Module 4

Sunday, 12 May 2024 7:18 PM

Frame Transmission Time T_{fr} = $\frac{\text{No. of bits}}{\text{channel B.W}}$

Pure Aloha :

Vulnerable Time = $2 \times T_{fr}$

Throughput $S = G \times e^{-2G}$ ($G \rightarrow$ FPS)

and Maximum Throughput when $G = \frac{1}{2}$: $S_{max} = 0.184$

Slotted Aloha :

Vulnerable Time = T_{fr}

Throughput $S = G \times e^{-G}$

and Maximum Throughput when $G = 1$: $S_{max} = 0.368$

CSMA :

Vulnerable Time = T_p (propagation Time)

Minimum Size of the frame = $B.W \times T_p$

$T_{fr} = 2 \times T_p$

Ring Latency = $\frac{M d R}{v + M b}$

CSMA / CA :