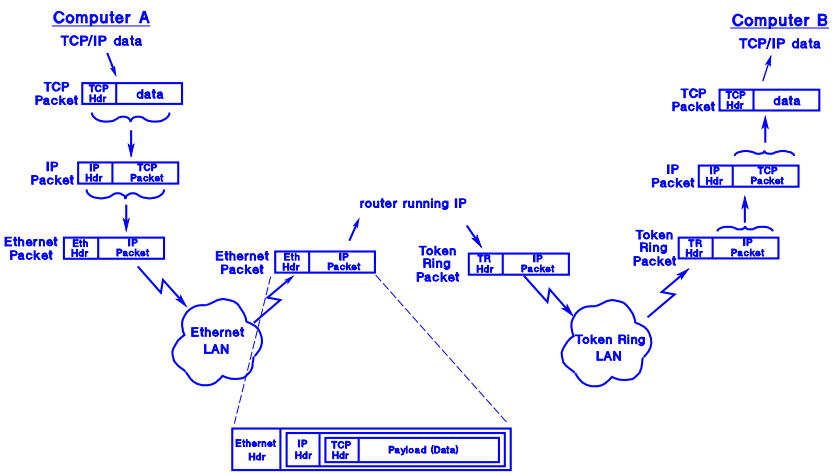
OSI Network Model

Application	7
Presentation	6
Session	5
Transport	4
Network	3
Data Link	2
Physical	1

NETW0010

University of Idaho

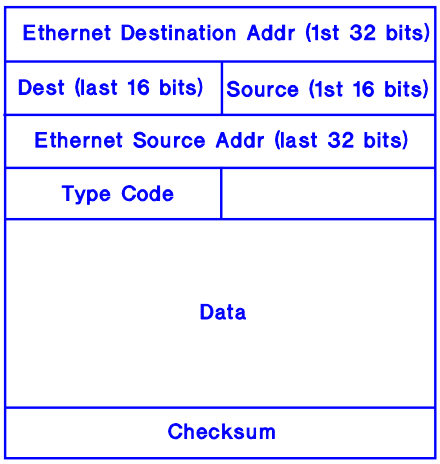
IP Over Different Networks



NETW0015

University of Idaho

Ethernet Packet



NETW0020

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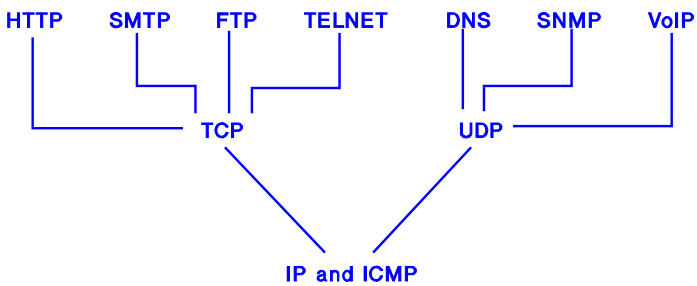
Internet Protocol Suite



NETW0025

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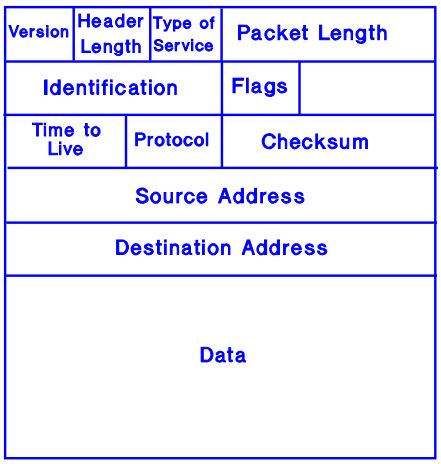
IP Packet Format



NETW0030

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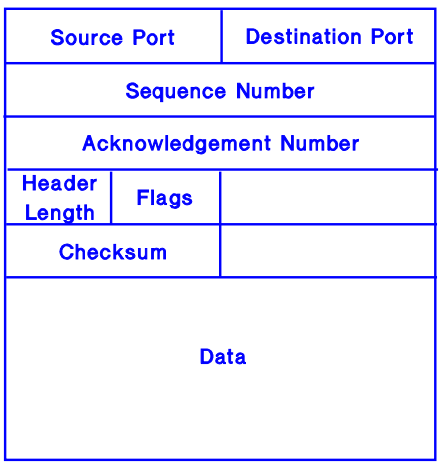
TCP Packet Format



NETW0040

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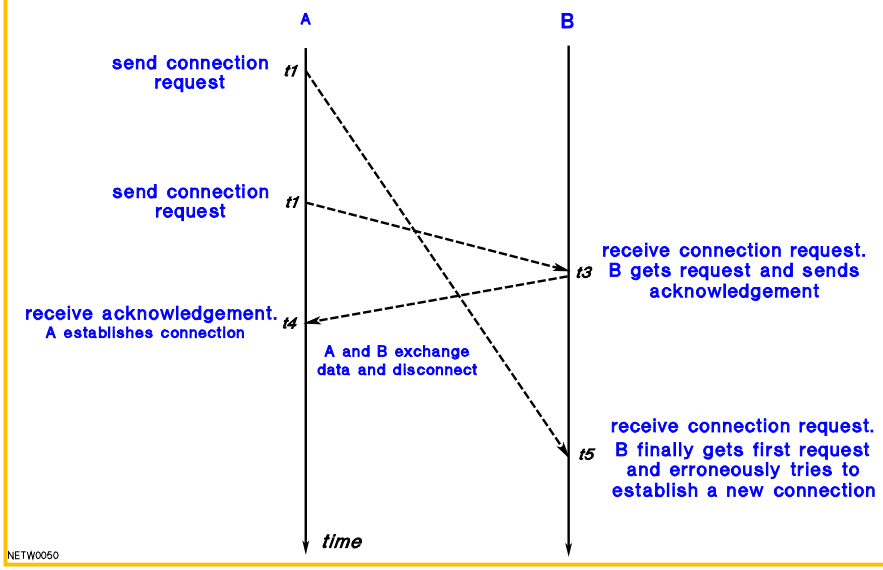
Two Way Handshake Protocol



NETW0050

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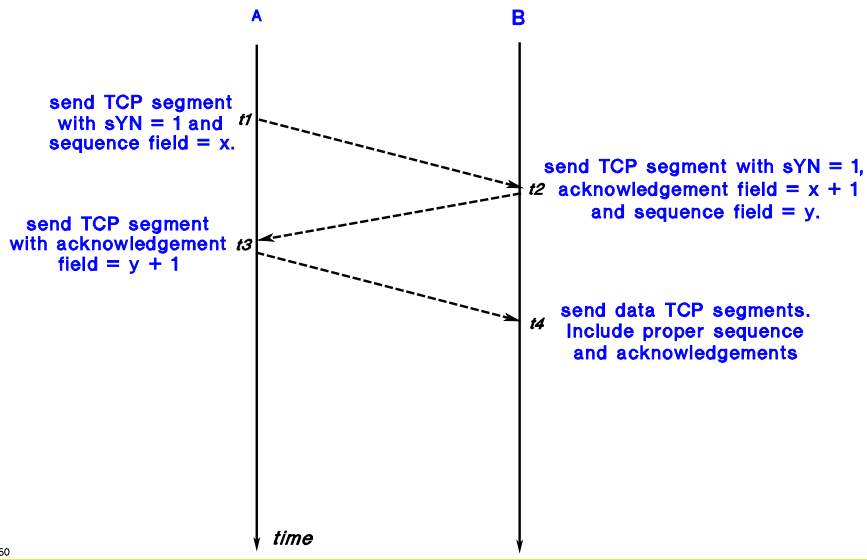
Three Way Handshake Protocol



NETW0060

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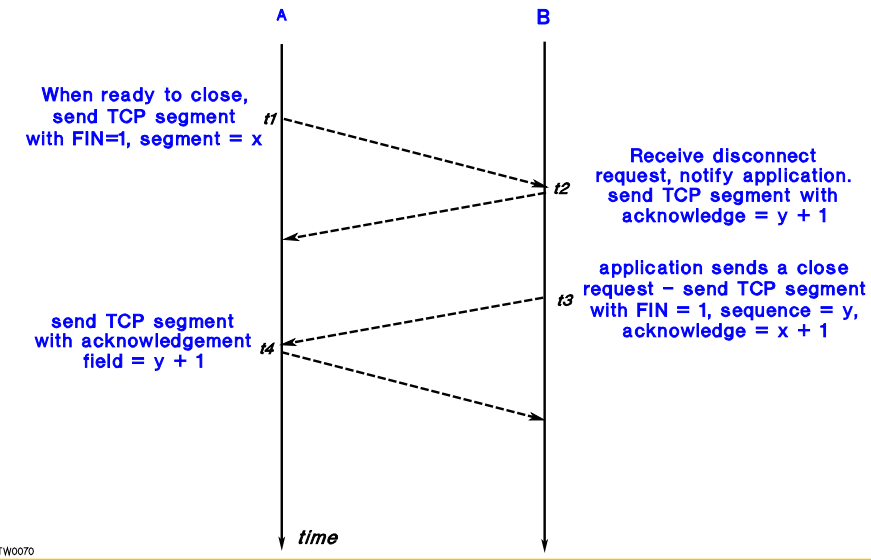
TCP Disconnect Protocol



NETW0070

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IP Addresses

32 bit value, usually expressed in "Dotted-Quad" format

129.101.153.33

One byte

URL is converted to IP address by DNS

IP is assigned to a system either statically, or dynamically by DHCP

NETW0080

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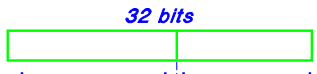
Network Addresses



Network Addr | *Host Addr*

11111111...1100000...00 *NetMask*

Ex.

Host Address	192.168.110.23
Network Mask	255.255.255.0
Network Portion	192.168.110.
Host Portion	.23

Net Class	*Network Mask*	*Network Address Range*
Class A	255.0.0.0	0.0.0.0 - 127.255.255.255
Class B	255.255.0.0	128.0.0.0 - 191.255.255.255
Class C	255.255.255.0	192.0.0.0 - 223.255.255.255

Another Example

UI Subnet

Ex.

		Last Digit (binary)
Host Address	129.101.153.33	
Network Mask	255.255.255.192	.1100 0000
Network Portion	129.101.153.	.0000 0000
Host Portion	.33	.xx10 0001

Private Networks

Net Class	*Network Mask*	*Network Address Range*
Class A	255.0.0.0	10.0.0.0 - 10.255.255.255
Class B	255.255.0.0	172.31.0.0 - 172.31.255.255
Class C	255.255.255.0	192.168.0.0 - 192.168.255.255