

Suppose, two hosts, X and Y, are located 20,000 km apart and are connected through a direct link with a transmission rate of 2 Mbps. The propagation speed along this link is 3×10^8 m/s.

- (i) If Host X sends a video file of 1,200,000 bits. The video file is split into 15 packets, each containing 80,000 bits. Assume that it takes 25 milliseconds to check for bit errors on each packet before transmission. Determine the total time needed to send the entire video file in this packetized format.