

REPORT AND ANALYSIS OF THE GBN AND SR ALGORITHMS

CS16B039

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When the experiments are conducted for the packet drop rates of $\exp(10, -3)$, $\exp(10, -5)$, $\exp(10, -7)$ we see practically no loss of packets. Such low drop rates can be experimented after running the programs for large values of N (Max Packets) multiple times. In our case, to simplify the process we use the packet drop rates of 0.2, 0.3, 0.4. We have made 3 runs for each packet drop rate.

GO BACK N

N = 100	DROP = 0.2	DROP = 0.3	DROP = 0.4
RUN 1	100 : 39	100 : 53	100 : 70
RUN 2	100 : 43	100 : 51	100 : 65
RUN 3	100 : 42	100 : 58	100 : 61
AVG	100 : 41	100 : 54	100 : 65

SELECTIVE REPEAT

N = 100	DROP = 0.2	DROP = 0.3	DROP = 0.4
RUN 1	100 : 32	100 : 45	100 : 55
RUN 2	100 : 35	100 : 45	100 : 55
RUN 3	100 : 30	100 : 45	100 : 52
AVG	100 : 32	100 : 45	100 : 54

Where the ratios describe the success / re-transmissions ratios.

We can see from these that selective repeat is much efficient in terms of retransmissions as it follows a conservative method of sending only unacknowledged packets.

Other takeoffs from this assignment are :

Selective repeat requires a little more processing than gobackN.

The Ubuntu UDP sockets are pretty impressive with almost no drop rates unless we introduce them virtually.