CS 725/825 & IT 725
Lecture 22
Link Layer

November 20, 2024

Components of Link Layer

▸ Data Link Control

    – addressing

    – framing

    – error detection and correction

    – flow control

    – QoS

▸ Media Access Control (MAC)

    – controlling access to the shared medium

Media Access Control

▸ Objective: Arbitration of access to the shared medium - prevention or avoidance of collisions.

▸ Deterministic - collisions are prevented
  – centralized
  – distributed

▸ Stochastic - some collisions are permissible - as long as they are detected and transmissions retried

Stochastic (random) MAC

ALOHA

▸ Transmit at will…

▸ Detect collisions with transmissions of other nodes

▸ Random back-off if collision is detected