

## Chapter 19 ARP (Address Resolution Protocol)

### The Problem

- Because IP defines logical addresses for every machine we need a mechanism to convert from the logical address to the real addresses
- The problem of **Address Resolution** must be solved
- There are essentially three methods to translate **protocol addresses** to **hardware addresses**

### When does Address Resolution Occur?

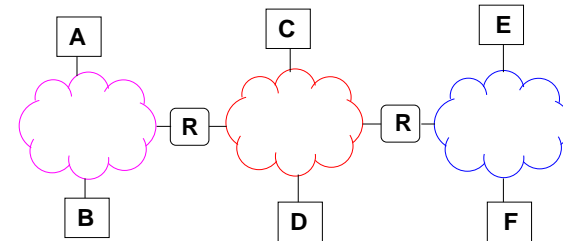


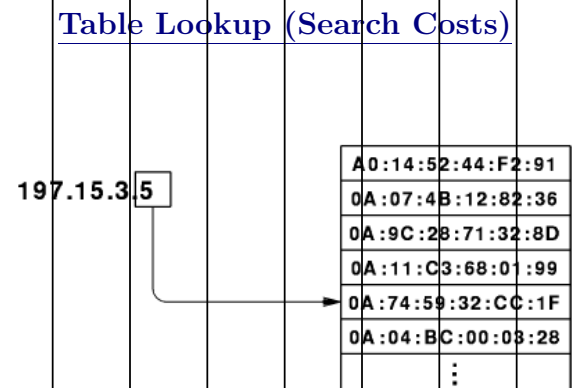
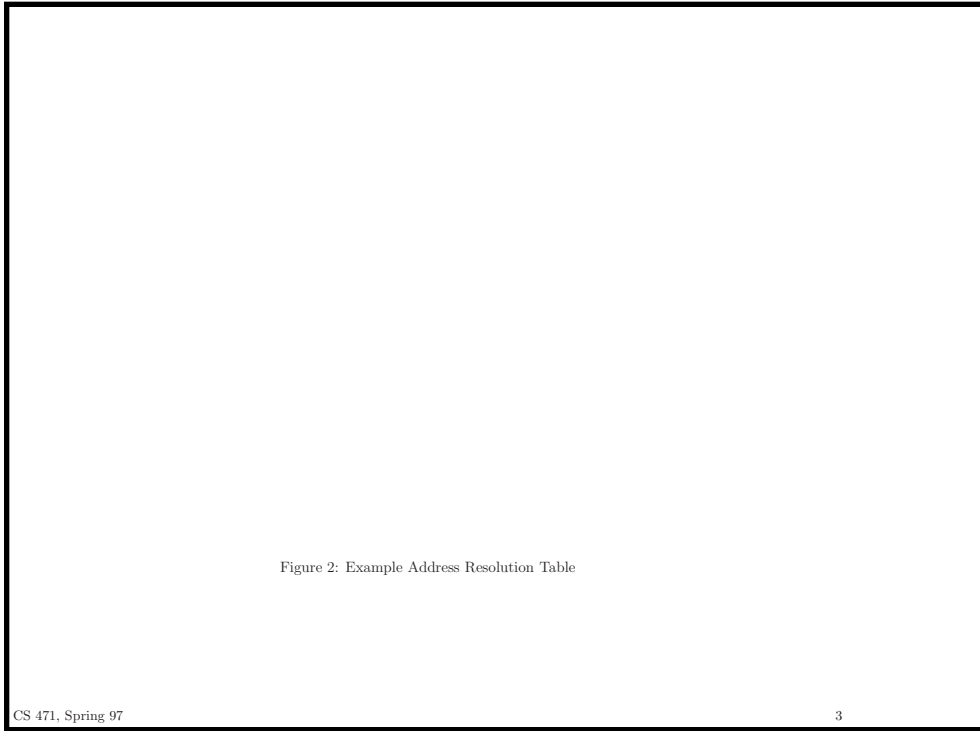
Figure 1: Example Topology

# NOTES

## Table Lookup

<u>IP Address</u>	<u>Hardware Address</u>
197.15.3.2	0A:07:4B:12:82:36
197.15.3.3	0A:9C:28:71:32:8D
197.15.3.4	0A:11:C3:68:01:99
197.15.3.5	0A:74:59:32:CC:1F
197.15.3.6	0A:04:BC:00:03:28
197.15.3.7	0A:77:81:0E:52:FA

# NOTES



# NOTES

A series of 28 vertical lines for taking notes.

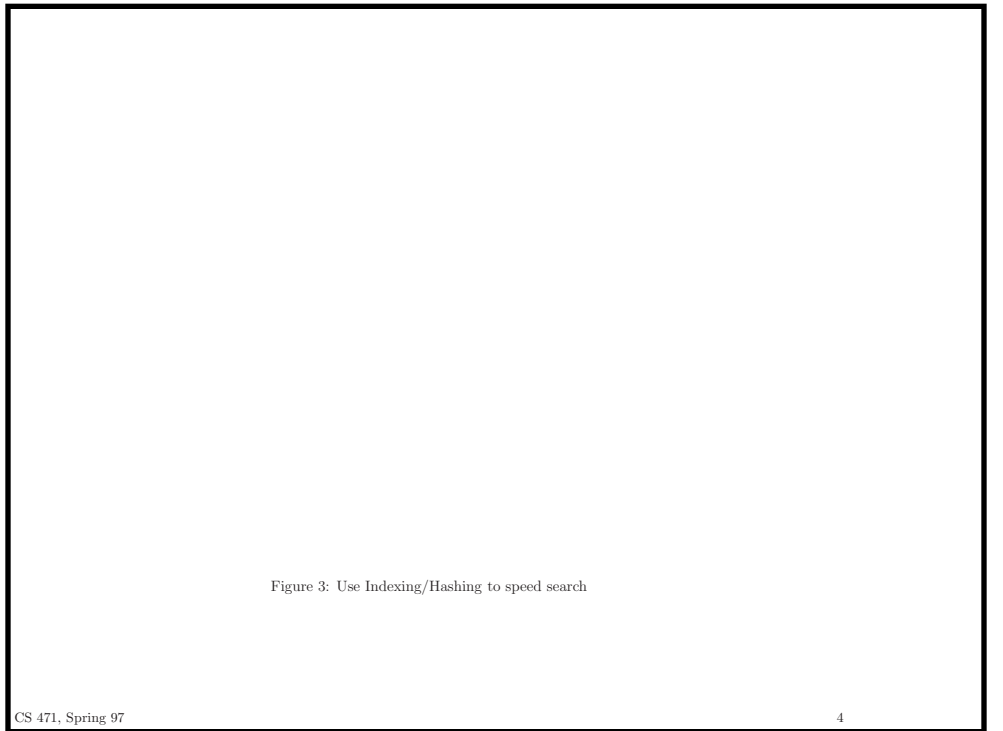
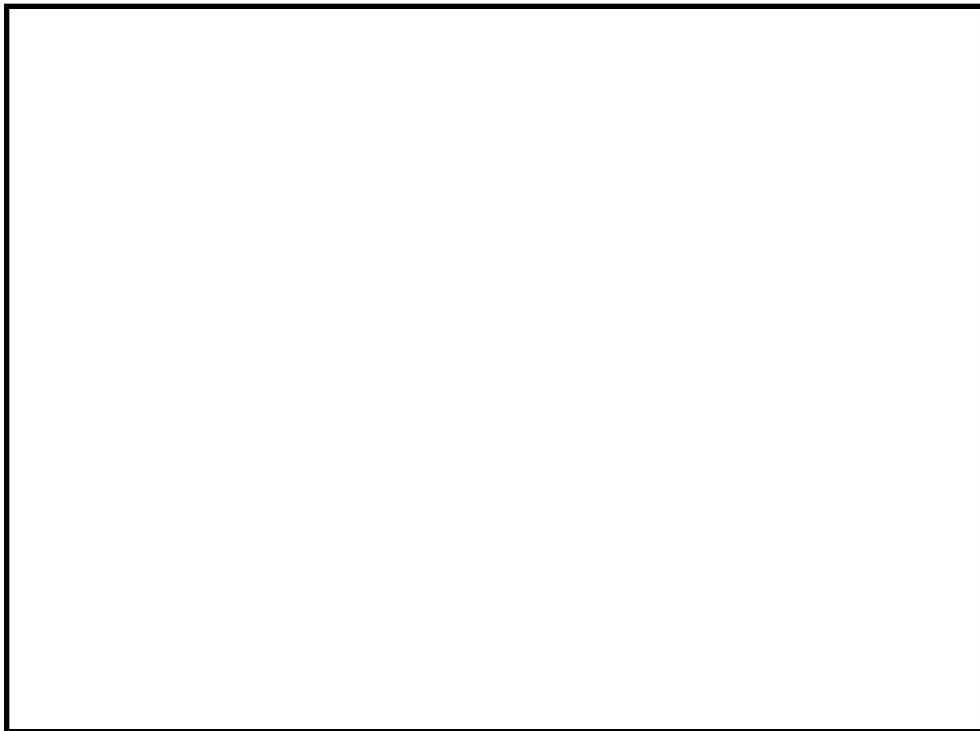
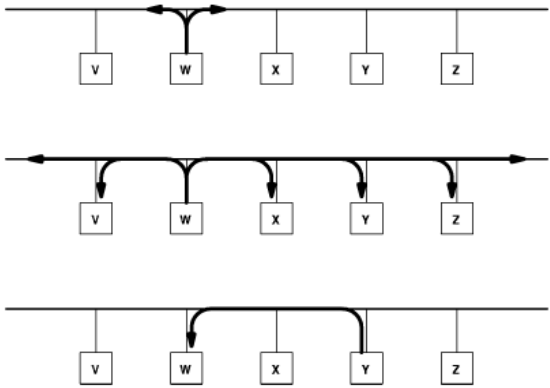


Figure 3: Use Indexing/Hashing to speed search

# NOTES

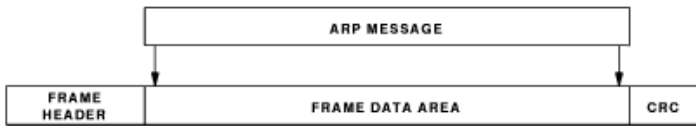
## ARP Messages (Example)





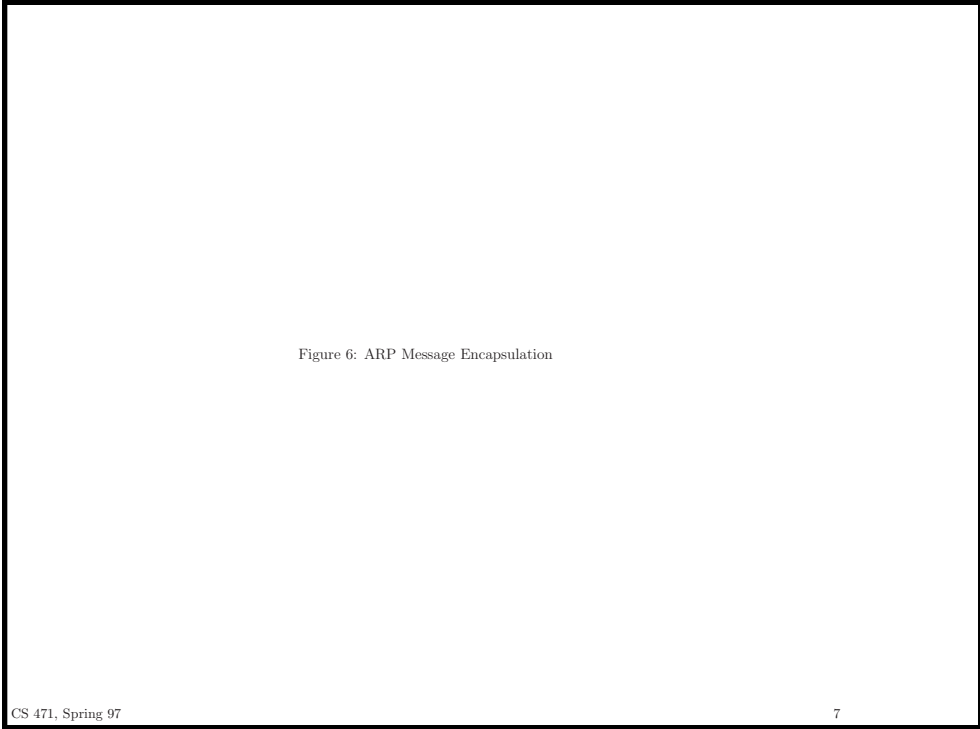
# NOTES

## ARP Message Encapsulation



# NOTES

Vertical lines for notes.



Vertical lines for notes.