Network Design : Principles, Protocols and Applications

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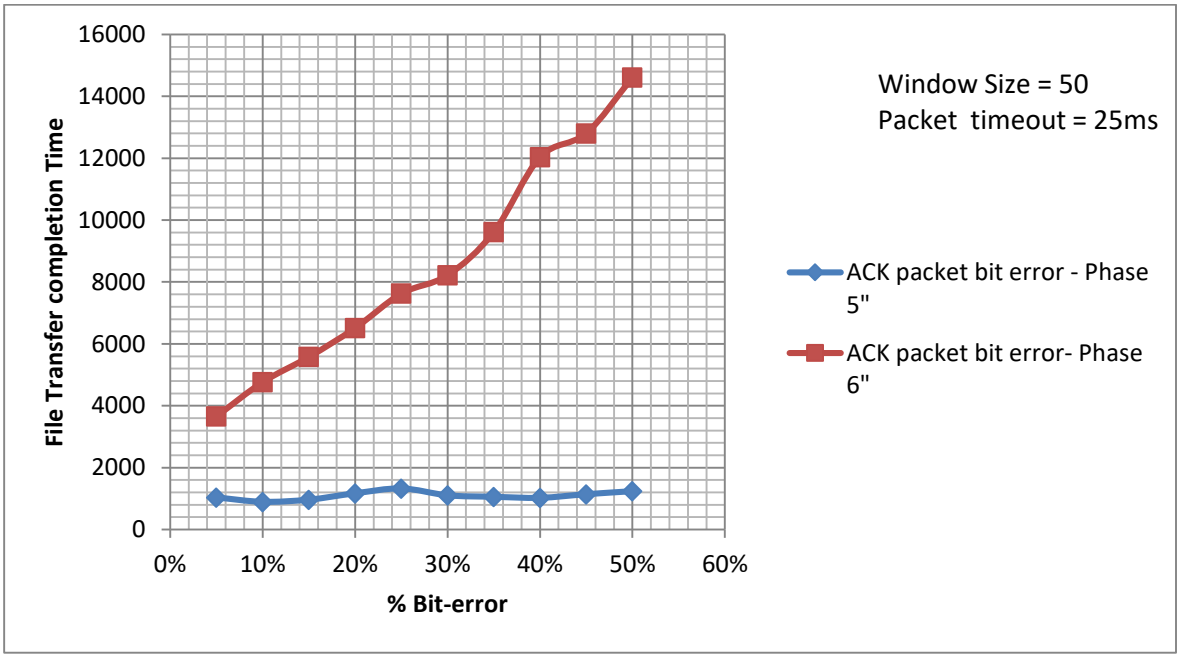
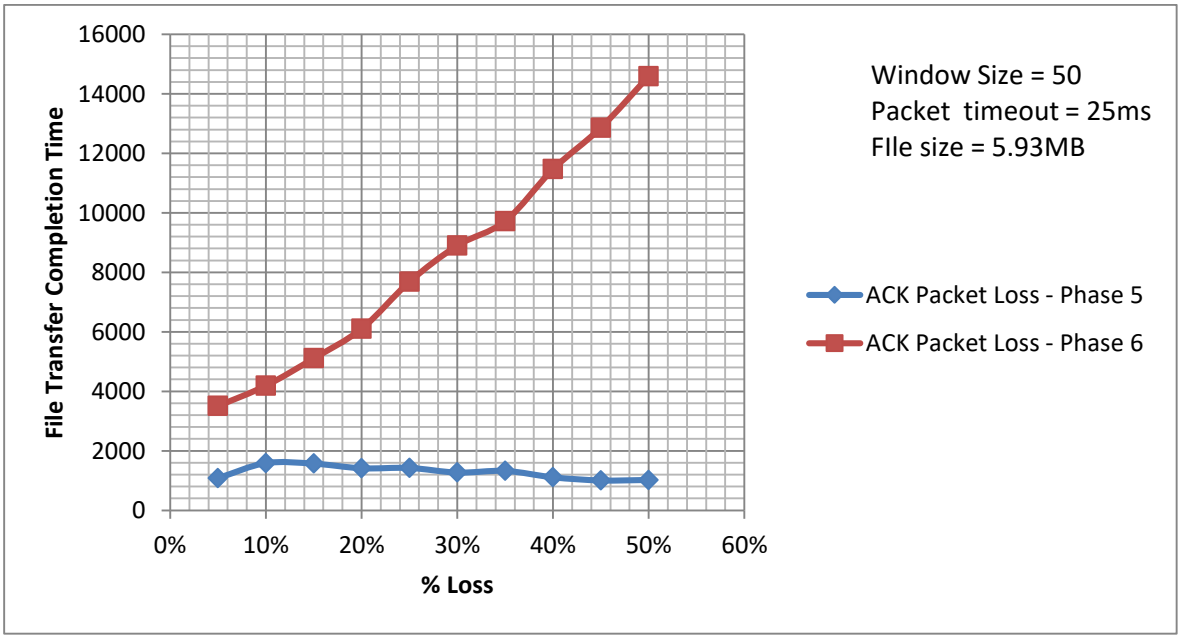
Performance comparison charts for Phase 5 and Phase 6.

1. **Comparison between % ACK Packet bit-errors for Go-Back-N protocol and Selective repeat.**

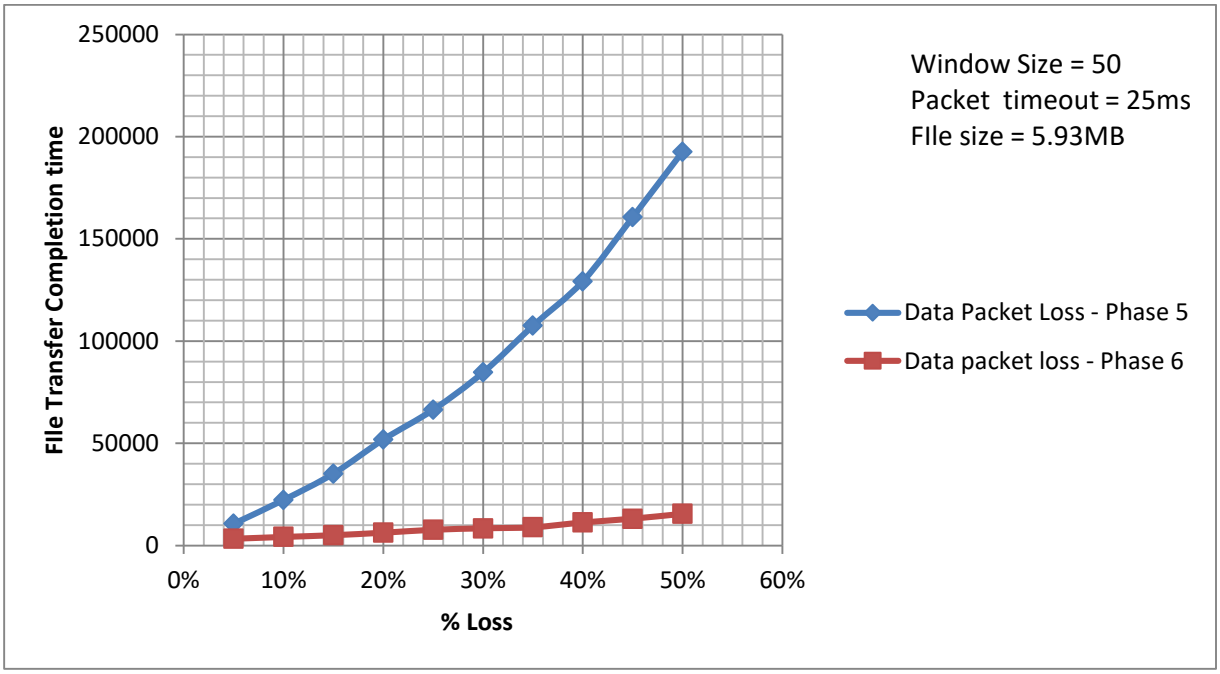


2. **Comparison between % ACK Packet Loss for Go-Back-N protocol and Selective repeat.**



Here is it observed that Go-Back-N performs well than Selective repeat in case of ACK losses because Go-Back-N uses Cumulative ACKs.

3. Comparison between % Data Packet loss between Go-Back-N protocol and Selective repeat.



- Here it is observed that selective repeat has better performance than Go-Back-N for Data packet losses.
- This happens since Selective repeat retransmits only Lost frames.

For 50% data packet loss, the completion time for Selective repeat is *15532ms* and that for Go-Back-N is *192702ms*. Clearly Selective repeat has better performance here.

We were not able to plot the comparison graphs for the Data packet bit-error since in Selective repeat, each data packets is being sent in one thread and it is tough to calculate bit-error for this case.

We have implemented the Selective repeat protocol and claim for 75% extra credit.