



# RAMA UNIVERSITY

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## FACULTY OF ENGINEERING & TECHNOLOGY

### BCA-302 Computer Networks

### Lecture-16

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Computer Science & Engineering

# OUTLINE

## ➤ WIRELESS LANS

### ➤ 802.11 ARCHITECTURE AND PROTOCOL STACK

### ➤ 802.11 PROTOCOL STACK

### ➤ 802.11 MAC SUBLAYER PROTOCOL

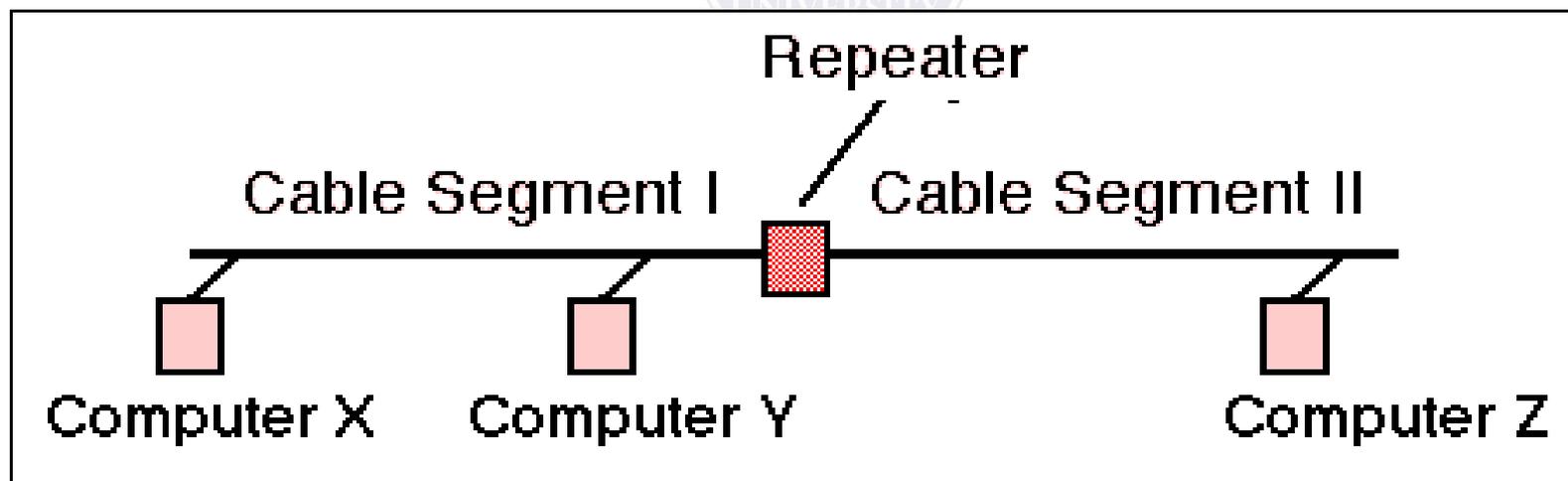
### ➤ BROADBAND WIRELESS

### ➤ 802.16 ARCHITECTURE AND PROTOCOL STACK

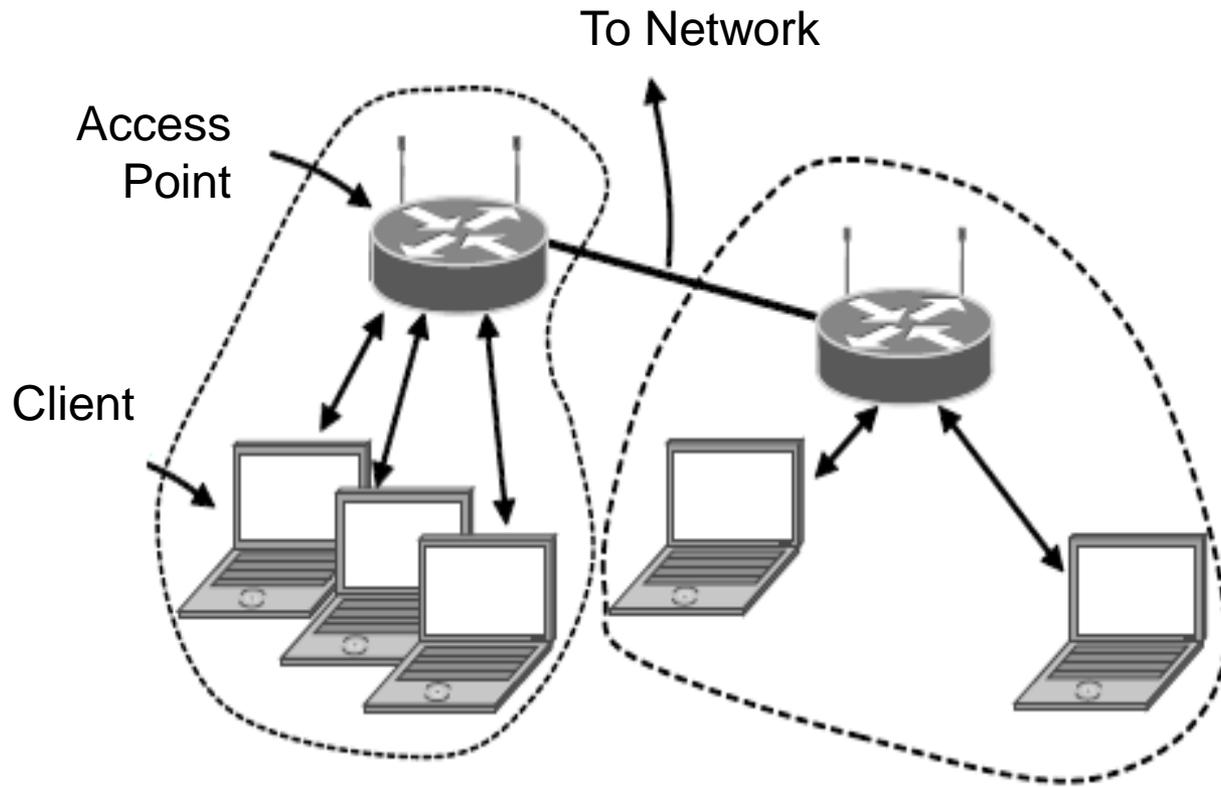


# WIRELESS LANS

- 802.11 architecture and protocol stack
- 802.11 physical layer
- 802.11 MAC sublayer protocol
- 802.11 frame structure
- Services

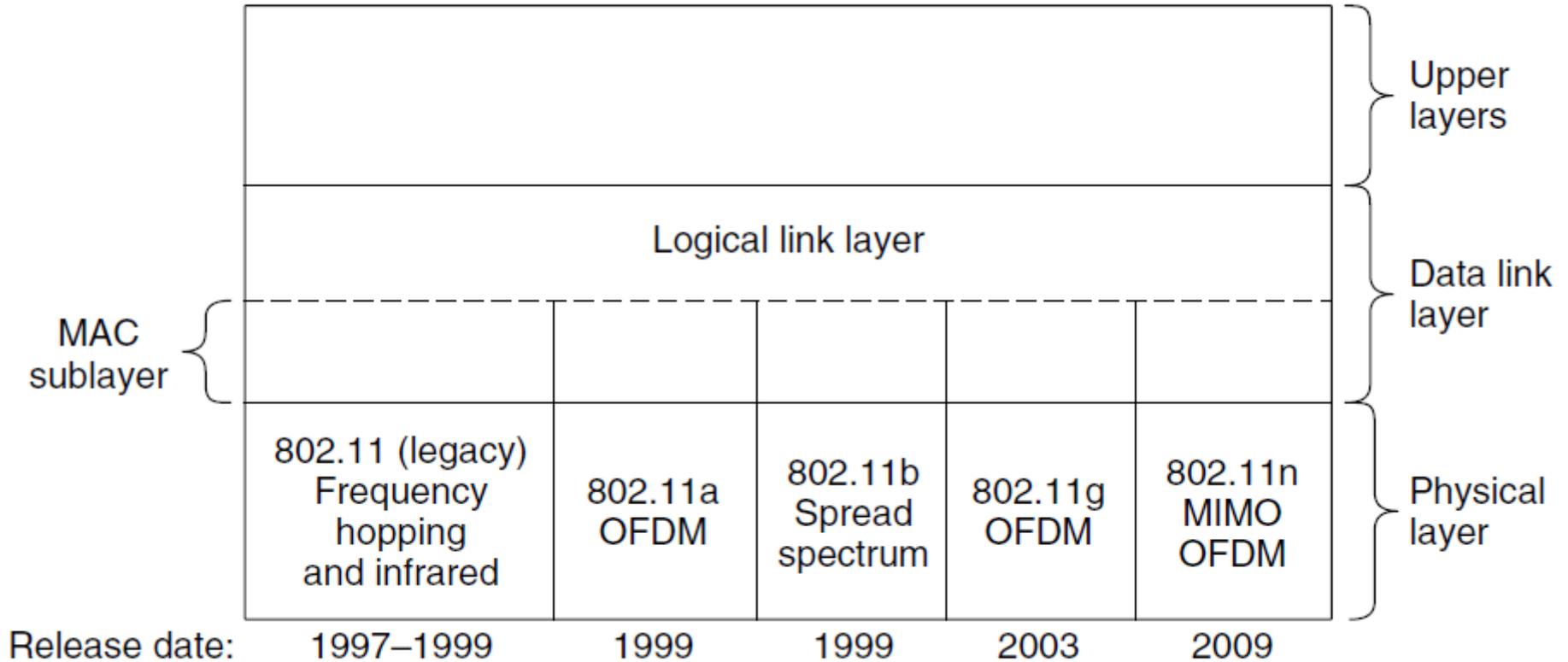


# 802.11 ARCHITECTURE AND PROTOCOL STACK



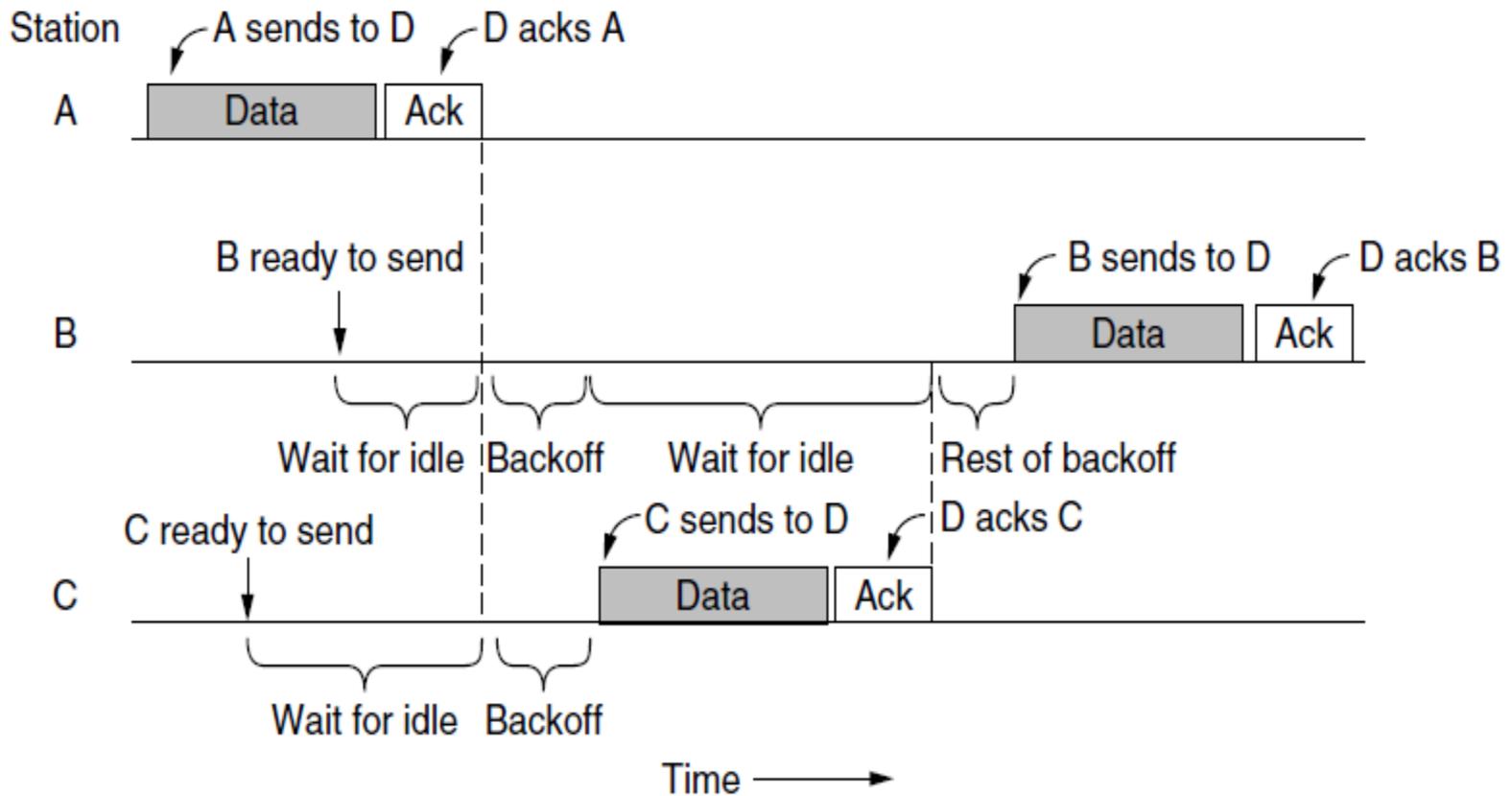
# 802.11 ARCHITECTURE AND PROTOCOL STACK

## 802.11 protocol stack



# 802.11 PROTOCOL STACK

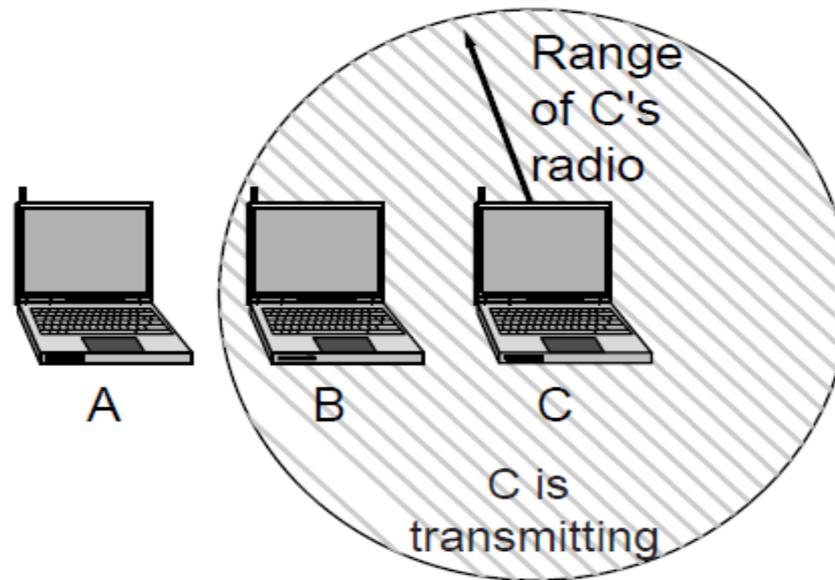
## Sending a frame with CSMA/CA.



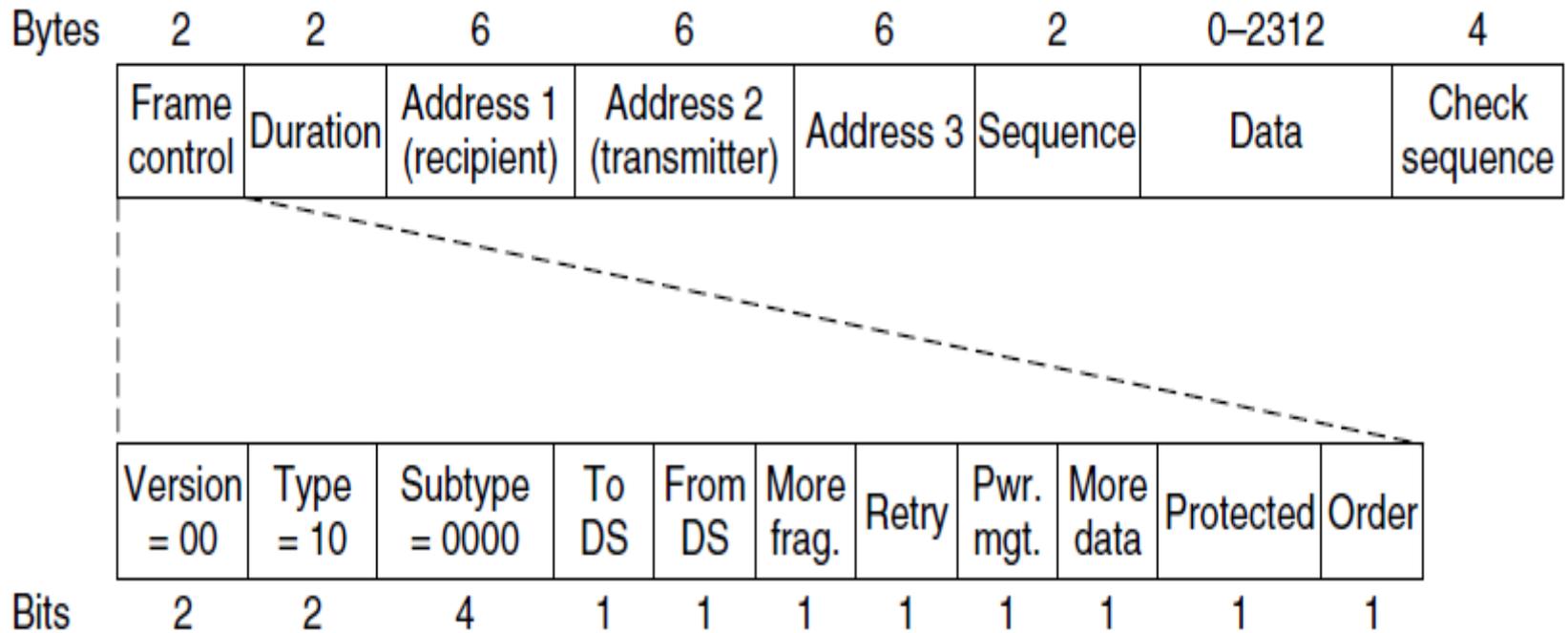
# 802.11 MAC SUBLAYER PROTOCOL

## The hidden terminal problem

A wants to send to B  
but cannot hear that  
B is busy

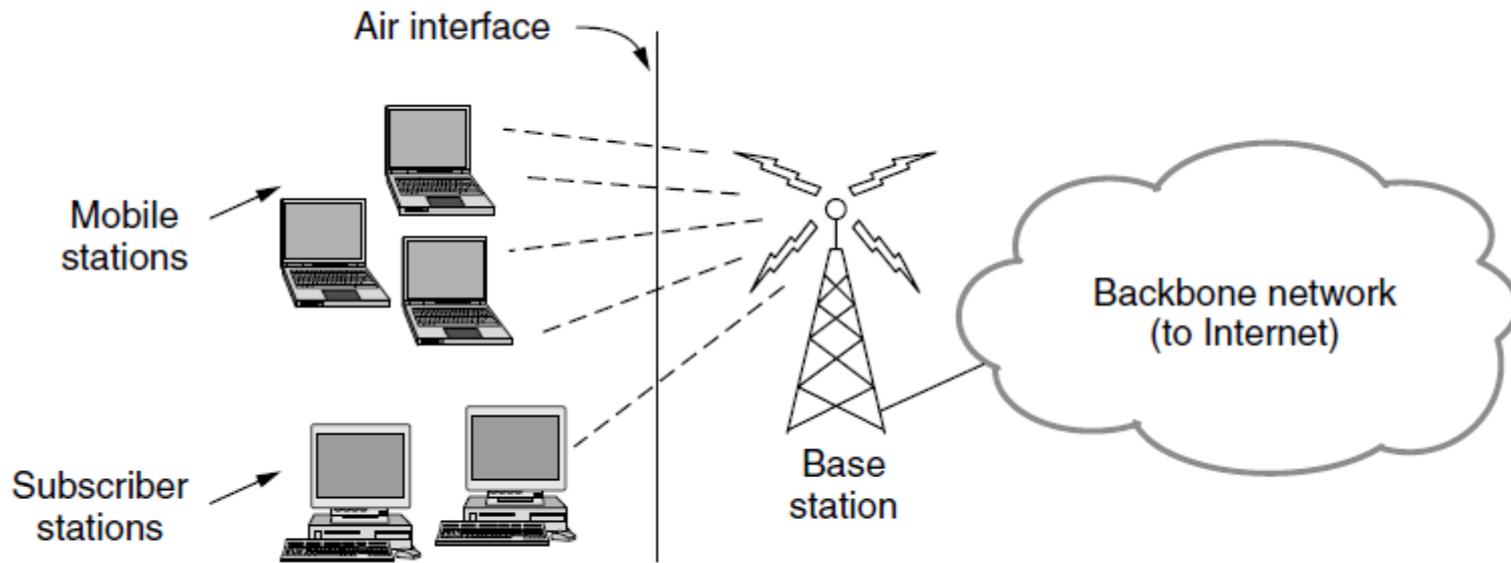


# 802.11 FRAME STRUCTURE

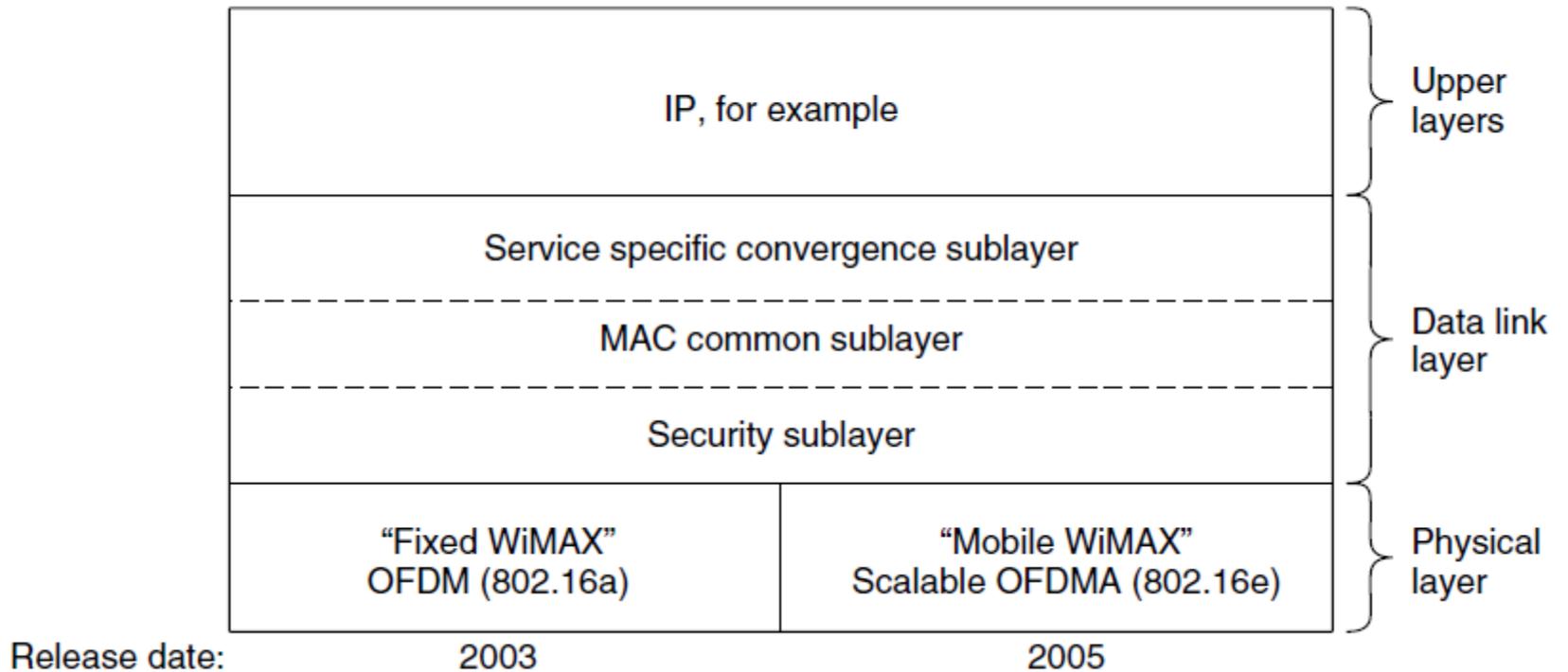


# BROADBAND WIRELESS

- Comparison of 802.16 with 802.11, 3G
- 802.16 architecture and protocol stack
- 802.16 physical layer
- 802.16 frame structure



# 802.16 ARCHITECTURE AND PROTOCOL STACK



# Multiple Choice Question

## MUTIPLE CHOICE QUESTIONS:

Sr no	Question	Option A	Option B	OptionC	OptionD
1	In classless addressing, there are no classes but addresses are still granted in _____	IPs	Blocks	Codes	Sizes
2	In IPv4 Addresses, classful addressing is replaced with _____	Classless Addressing	Classful Addressing	Classful Advertising	Classless Advertising
3	First address in a block is used as network address that represents the _____	Class Network	Entity	Organization	Codes
4	In classful addressing, a large part of available addresses are _____	Organized	Blocked	Wasted	Communicated
5	Network addresses are a very important concept of _____	Routing	Mask	IP Addressing	Classless Addressing

# REFERENCES

- <http://www.engppt.com/2009/12/networking-fourzan-ppt-slides.html>

