

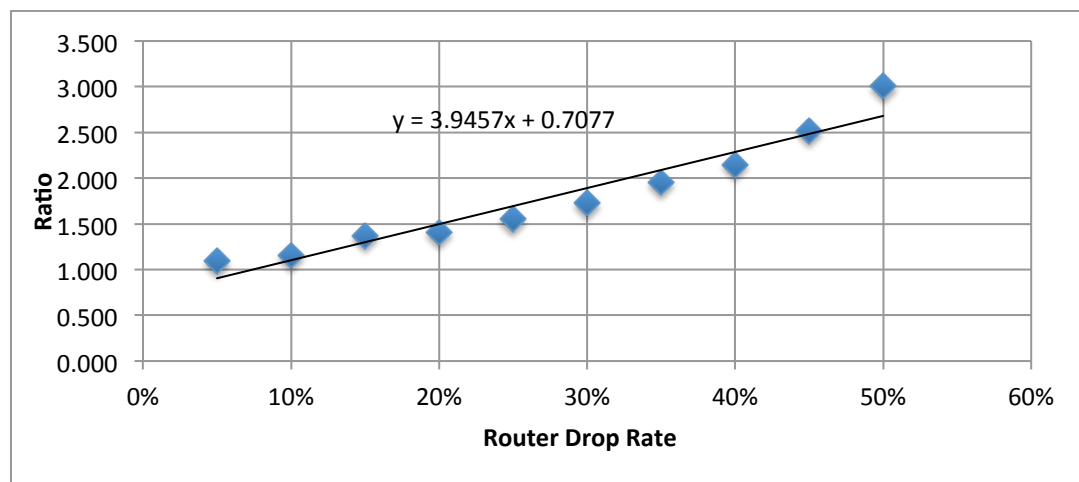
COMP 445 /4
Data Communication and Computer Networks
Lab Assignment #2

Benoit Kohler	6398499
Grégoire Morpain	6398391

We have only record packets needed for file transfer.

File size = 232 KB

	Router Drop Rate	SENDER (sends frames)	RECEIVER (sends ACKs)	SENDER (sends frames)	RECEIVER (sends ACKs)	Ratio
		Packets Needed		Packets Sent		
1	5%	928	928	1025	998	1,090
2	10%	928	928	1126	1014	1,153
3	15%	928	928	1366	1176	1,370
4	20%	928	928	1459	1154	1,408
5	25%	928	928	1645	1233	1,551
6	30%	928	928	1897	1304	1,725
7	35%	928	928	2203	1422	1,953
8	40%	928	928	2490	1500	2,150
9	45%	928	928	2987	1690	2,520
10	50%	928	928	3742	1843	3,009



Observations:

We can clearly see from the chart that there is a linear relation between the ratio and the router's loss rate.

Stop-and-wait ARQ is inefficient compared to other ARQs, because the time between packets, if the ACK and the data are received successfully, is twice the transit time (assuming the turnaround time can be zero). The throughput on the channel is a fraction of what it could be. To solve this problem, one can send more than one packet at a time with a larger sequence number and use one ACK for a set.