

Title: Go back N & Selective repeat ARQ

Problem Definition:

Write a program to simulate Go back N & selective repeat mode of sliding window protocol in peer-to-peer mode.

Learning objectives

Students will be able to understand Go back N & selective repeat modes of sliding window protocol.

Theory:

→ Data link layer is responsible for implementation of point-to-point flow & error control mechanism.

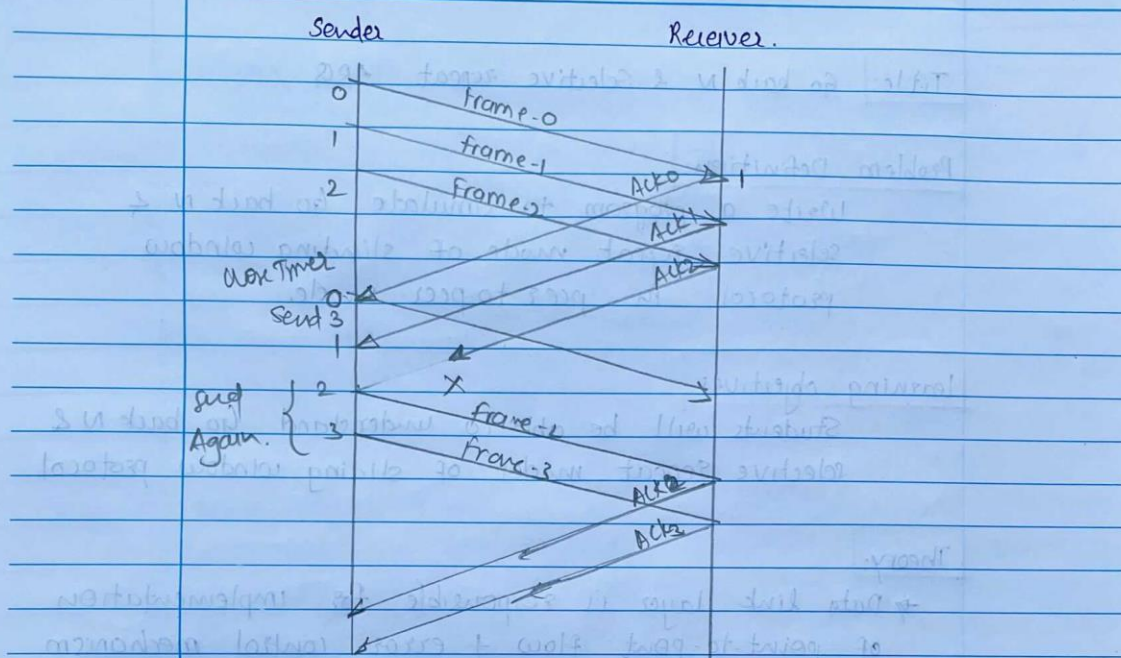
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Go Back N ARQ

1) Stop and wait ARQ mechanism doesn't utilize the resources at their best.

2) When acknowledgement is received, the sender sits idle & does nothing.

3) In Go-Back-N ARQ method, both sender & receiver maintain a window.



- ⇒ The sending window size enables the sender to send multiple frames without receiving the acknowledgement of previous one.
- ⇒ The receiving window enables the receiver to receive multiple frames & acknowledge them. The receiver keeps track of incoming frame's sequence numbers.
- ⇒ Sender checks up to what sequence number it has received positive acknowledgement. If all frames are positively acknowledged then sender sends next set of frames.
- ⇒ If sender finds negative Ack then retransmits all frames in that set.

Selective Repeat ARQ:

- 1) In Go Back-N ARQ, it is assumed receiver doesn't have any buffer for its window size & has to process each frame as it comes.
- 2) This enforces sender to retransmit all frames in the set but in selective repeat ARQ, the receiver keeps a track of sequence numbers, buffers the frames in memory & sends NACK for missing & damaged.

Conclusion:

Hence we have studied go-back-N & selective repeat modes of sliding window protocol.

