CS-534: Packet Switch Architecture Spring 2006

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Exercise Set 2: Turn-Around Overhead

Assigned: Wed. 22 Feb. 2006 (week 2) -- Due: Mon. 27 Feb. 2006 (week 3)

2.1 Turn-around Overhead

In a shared-medium-based LAN (ehternet style), we wish to keep the turn-around overhead (as defined in class) down to 5 % of the useful transmission time when the packet size is 80 bytes. What is the maximum allowable distance between transmitters in order to achieve this when the transmission rate is (a) 10 Mbps, (b) 100 Mbps, (c) 1 Gbps, (d) 10 Gbps. Transmission is bit-serial, and the speed of light in the LAN medium is 200 Mm/s.

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