

Medium Access Control (MAC)  
Protocols for Ad hoc Wireless  
Networks -IV

**CS: 647**

**Advanced Topics in Wireless Networks**

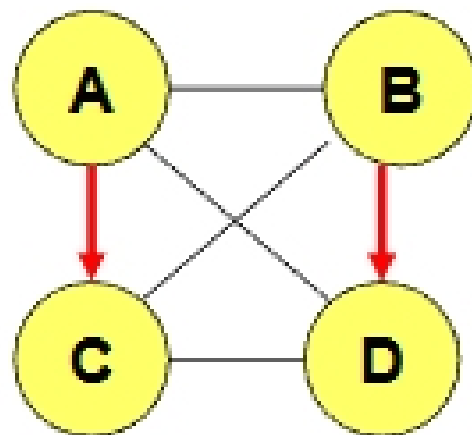
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# Outline

- **Wireless MAC Issues**
  - Hidden terminal problem
  - Exposed terminal problem
  - Capture
- **MAC Performance Metrics**
- **Wireless MAC Classification**
- **Distributed Wireless MAC Protocols**
  - CSMA/CA
  - 802.11 MAC
    - DCF
    - Backoff
  - **Fairness**
  - Energy/Power

# Fairness Issue

- Many definitions of fairness plausible
- Simplest definition: All nodes should receive *equal* bandwidth



Two flows