

CSMA/CA = Carrier Sense Multiple Access / Collision Avoidance

* Features

802.11 uses inter-frame spacing

DIFS
distributed
inter-frame
spacing
(50μ)

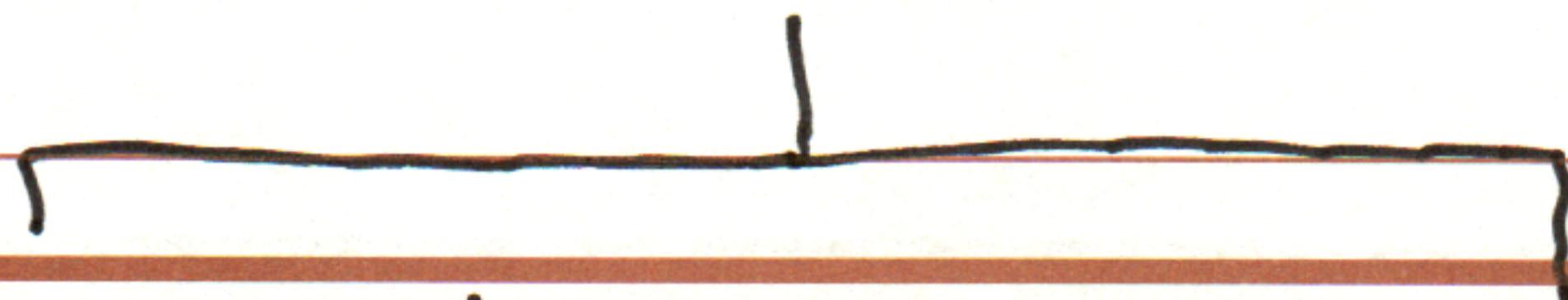
SIFS
short IFS
(10μ)

+ Time-out

* Wi-Fi need an ACK scheme.
the node can't "detect" a collision

- * Once a node starts transmitting a frame, it has to finish it even if a collision did occur.
- * If no ACK is received, the timer will time-out & sending node assumed a collision has occurred.

MAC



Distributed
Function

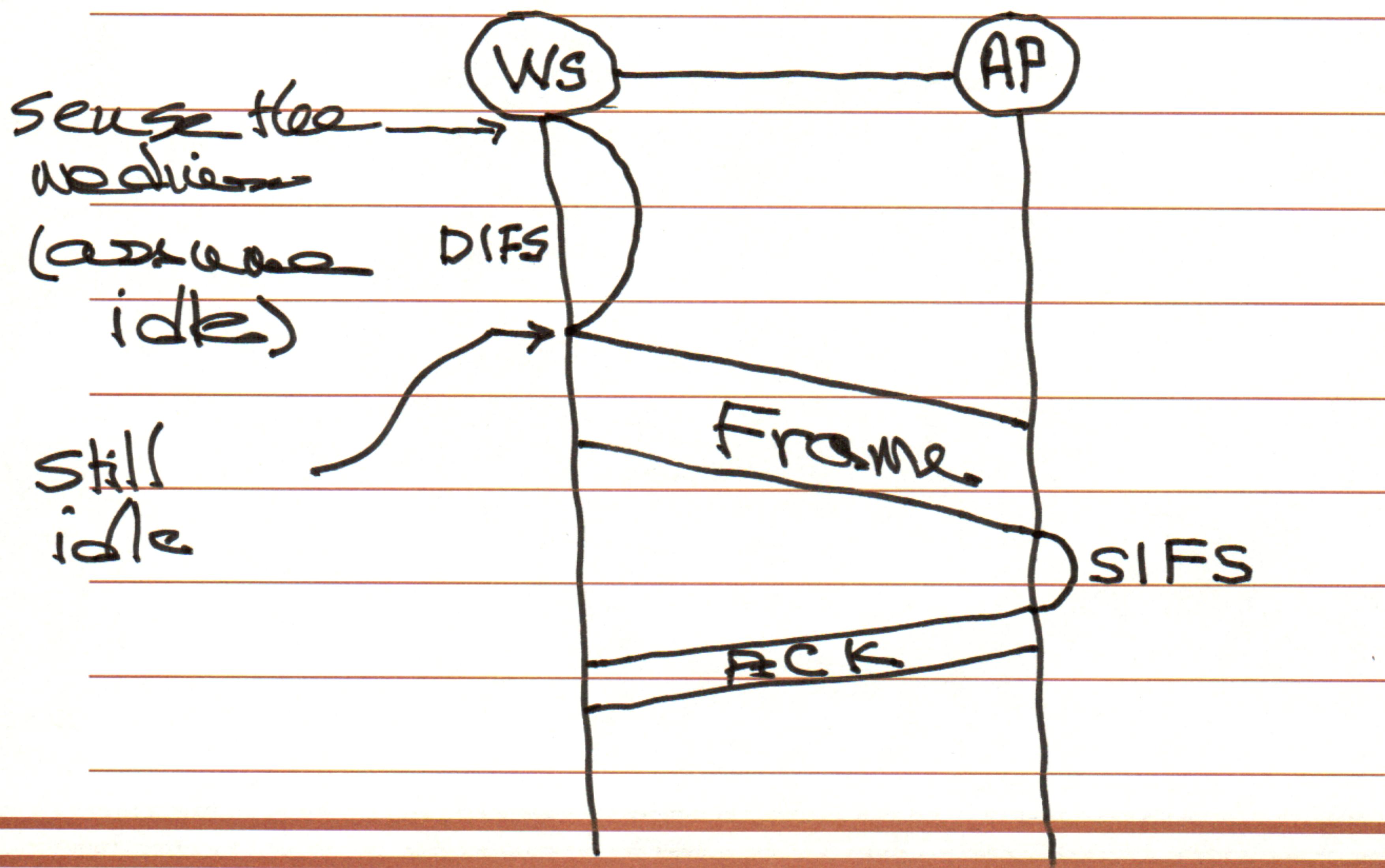
(CSMA/CA)

Mandatory

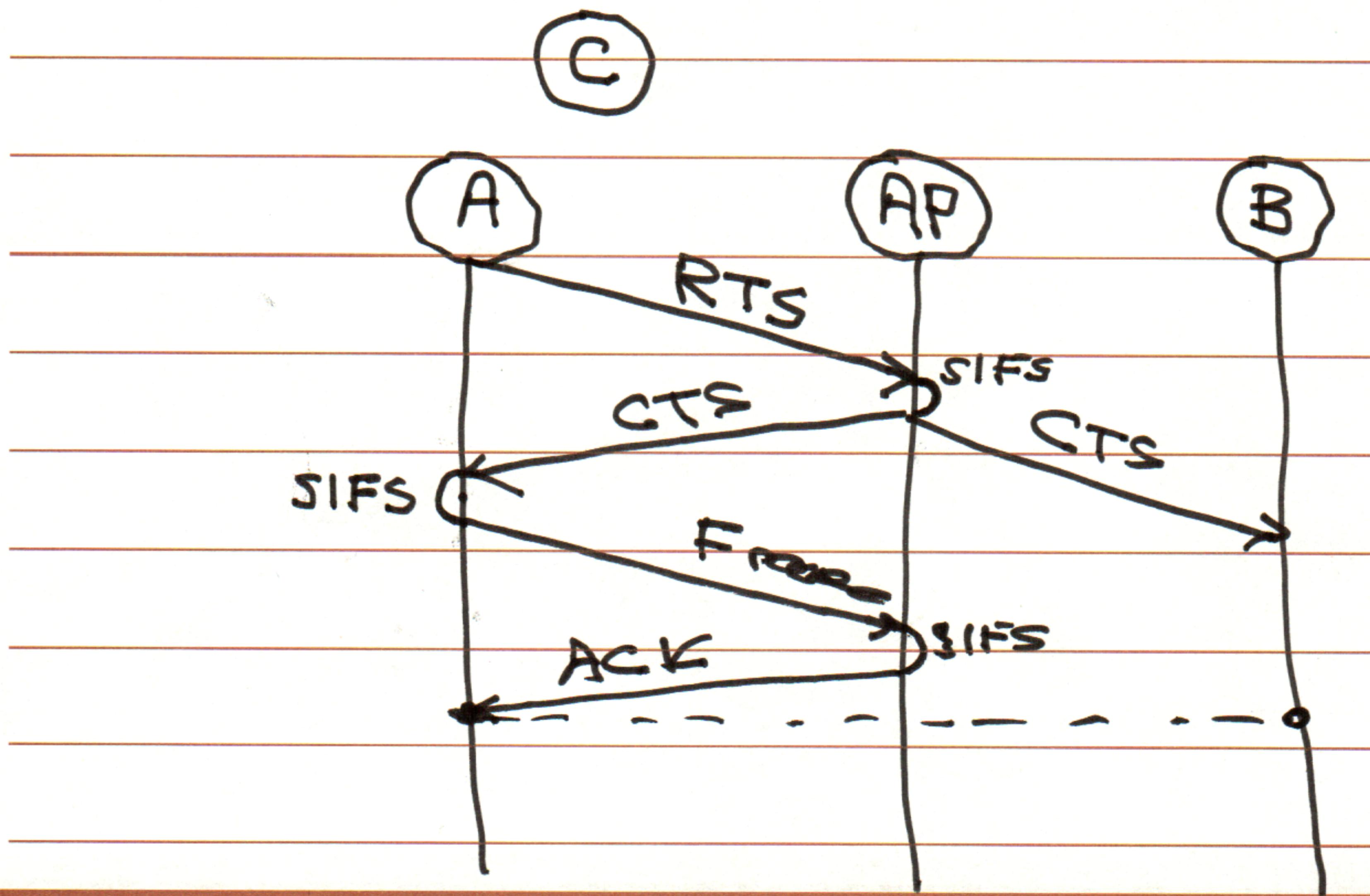
RTS/CTS

request to send
clear to send
(Reservation
scheduling
option).

CSMA/CA



RTS/CTS



Virtual Sensing U.S. Physical
Sensing