Byte Ordering

Big Endian stores most significant octet in the smallest address

uint32_t x = ~~0x0102~~ 0x01020304

sets x to a value in decimal

16,909,060

or 0x01020304 in Hex

or in binary:

00000001 00000010 00000011 00000100

↓ ↓

most significant Byte Least significant Byte

On a PC (Intel architecture)

it orders bytes based on Little Endian

where least significant Byte (LSB) is in the smallest Address

Big Endian stores the MSB in smallest address

Little Endian

```
uint32_t x = 0x01020304
uint16_t y = 0x0506
```

memory	(Little Endian)
1000	4
1001	3
1002	2
1003	1
1004	6
1005	5

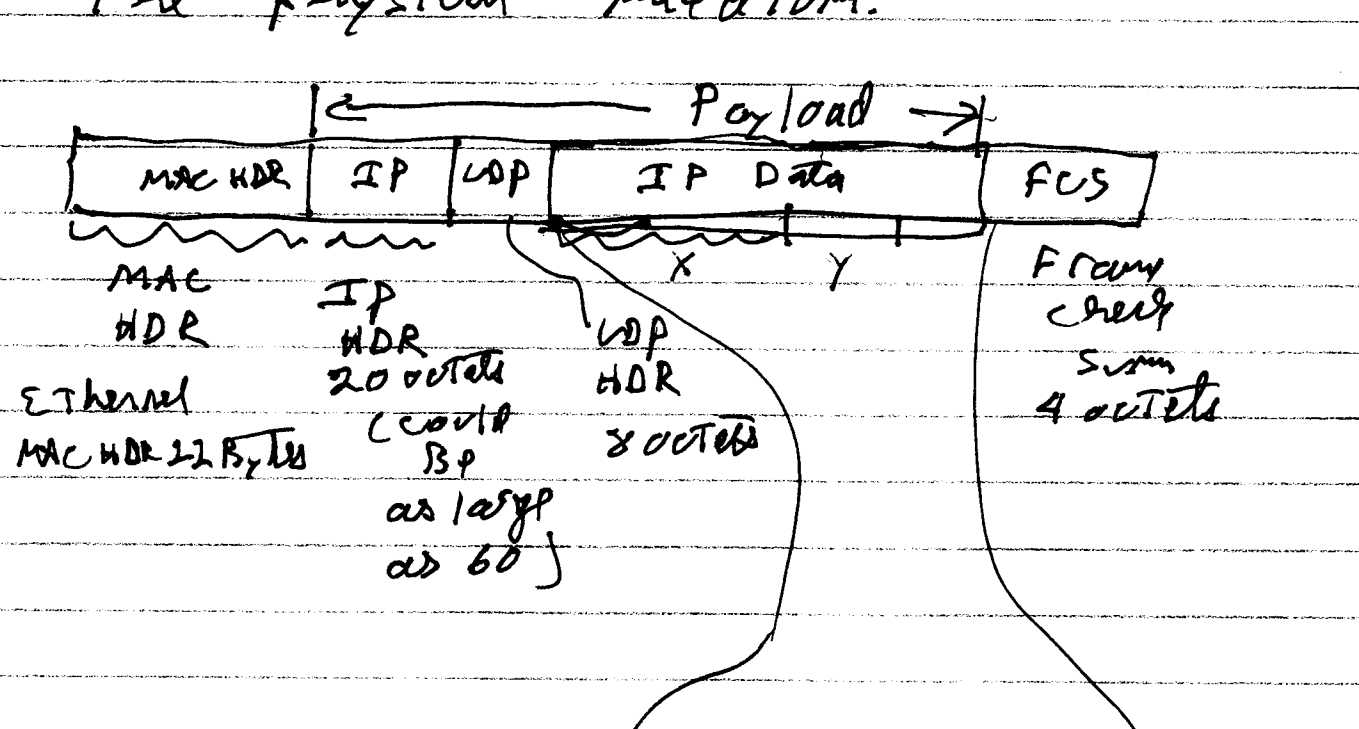
Big Endian

we pack x + y to a network Buffer (8 octets) in network Byte order (Big Endian)

buf2	value
2000	1
2001	2
2002	3
2003	4
2004	5
2005	6
2006	0
2007	0

Assume we send buf (8 octets) with sendto() as we would do in UDP Echo client.

Let's Look at The stream of bytes That is are placed in a frame which is Then sent bit by bit by The physical layer over The physical medium.



Addressing of a Frame we assume The low memory end is The start and higher memory are subsequent octets.

The MSB of our variable X is sent first as it is placed in The smallest address