

# Performance Analysis for a single-hop 802.11 wireless LAN

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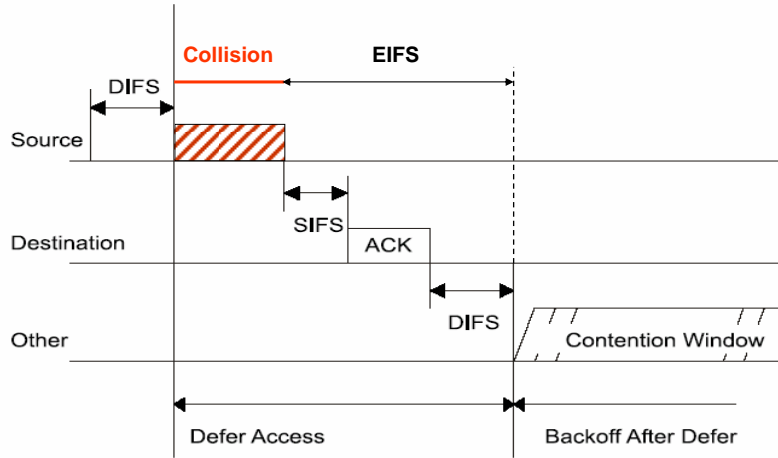


## Introduction



- 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

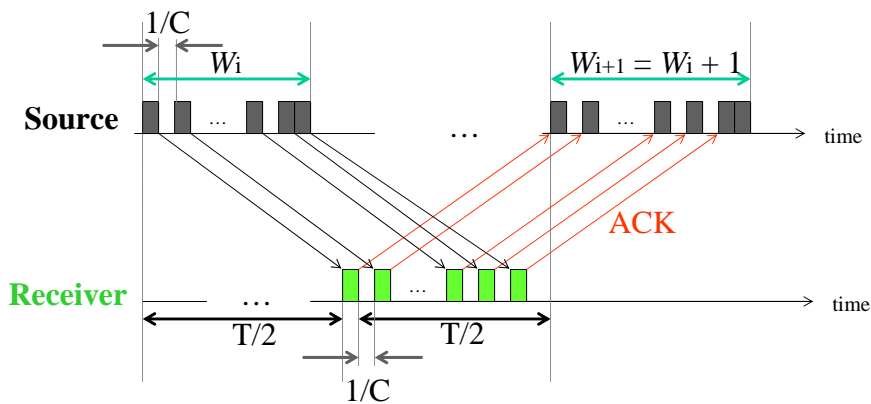
# MAC (IEEE 802.11 a/b/g/e)



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

