★ The polling protocol eliminates the collision.

★ This allows polling to achieve a much higher efficiency.

★ The first drawback is that the protocol introduces a polling delay—the amount of time required to notify a node that it can transmit.

★ The second drawback, which is potentially more serious, is that if the master node fails, the entire channel becomes inoperative.

NESO ACADEMY

06:11

POLLING – FUNCTIONS

★ **Poll function** : If the primary wants to receive data, it asks the secondaries if they have anything to send.

★ **Select function** : If the primary wants to send data, it tells the secondary to get ready to receive.

EFFICIENCY OF POLLING

Let T_{poll} be the time for polling and T_t be the time required for transmission of data. Then,

$$\text{Efficiency} = \frac{T_t}{T_t + T_{poll}}$$