Slotted ALOHA

By

Dr M. Senthilkumar

Assistant Professor
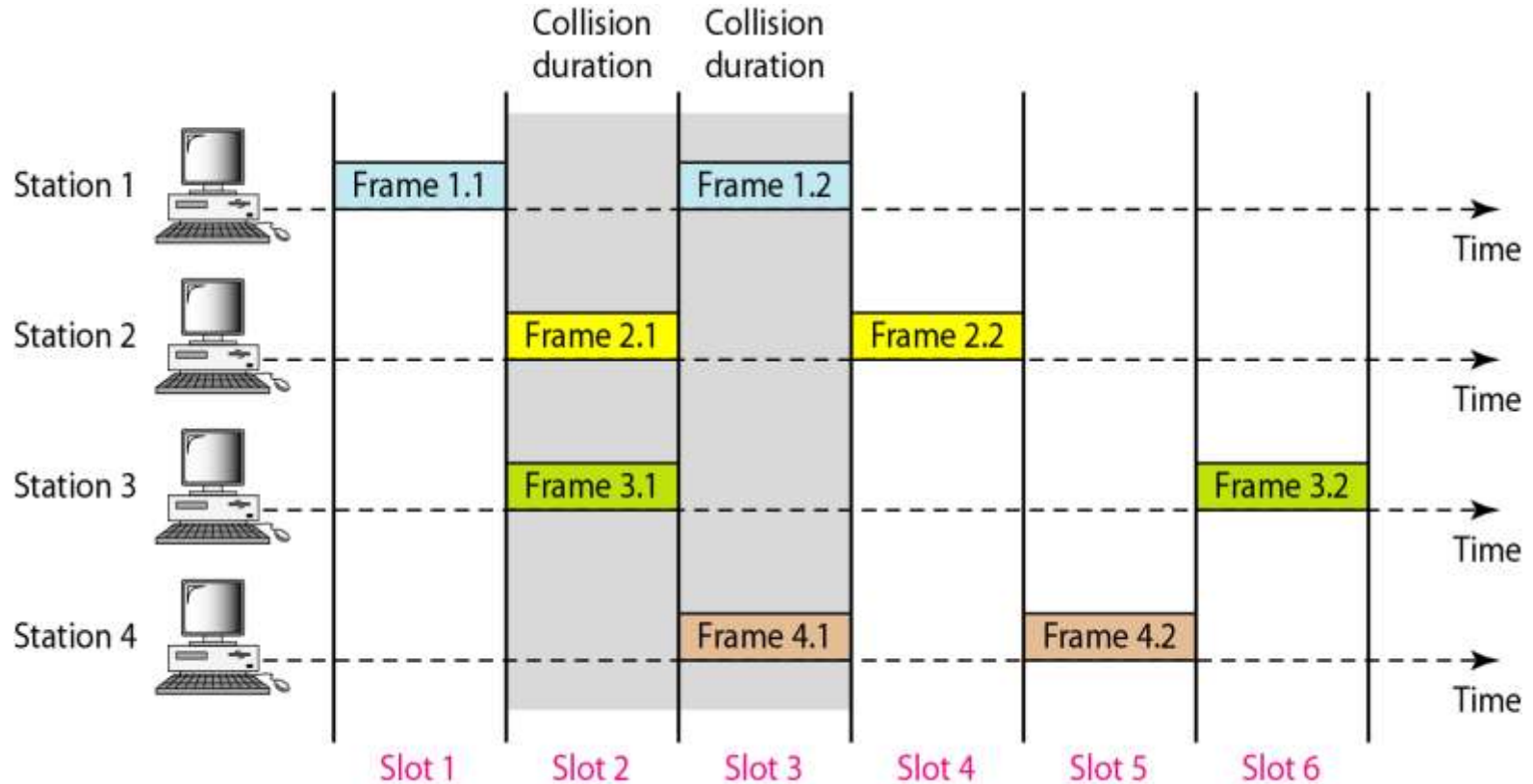
Department of Computer Science

Government Arts and Science College, Avinashi - 641654
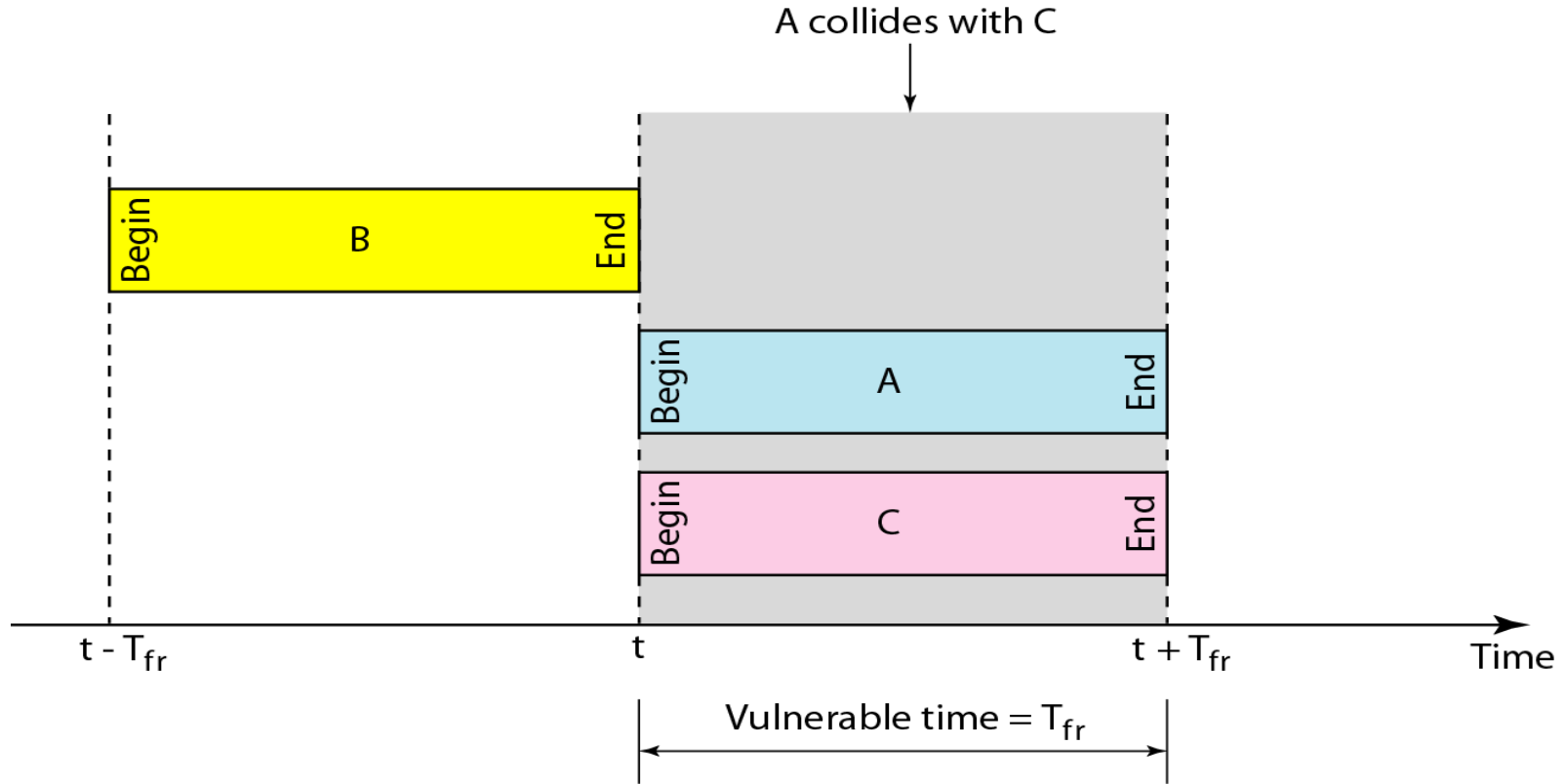
Slotted ALOHA

- ✓ Divide the time into slots of Tfr seconds
- ✓ Force the station to send only at the beginning of the time slot.
- ✓ Of course, there is still the possibility of collision if two stations try to send at the beginning of the same time slot.
- ✓ However, the vulnerable time is now reduced to one-half, equal to Tfr

Frames in Slotted ALOHA

Vulnerable Time for Slotted ALOHA

Throughput for Slotted ALOHA

- ✓ Throughput for the Pure ALOHA is $S = G \times e^{-G}$

- ✓ The maximum throughput $S_{max} = 0.368$ when $G = 1$

References

- ✓ Books: Data communication and Networking, Behrouz A Forouzan, Fourth edition
- ✓ Computer Networks, Andrew S. Tanenbaum, 4th edition, PHI
- ✓ Data Communication and Networks, Achyut Godbole, 2007, TMH.
- ✓ Computer Networks: Protocols, Standards, and Interfaces, Uyless Black, 2nd ed, PHI
- ✓ Various relevant websites

Thank You