64. Selective Repeat ARQ

Outcomes of the Lecture

1. Understand the concept of Selective Repeat ARQ.
2. Understand the working of Selective repeat ARQ.

Selective Repeat ARQ –

* The Selective Repeat ARQ is the second type of Sliding window Protocol.
* In the Selective Repeat ARQ, the damaged or lost frames are re-transmitted to the receiver.
* The other sent frames are received and buffered as it is, if they are not damaged.
* The receiver keeps the track of the sequence of the frames, in case the frame is lost or encountered error, a negative acknowledgement is sent to the sender.
* This helps the sender to only transmit the selective data frame to the receiver with some modifications which are handled by the Error control Unit.

Working of Selective Repeat ARQ –

* The data frames are aligned in a sequential manner sent by the sender.
* 10 9 8 7 6 5 4 3 2 1
* The Window is from 1 to 4.
* The process starts just as same as Sliding window protocol.
* The N number of frames are sent first, and waits till the acknowledgement of each frame.
* In the process, if the first frame’s ack is received by the sender, the next frame is sent to the receiver i.e. 5.
* Thus the window is slided to the current unacknowledged frames sent.
* Thus the current window is from 2 to 5.
* The working of the Selective Repeat ARQ does not require the sliding window or the window size.
* When any data frame is corrupted, not sent or ack is not reached, the sender identifies the id of the frame and re-transmits the data frame.
* This prevents the repetitive transmission of the correct data frames.

