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CS455

1. 5000000m / 200000000 m/s = .025s
2. 2000 Megabyte / 10 Mb/s = 1525.88s
3. w(m/bit) = R(m/s)/s(bit/s)
4. w = d/bandwidth delay product
5. Delay x bandwidth product = .025s*10000000 b/s = 250000 bit
6. Propagation time = 1000000m /200000000 m/s = .005 s
   Transmission time = 2000B/10Mb/s = 0.000190735s
   Total Delay = propagation time + transmission time = 0.005190735 s
7. Delay with 3 hops = 3*(propagation time +transmission time) = 0.015572205 s
8. It will delay longer as there will be queueing delay. They will need to cut data into packets, and the smaller the packets are, the more time it need as each packet contains a heard and more overhead. It all depends on the traffic intensity. If the traffic intensity is large, there is a chance of packets dropped by the router. Lower traffic intensity means no packet loss.