



Firefox

Network Applications



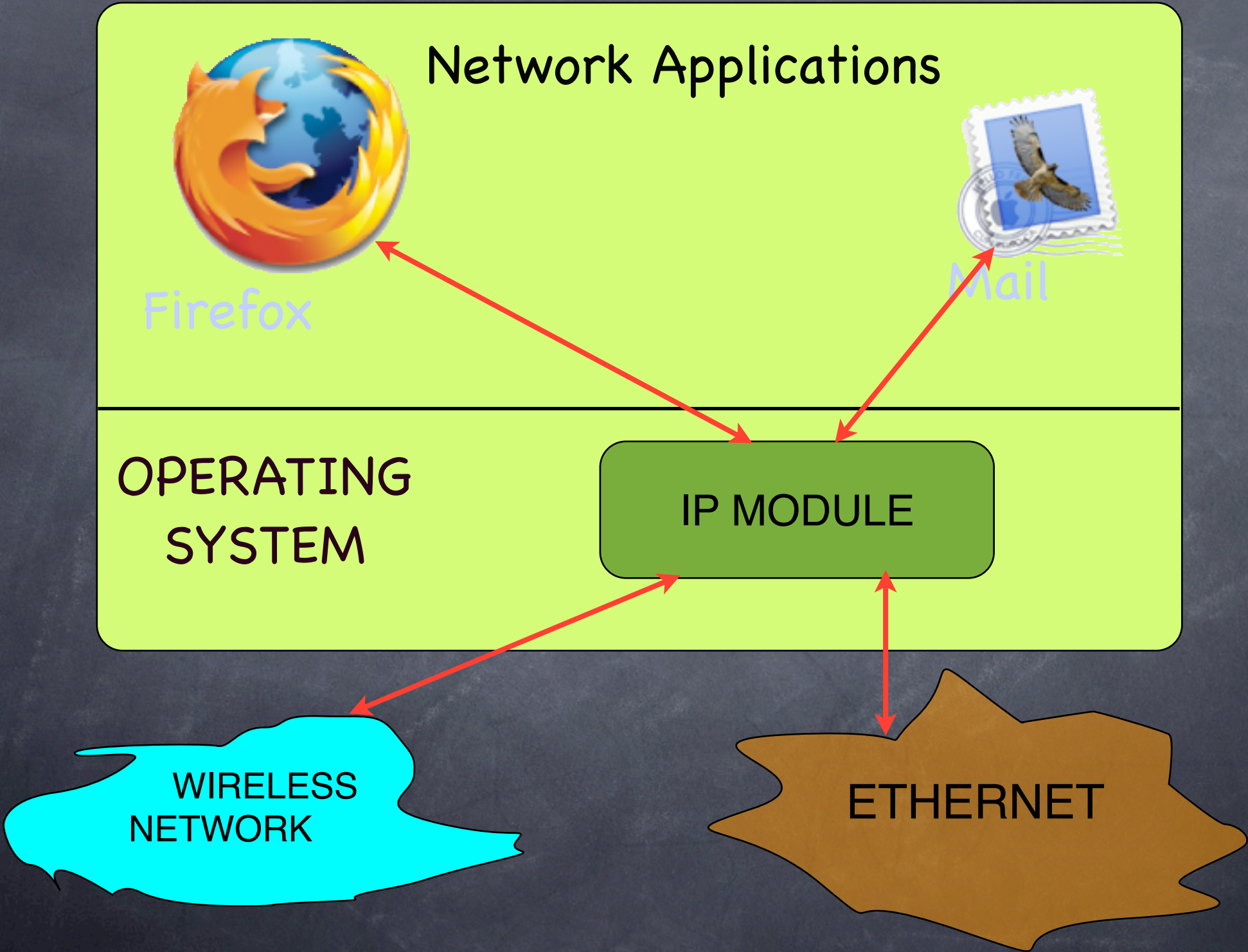
Mail

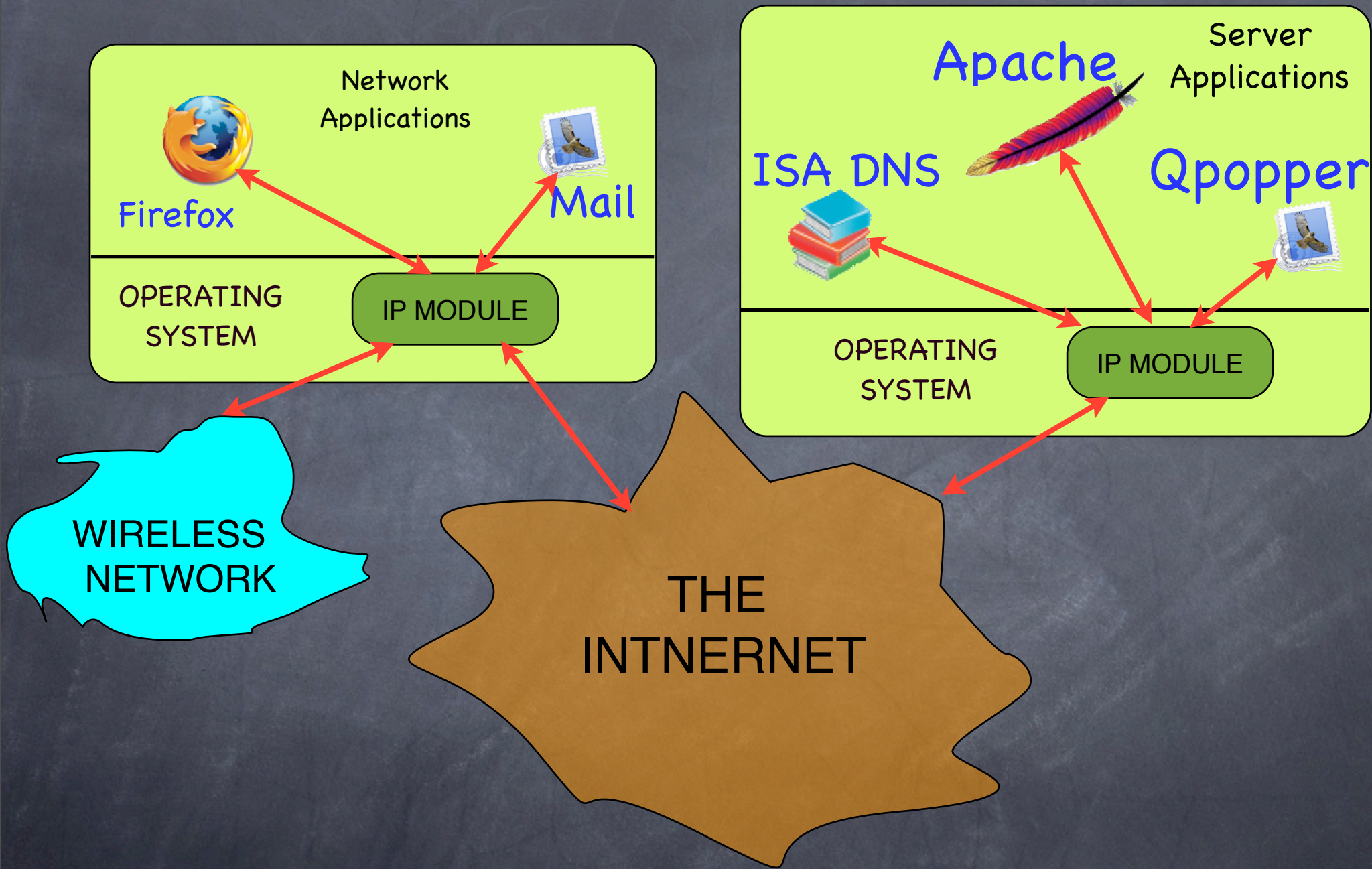
OPERATING
SYSTEM

IP MODULE

WIRELESS
NETWORK

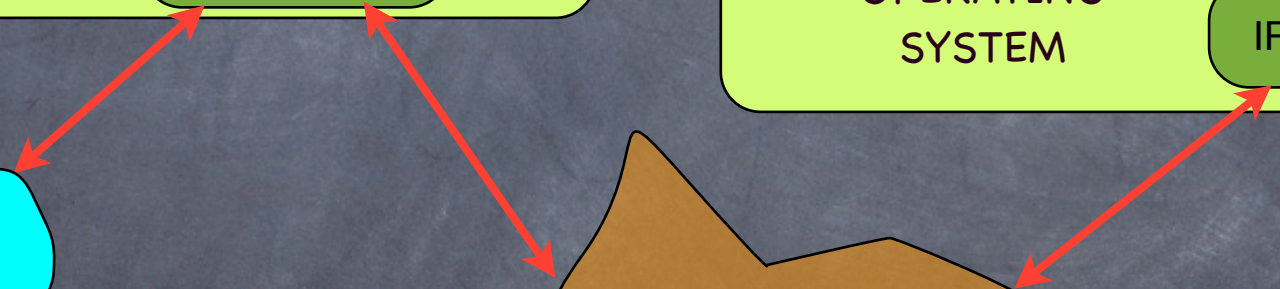
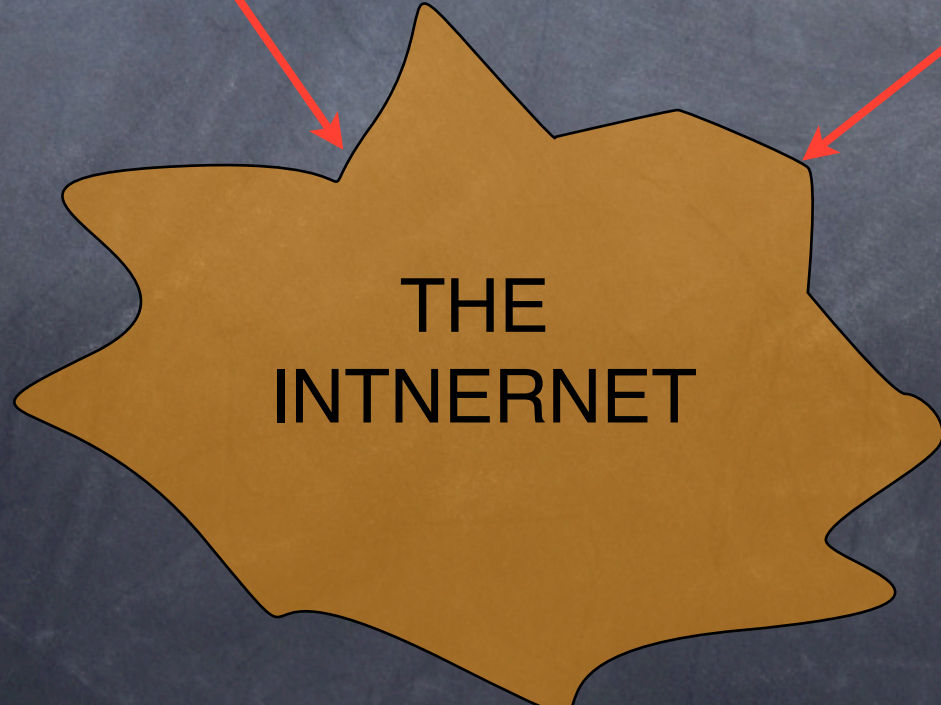
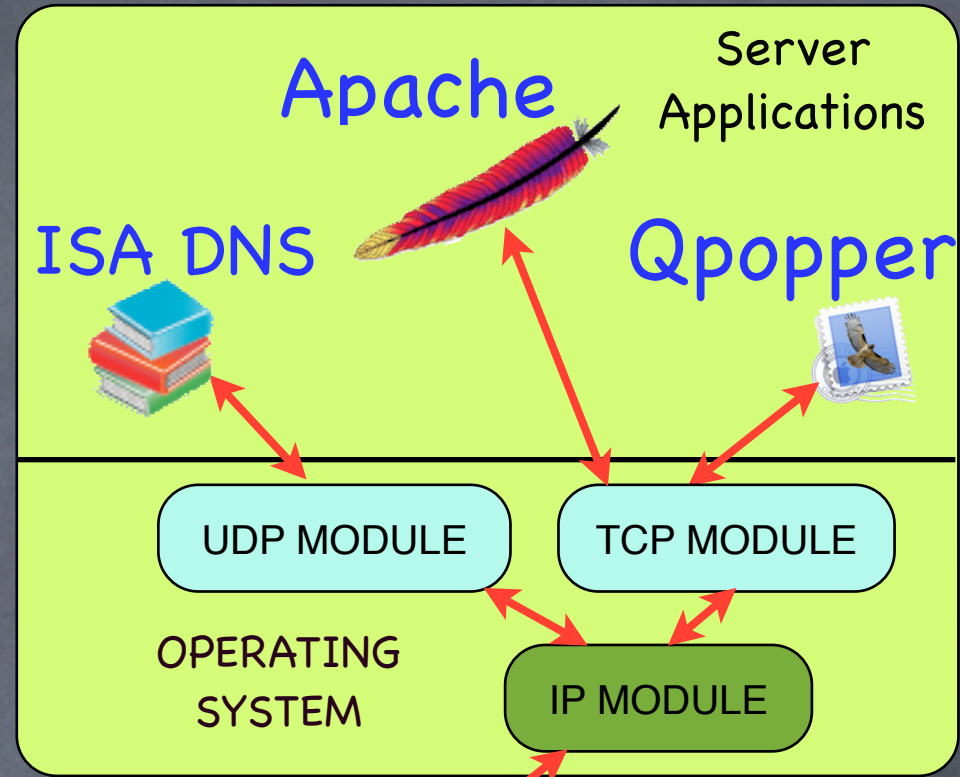
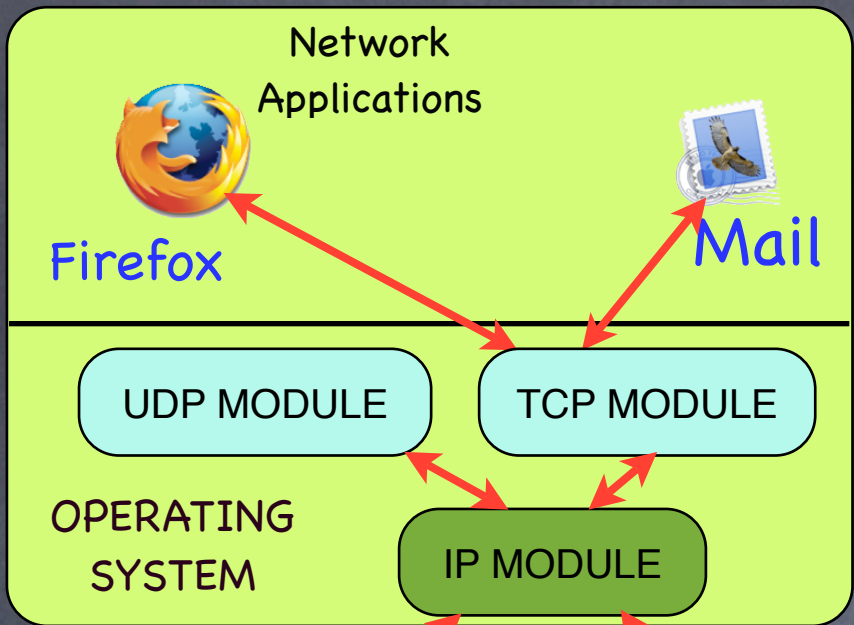
ETHERNET





IP Datagram Format

4	4	8	16
IP version	Hdr len	Service class	Packet Length
Packet Number		Fragment Number	
TTL	Protocol	Error Check	
From Addr			
To Addr			
DATA (up to 65516 bytes)			



UDP Packet Format

16	16
Source Port	Destination Port
Length	Optional Error Check
DATA	

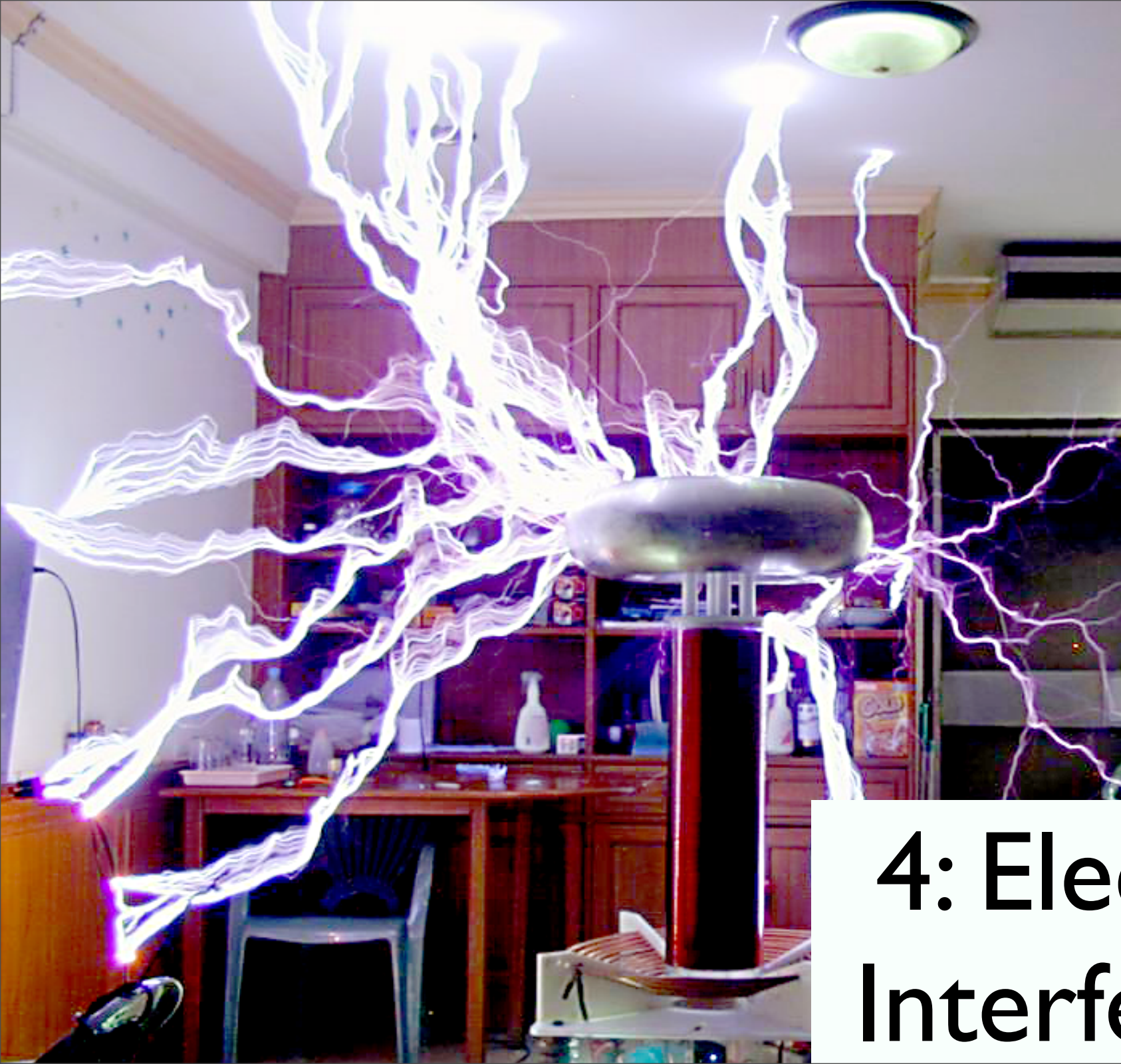
UDP packet inside IP packet

4	4	8	16
IP version	Hdr len	Service class	Packet Length
Packet Number		Fragment Number	
TTL	Protocol		Error Check
From Addr			
To Addr			
Source Port		Destination Port	
Length		Optional Error Check	
DATA			

Top 5 reasons IP packets
get lost: . . .

5: Cosmic Rays





4: Electrical Interference

3: We both plugged our hair dryers into the same circuit as the router and the blew a fuse.



2: Back Hoes



MAIL MYSTERY SOLVED

NEW YORK (1010 WINS) -- A letter carrier charged with torching first-class mail that he had stashed in a basement for years has been released on \$25,000 bail, the U.S. attorney's office said Thursday.

Gregory Mewborn, assigned to the Vanderveer post office in the Flatbush section of Brooklyn for eight years, was arraigned before a federal magistrate on Wednesday night, said Robert Nardoza, a spokesman for the U.S. attorney.

A federal complaint charged that Mewborn ``unlawfully secreted, destroyed, detained and delayed" letters and other mail entrusted to him.

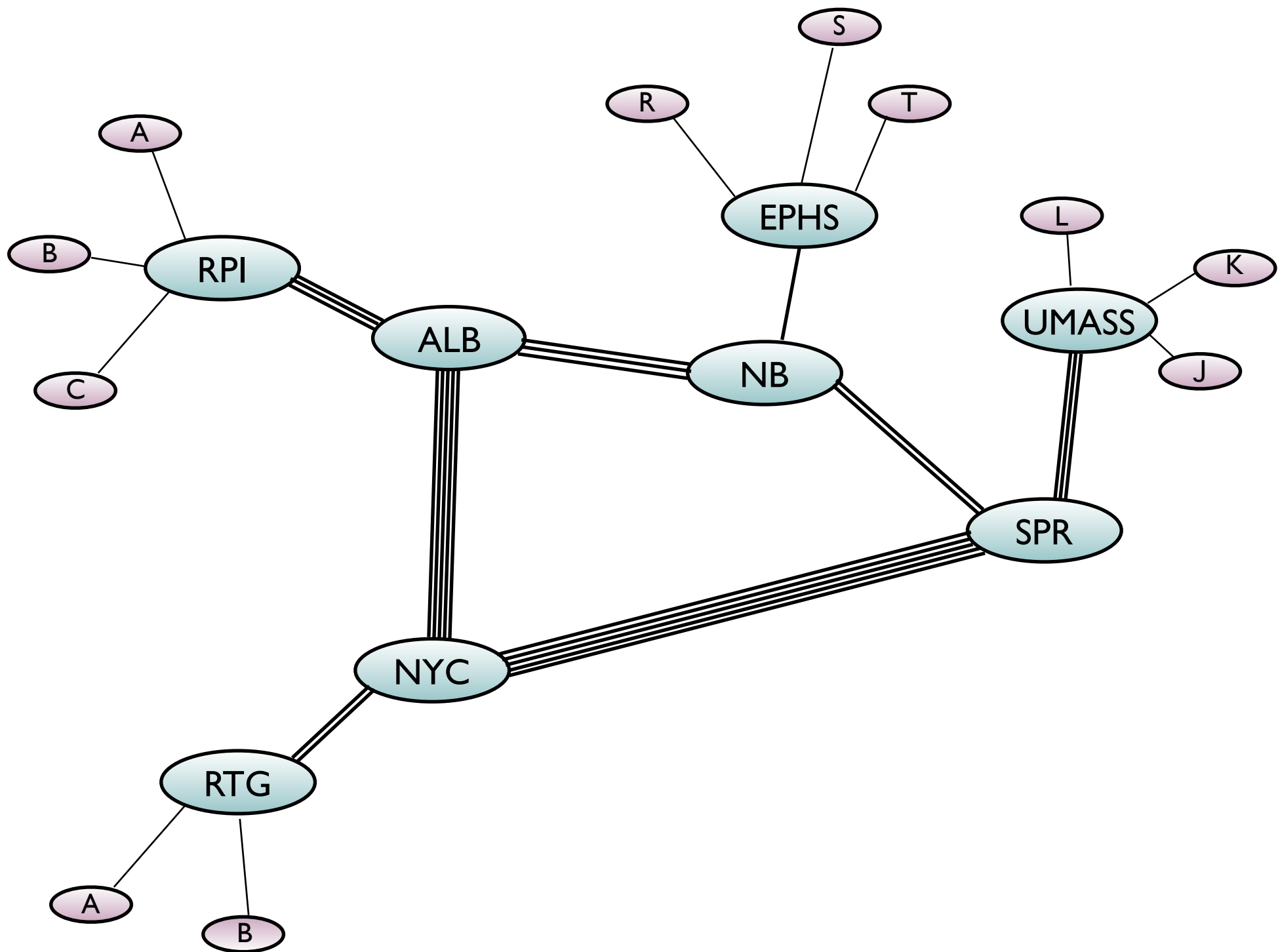
Firefighters got a call about smoke at a boarded building in Flatbush on Wednesday morning. They found 10 bags of undelivered mail, some of it burned, and a lighter fluid container near the basement furnace. The mail dated as far back as 2002.

<http://www.1010wins.com/pages/32068.php?contentType=4&contentId=136945>

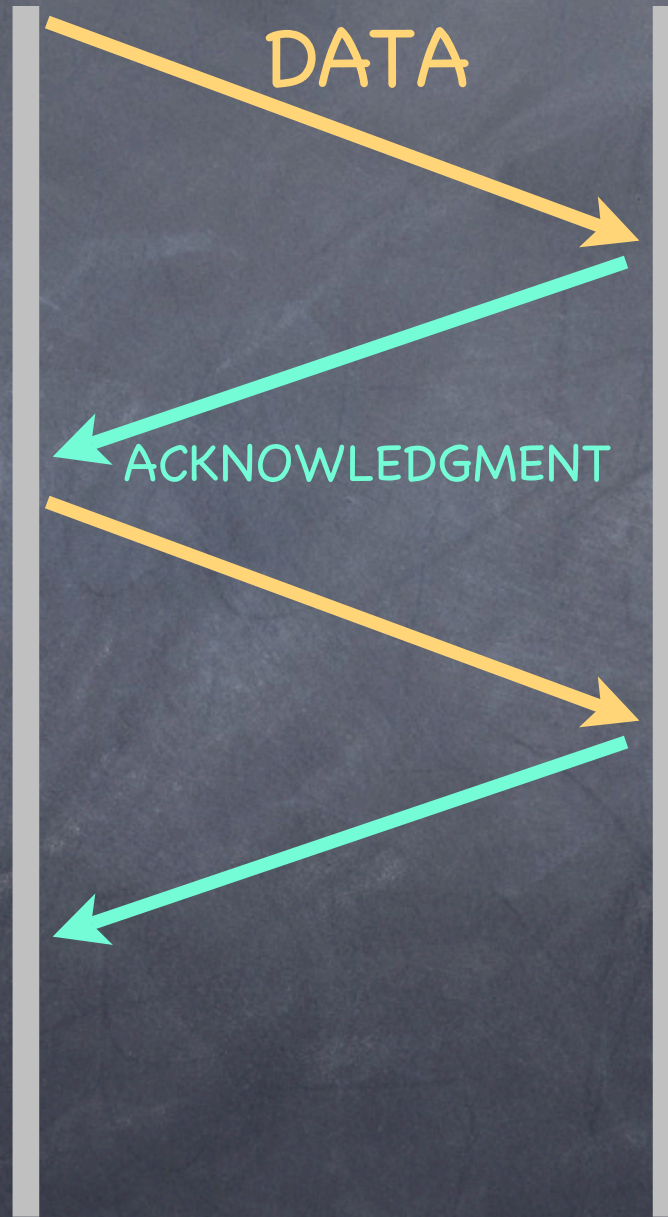
http://directmag.com/news/marketing_chicago_letter_carrier/

<http://www.cbc.ca/canada/manitoba/story/2006/05/16/mb-mail-20060516.html>

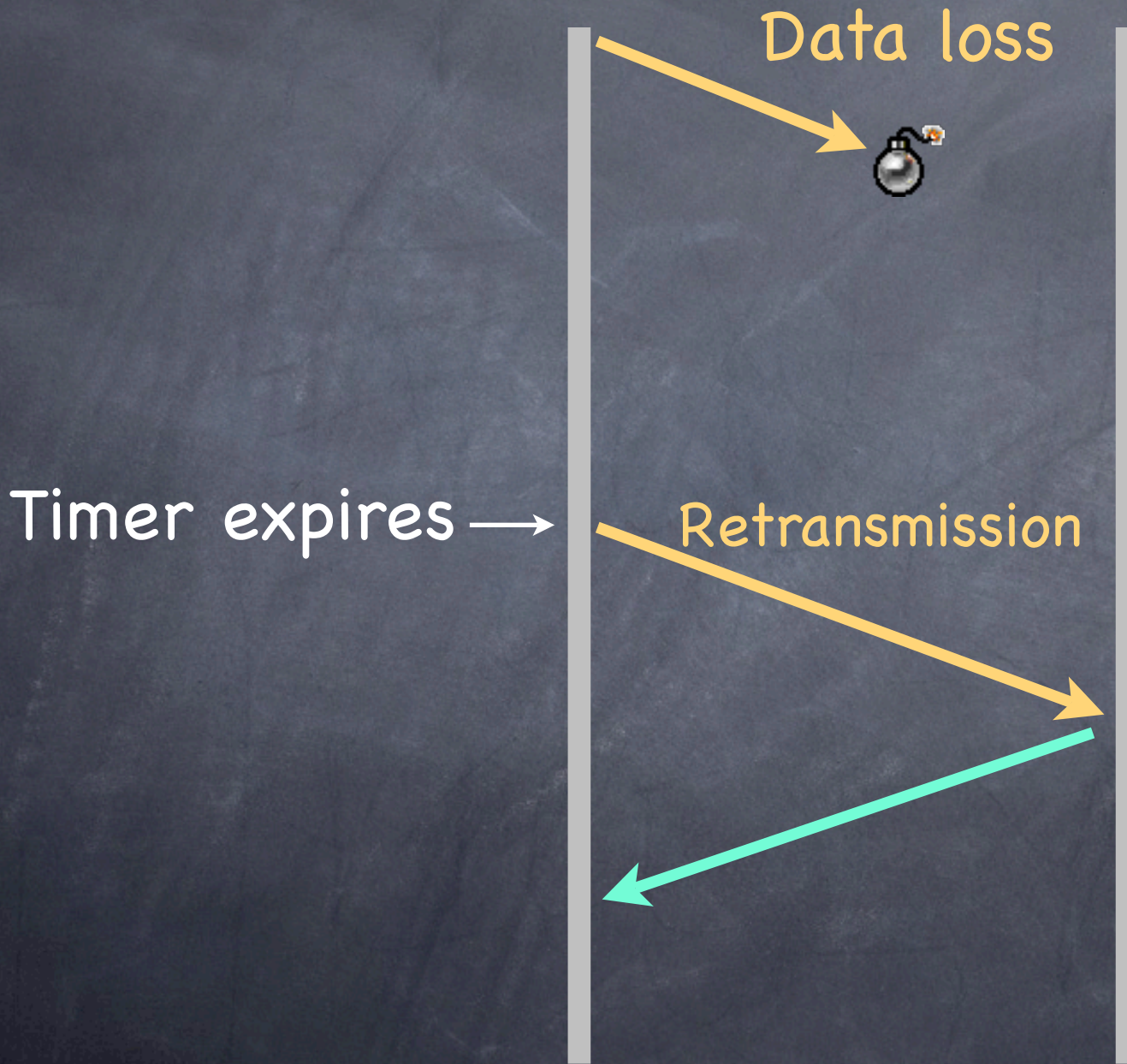




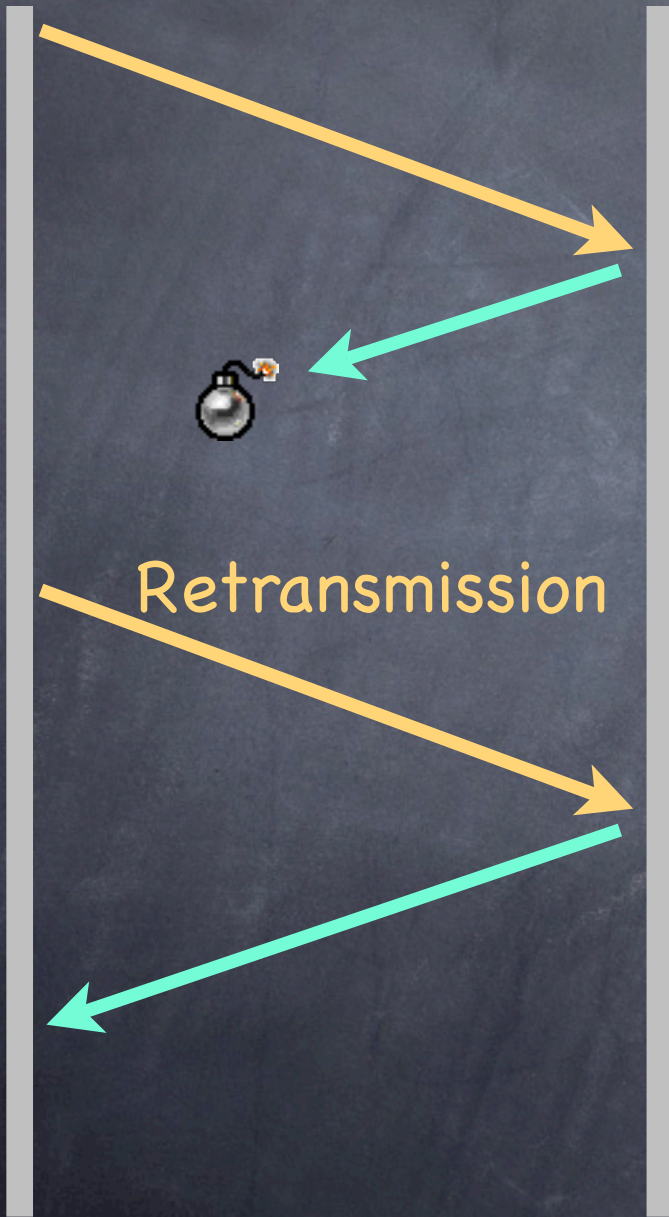
NORMAL TCP DATA TRANSMISSION



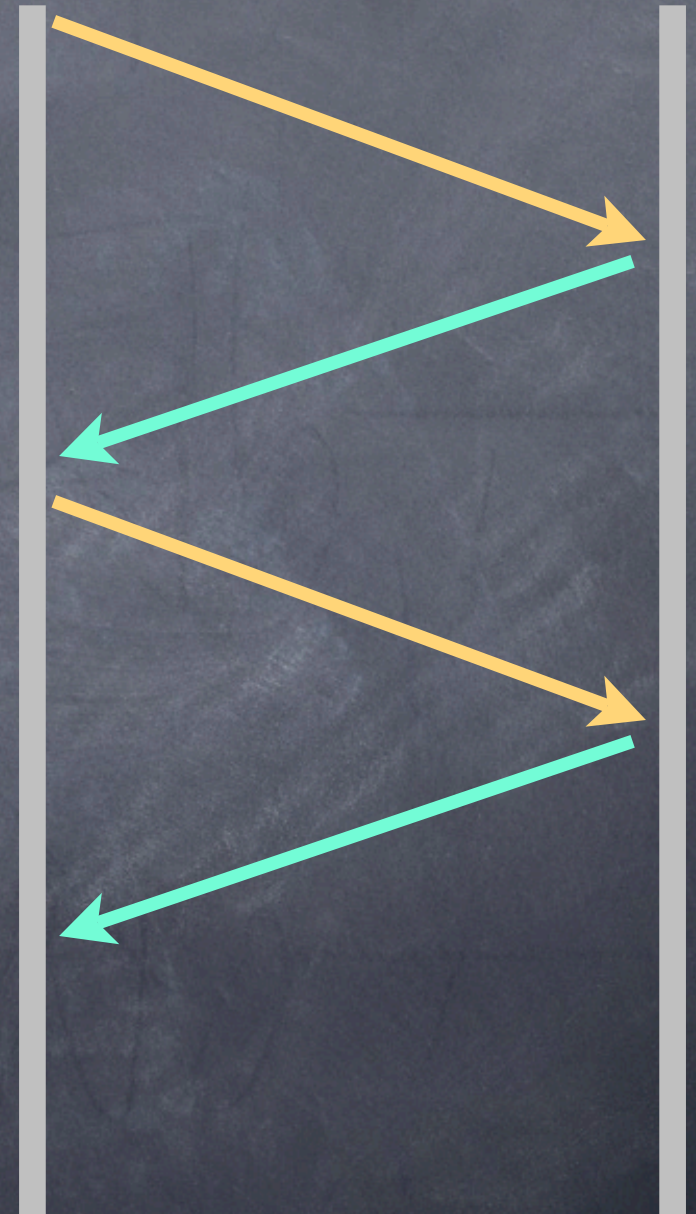
DATA LOSS



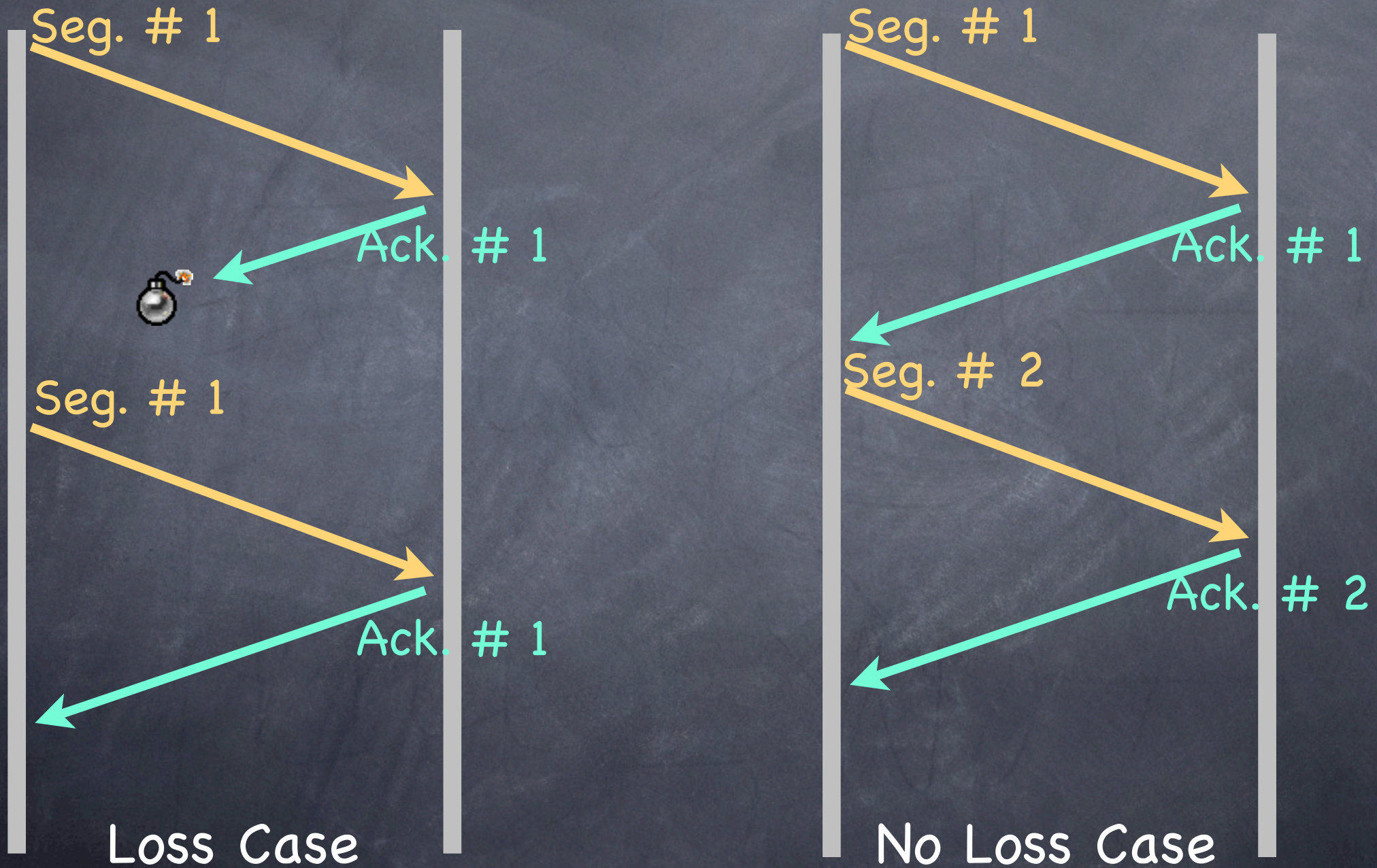
ACKNOWLEDGMENT LOSS + PACKET DUPLICATION



VS.



Sequence and Acknowledgment Numbers



TCP Segment Format

16		16	
Source Port		Destination Port	
Sequence (Segment) Number			
Acknowledgment Number			
Hdr Len		Flags	Receiver window
Error Check		Urgent Pointer	
DATA			

TCP packet inside IP packet

IP version	Hdr len	Service class	Packet Length
Packet Number		Fragment Number	
TTL	Protocol		Error Check
From Addr			
To Addr			
Source Port		Destination Port	
Sequence Number			
Acknowledgement Number			
Hdr Len		Flags	Receiver Window
Error Check		Urgent Pointer	
DATA			

...inside Ethernet packet!

