

Performance Analysis for a single-hop 802.11 wireless LAN

Hai Vu



Introduction

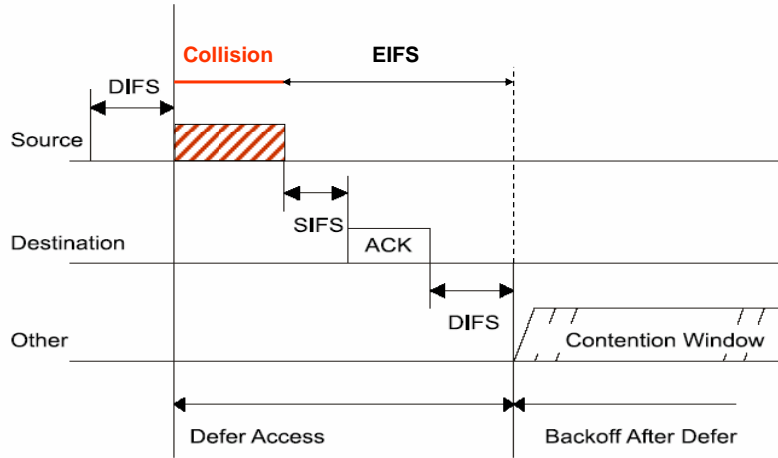


- What?
 - WLAN, WiFi (hotspot), WiMax, sensor network, home network, etc.
 - voice, data, game, video

- Why?
 - capacity problem, traffic interaction is little understood, QoS guarantee is a challenge

- How?
 - research methods

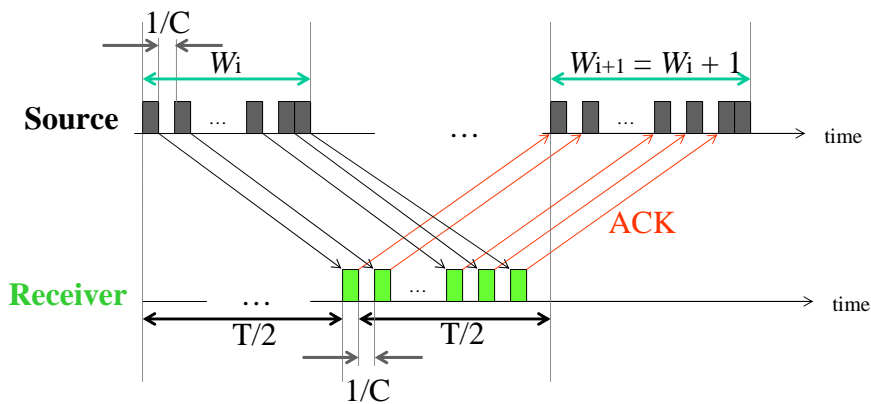
MAC (IEEE 802.11 a/b/g/e)



DIFS: Distributed Inter Frame Space SIFS: Short Inter Frame Space
 EIFS: Extended Inter Frame Space



Traffic



Research methods



- Test-bed
- Simulation
- Analytical models
 - obtain insights
 - design, dimension and optimize network
 - evaluate and compare technologies
 - guideline for new developments (protocols/technologies/networks)

VoIP test-bed

