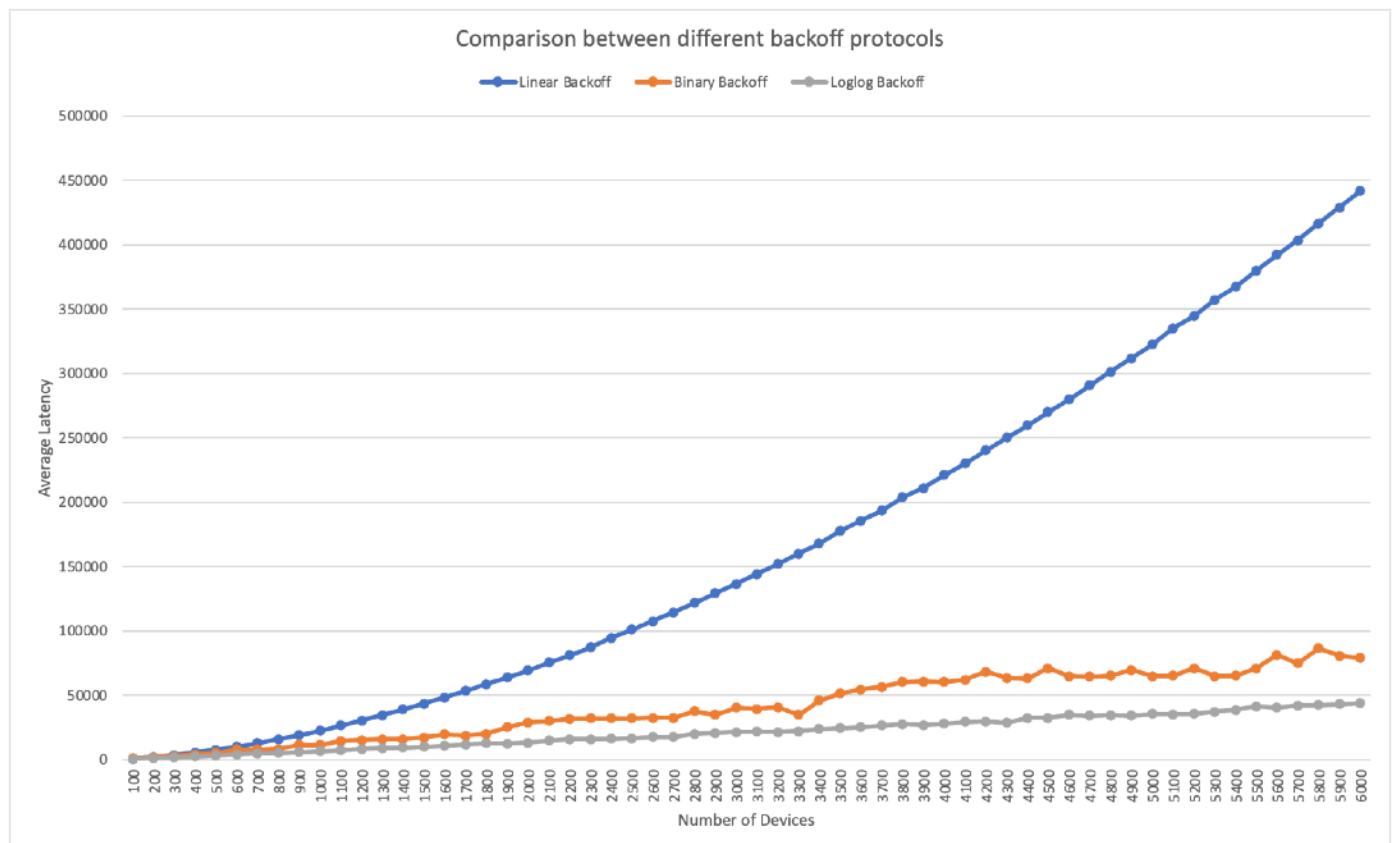


Data Communication Networks

Programming Assignment #3

Plot:



Brief report:

The loglog backoff protocol seems to give the best (lowest) average latency as the number of devices tends to infinity.

The linear backoff protocol seems to give the worst (highest) average latency as the number of devices tends to infinity.

I think that the problem of the linear backoff protocol is that it increases the size of the window really slowly compared to the other two protocols. Indeed both binary and loglog backoff protocols create bigger transmission windows in less time. For that reason the linear protocol uses smaller windows more often and that brings to more collisions and therefore more failures in transmissions, thus increasing the average latency.

I am satisfied by the look of the plot since the data taken are really close to the one given in the example. The slight difference in the numbers is due to the randomness of the input. The obtained results are coherent with the theory.