CSC 573

Project 2 – Go-Back-N ARQ Scheme

John Bumgardner

**Task 1: Effect of Window Size (N):**

As shown above, there is a clear worst value to select as the N, as it both maximizes errors, while minimizing the number of packets to be successfully transmitted. Performance is best when using a small window size, as the speed of not having to resend entire windows helps, whereas at large windows, so many packets can be successfully sent before having to retransmit.

**Task 2: Effect of MSS:**

Increasing the size of the packets has a clear advantage assuming the intermediary connections can handle. However, due to fixed time sinks (partitioning into packets, calling functions, establishing socket connections) the advantage becomes less pronounced at higher MSS values.

**Task 3: Effect of Loss Probability:**

As the probability is increased, with MSS and N being held constant, the time to send increases linearly. There is, however, some noise in this, as pseudorandom number generators are just that, pseudorandom, and more tests than 5 per probability would likely level out the values.