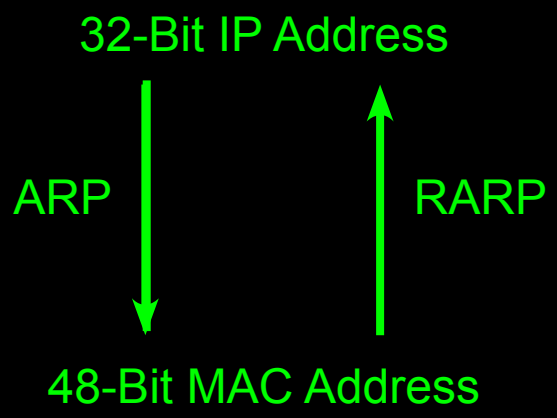
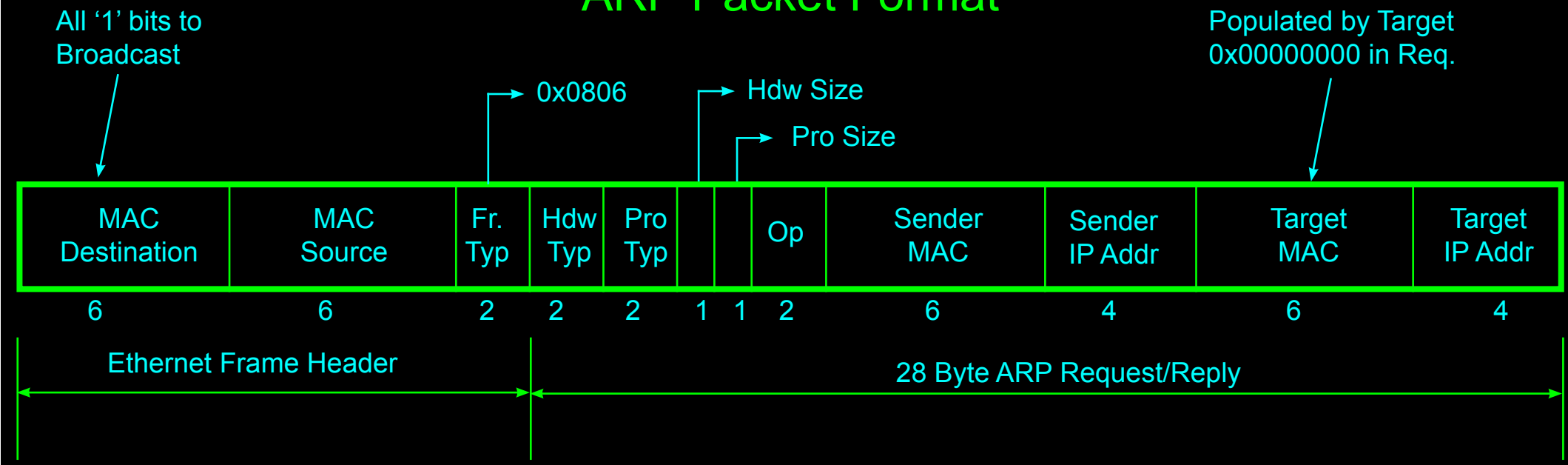
Network Protocol Attributes
Intra- and Inter- Networking Protocols

Address Resolution Protocol (ARP)
and
Reverse Address Resolution Protocol (RARP)



Network Protocol Attributes
Networking Protocols

ARP Packet Format



Frame Type	= 0x0806	==> ARP request or reply
Hardware Type	= 0x0001	==> Ethernet
Protocol Type	= 0x0800	==> IEEE 802.3
Hardware Size	= 0x06	==> Size of MAC addresses
Protocol Size	= 0x04	==> Size of IP Addresses
Op Code	= 0x0001	==> ARP Request
	= 0x0002	==> ARP Response

Network Protocol Attributes
Networking Protocols

Address Resolution Protocol (ARP)

Proxy ARP - When one host, such as a router, stands-in for the target

Gratuitous ARP - When a host sends and ARP request asking for its own MAC

ARP Request to nonexistent Host - Eventually times out. Time out value varies by system.

ARP Reply available to any host that can “hear” it.

Cached ARP data refreshed frequently

Network Protocol Attributes
Networking Protocols

Reverse Address Resolution Protocol (RARP)

Purpose is to obtain an IP address from a destination

Destination must have knowledge of source's MAC address

RARP Packet format nearly same as ARP:

Frame Type	= 0x035	==> RARP Request or Reply
Op Code	= 0x0002	==> Request
	= 0x0003	==> Reply