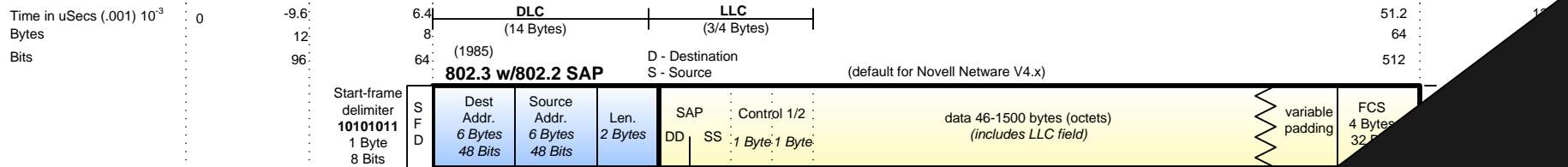


"Ethernet" CSMA/CD Frame, or Packet Types

10 Megabits per second - Carrier Sense, Multiple Access/ Collision Detection



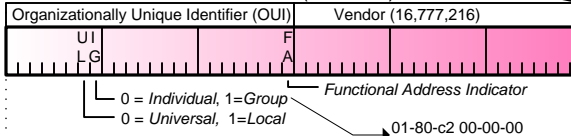
Collision Zone

Nodes wait 9.6u Secs **minimum** before sending. InterFrame Gap (IFG)

100Base LAN equates to .96u secs

Preamble 56+8 (SFD) bits clock synch.

Ethernet Destination Address (LSB first)



If I/G and U/L bits = 1 and FA = 0 - then a functional address
Source Address I/G = 1 (LSB) - then source route (RIF) info
I/G bit is LSB (canonical) - sent first on the wire.

(1980) Ethernet II (DIX) protocol



Greater than 1500 (x'05 dc')
Not Length
IP Type x'08 00
X.25 x'00 00
ARP Type x'08 06
Netware x'80 00

Collision (simultaneous broadcasts) Exponential Back-off Algorithm

1. Jam bits (32-48 bits)
2. Random wait number from 0 to the nth power of 2, where n=number of successive collisions. 0 to 2 after the first, 0 to 4 after the second, 0 to 8 after the third. Until the 10th collision - 1024.
3. Multiple this random number by the slot time (51.2usecs = 512 bits) and wait this amount of time before trying to resend.
4. Give up after 16 attempts.

802.3 w/802.2 SAP



Manchester Encoding

There is a transition at the middle of each bit period. The mid-bit transition serves as a clocking mechanism and also as data.

- 0 - transition from high to low in middle of interval
- 1 - transition from low to high in middle of interval

LLC2
TI