Numerical proxy ARP

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Date

ARP & RARP

Address Resolution Protocol (ARP):

- ARP associates an IP address with the physical address

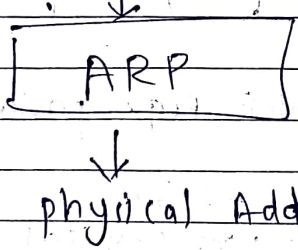
Logical Address $\xrightarrow[(ARP)]{\text{Mapping}}$ physical Address

- As 'IP' uses the service of Data link layer, it needs to know the physical address of the next hop ⇒ Arp

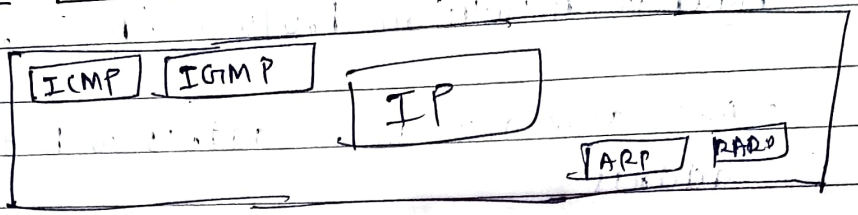
Mapping of IP Address into MAC Address :-
(1) static mapping
(2) Dynamic mapping

(1) Static Mapping
Table is crated with logical & physical addrss.
Limitations

(2) Dynamic Mapping — ARP, RARP
Each time a machine knows the logical addr. of another machine, it can use a protocol to find physical address.



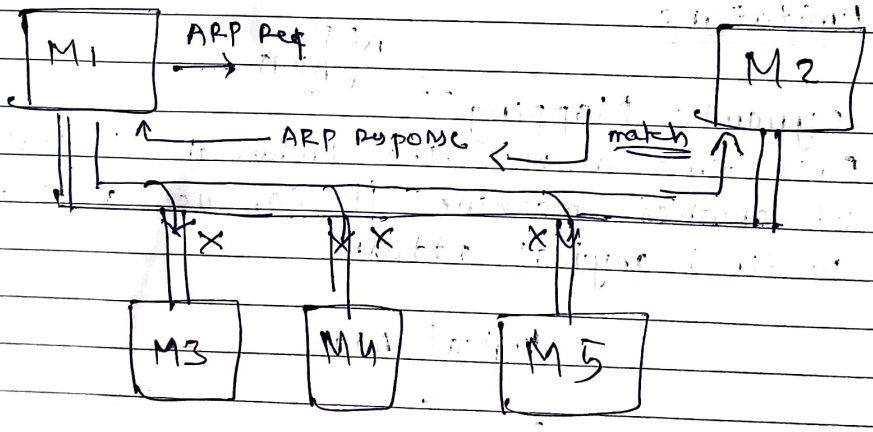
position of ARP



Working

ARP protocol

- Accepts a logical address from the IP protocol
- Maps the address to the corresponding physical address
- pass it to the data link layer.



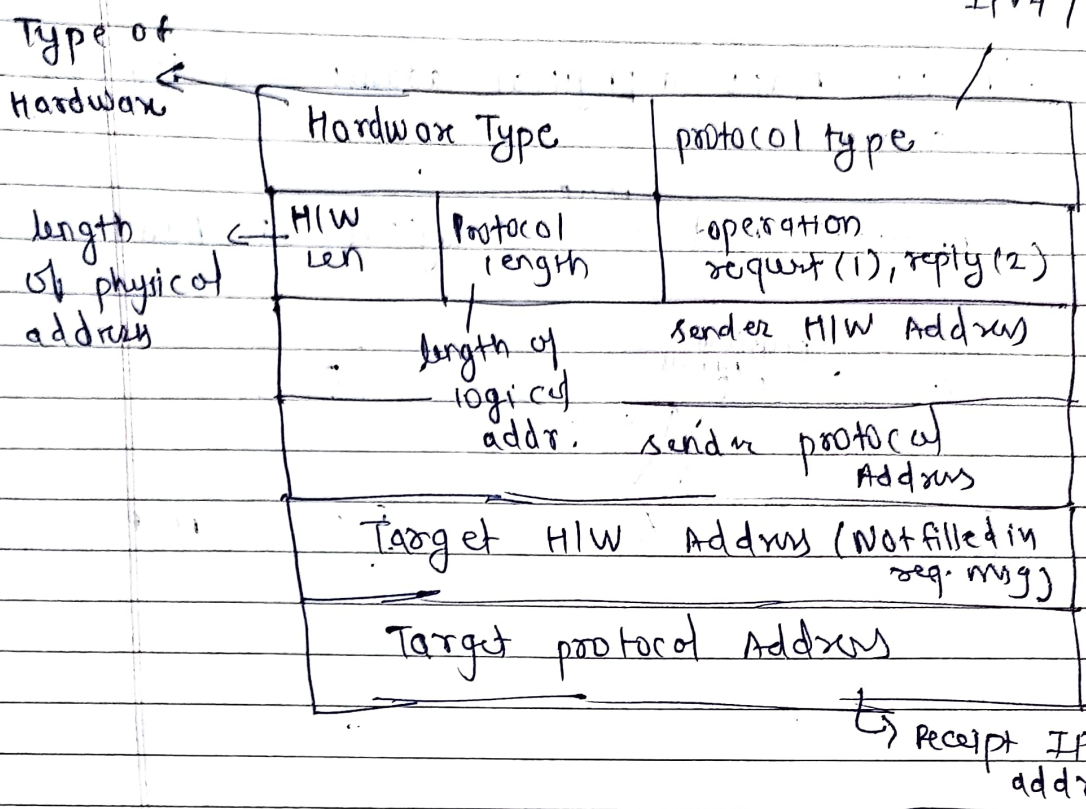
M1 will send ARP Req. packet → IP add M1, MAC add M1, M2 IP add

ARP Response → M2 IP → M2 physical address

ARP → request → Broadcast

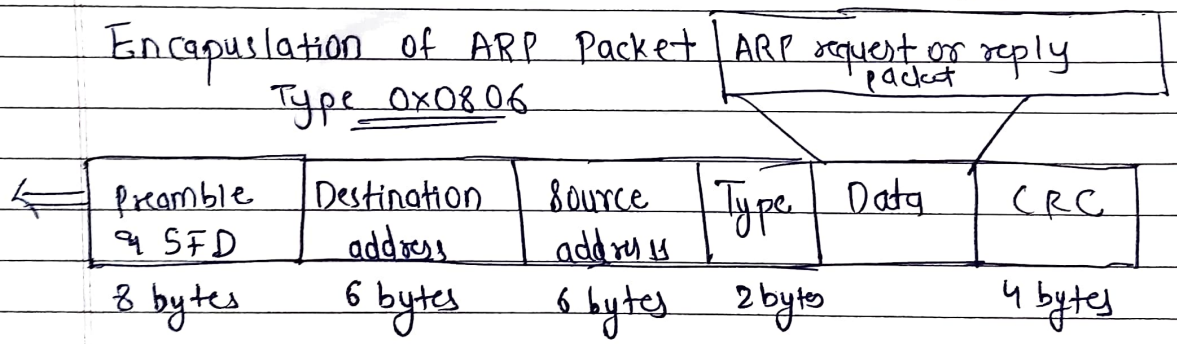
ARP → response → Unicast

ARP Packet format



Encapsulation of ARP Packet

Type 0x0806



Four Cases using ARP

RARP(Reverse Address Resolution Protocol (RARP)

- 'RARP' maps a physical address to a logical address

physical Add ——Map——→ logical IP Addr.