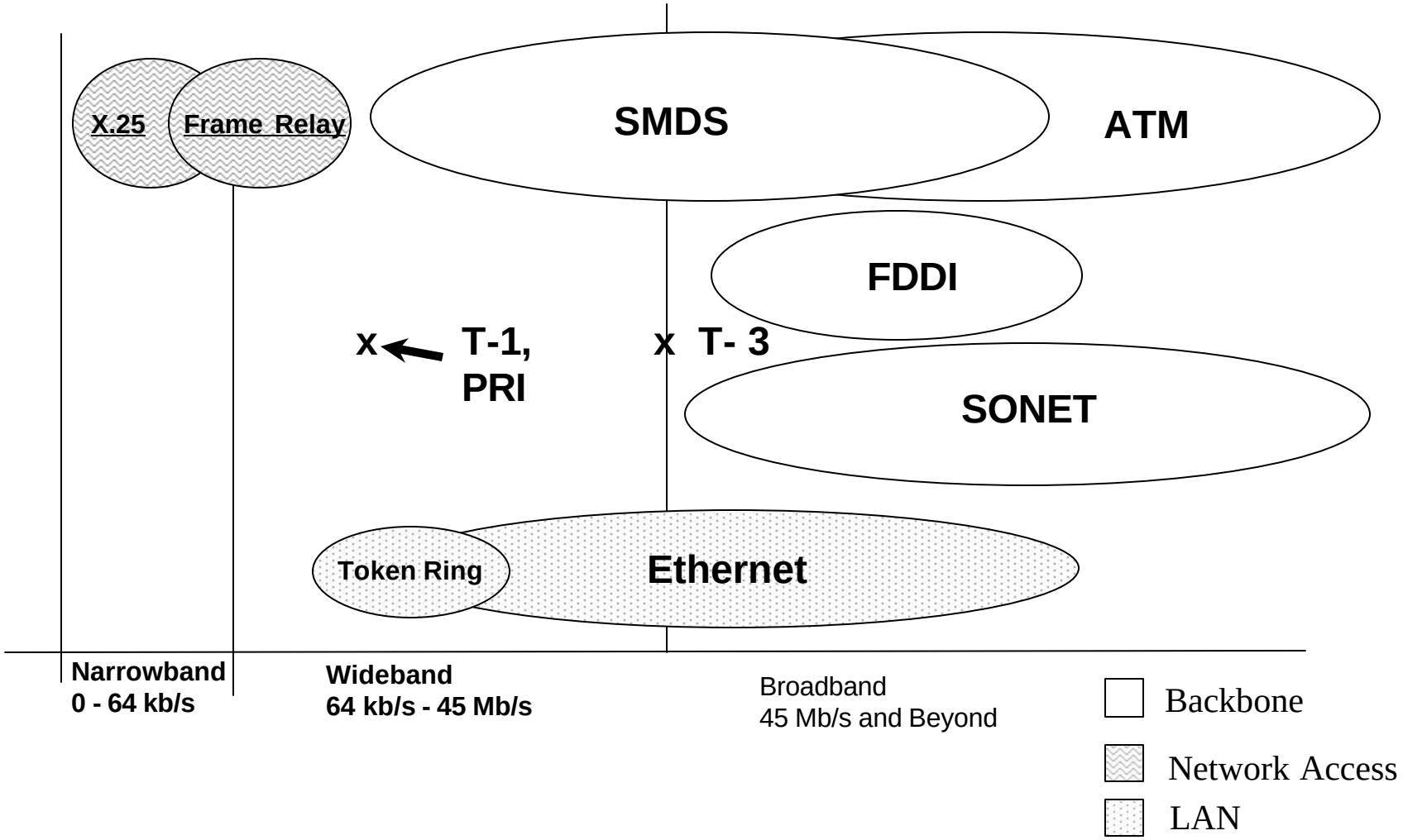
Bandwidth



©SCTE

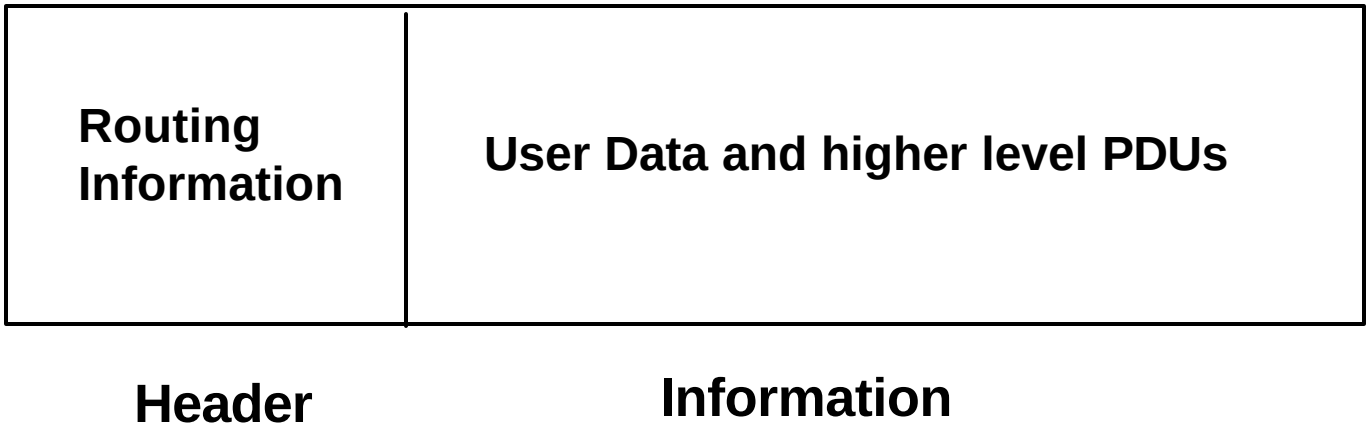
X.25 Protocol

Physical Level

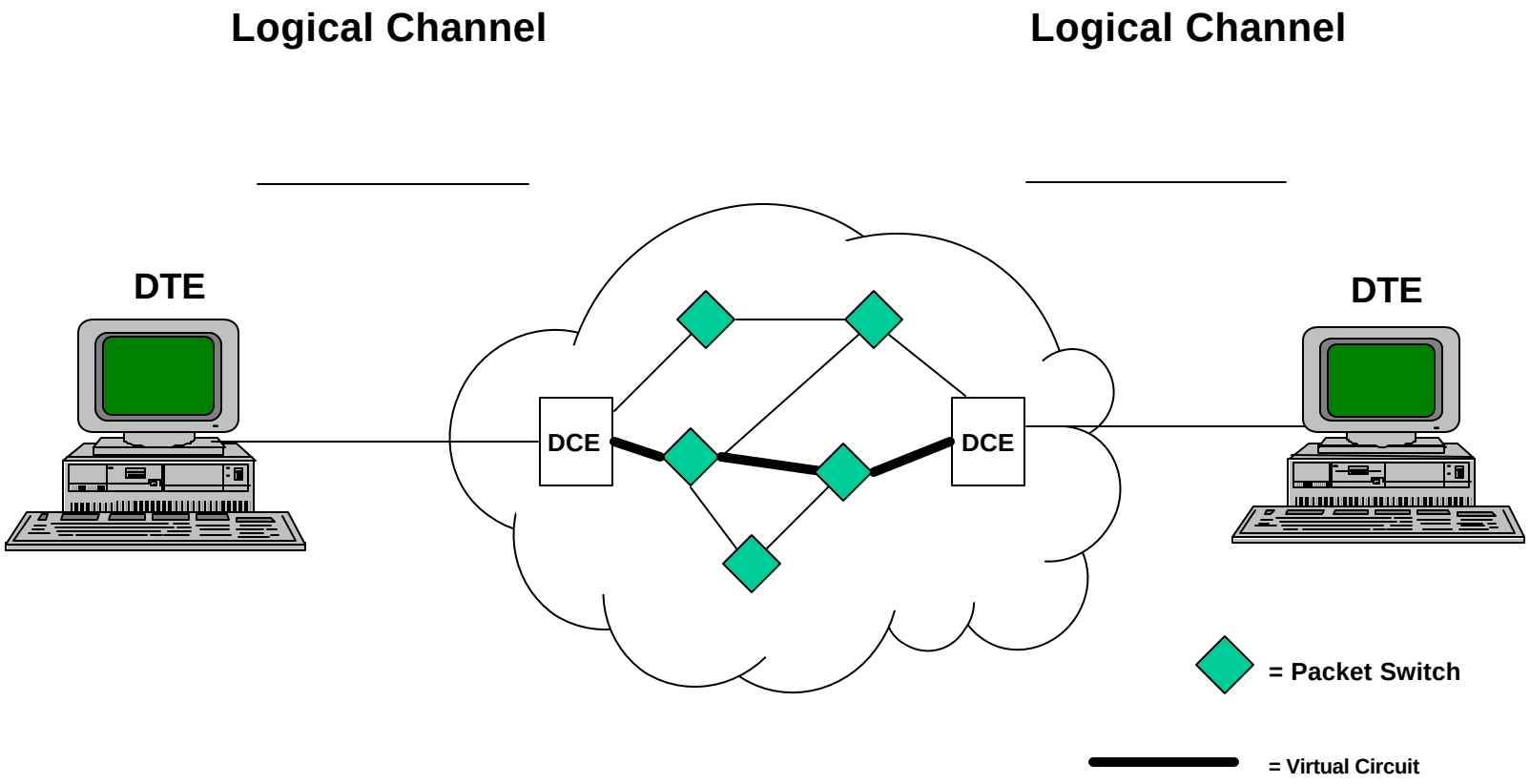
Link Level

Protocol Level

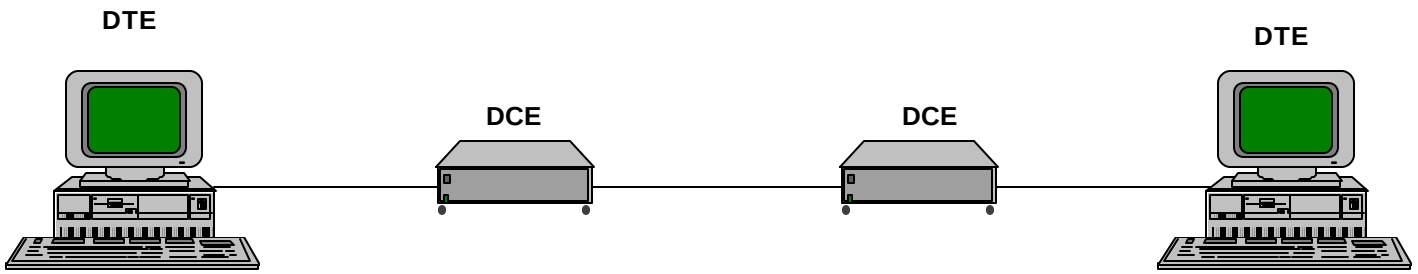
Packet Format

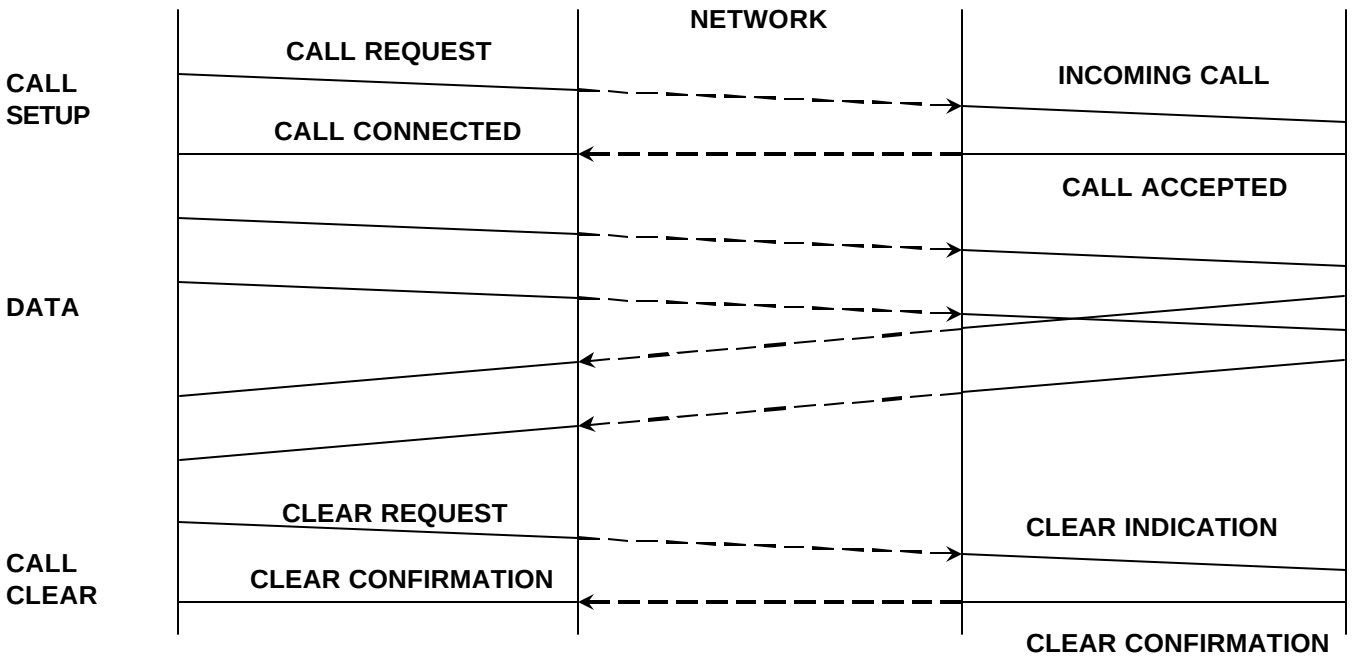


Logical Channels and Virtual Circuits



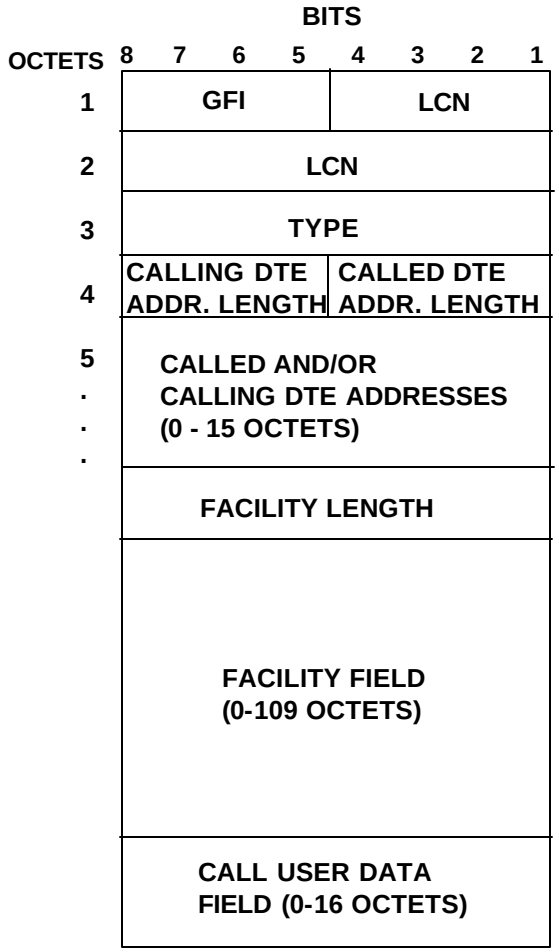
Virtual Call Data Flow



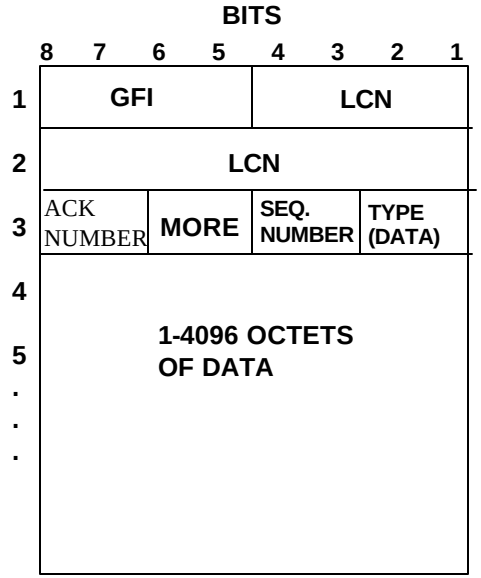


X.25 Packet Types

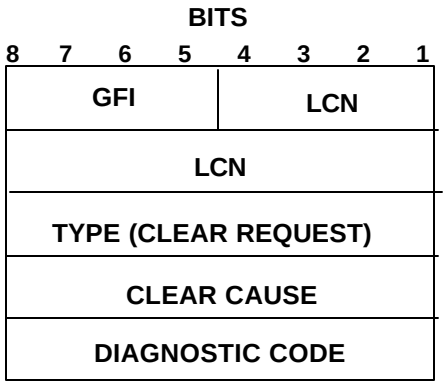
Call Request



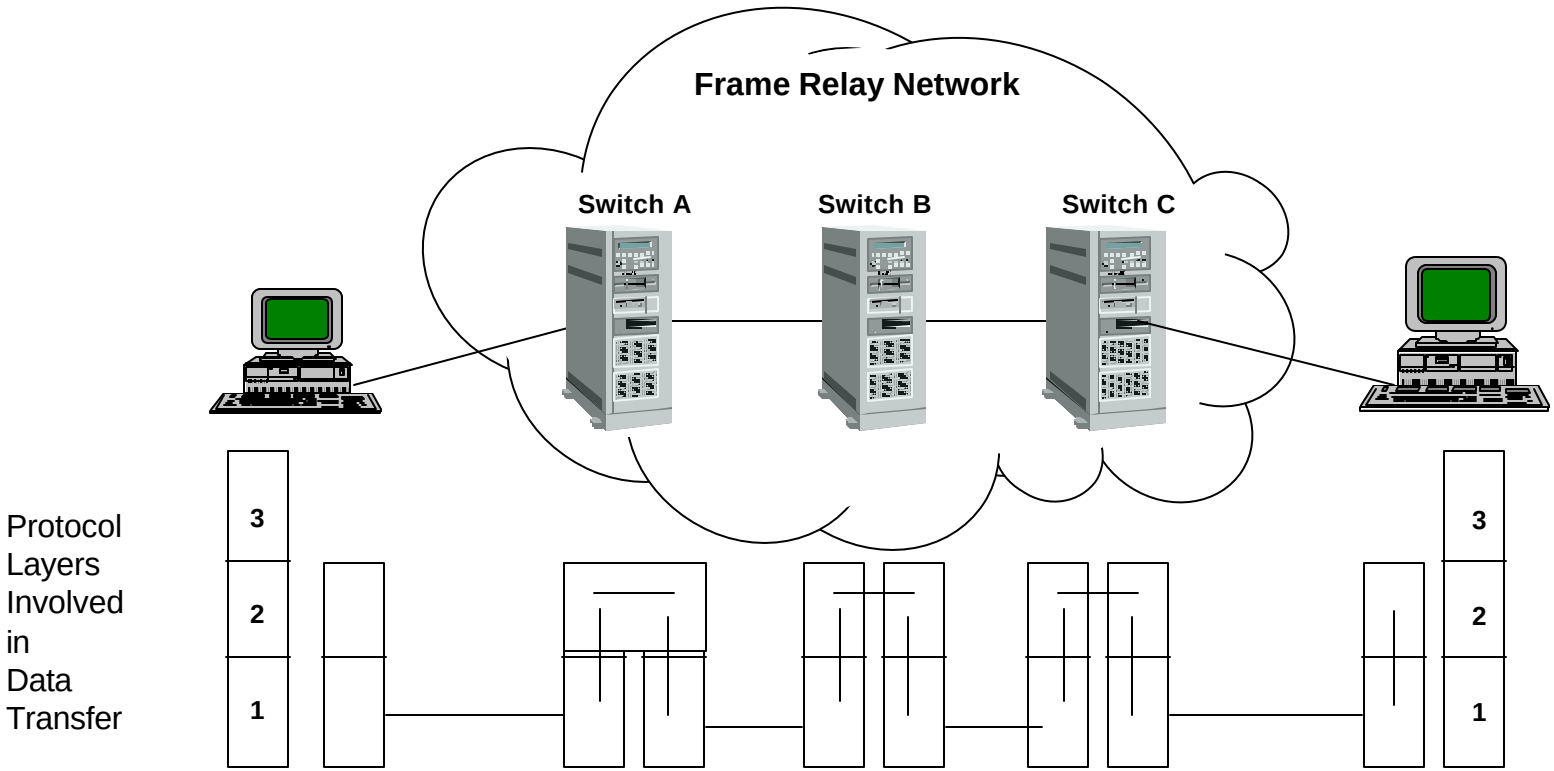
Data



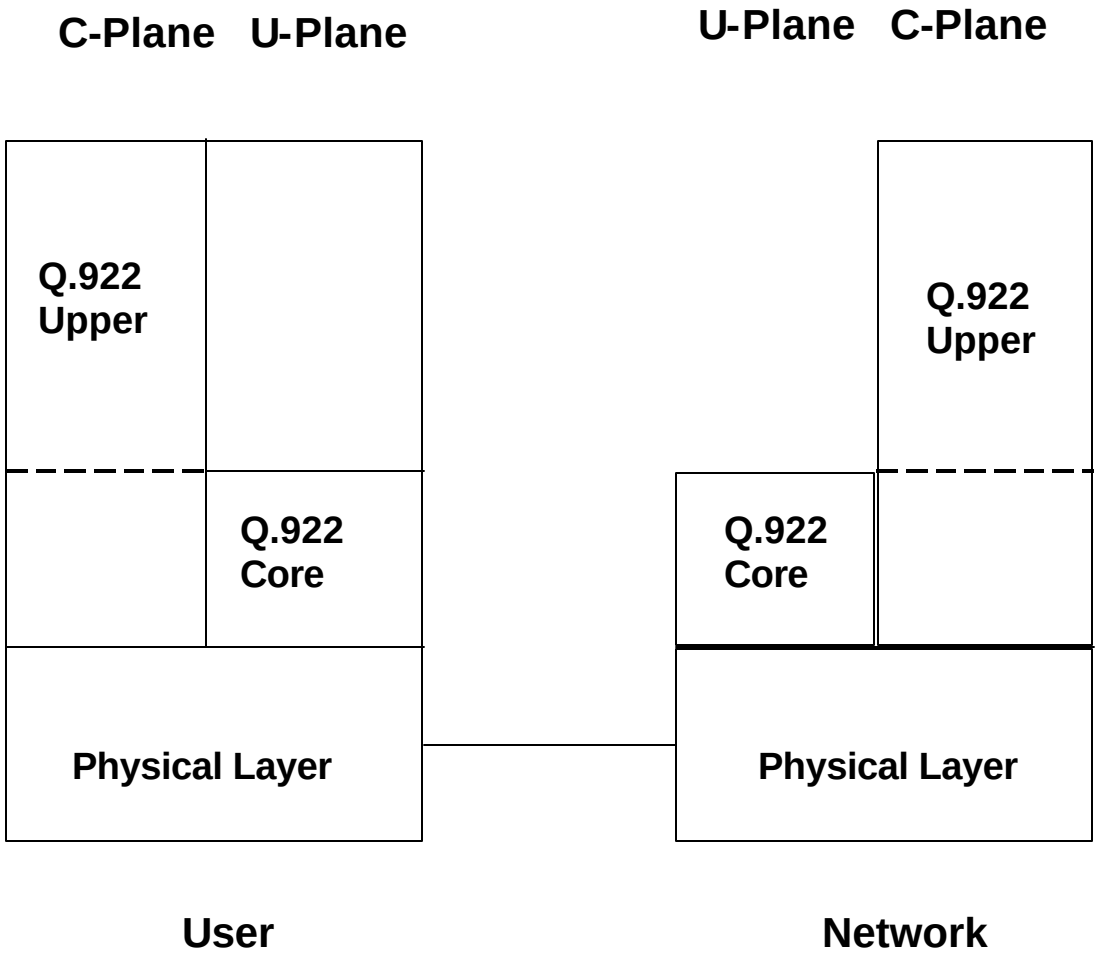
Call Termination



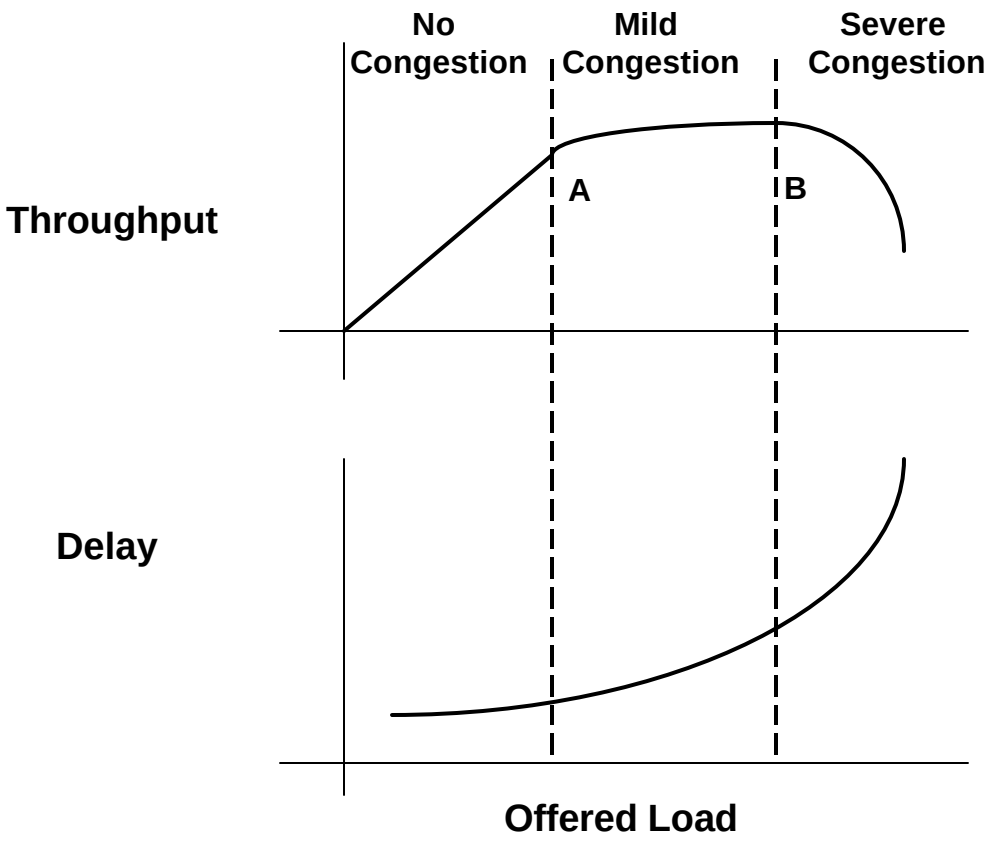
Data Flow in a Frame Relay Network



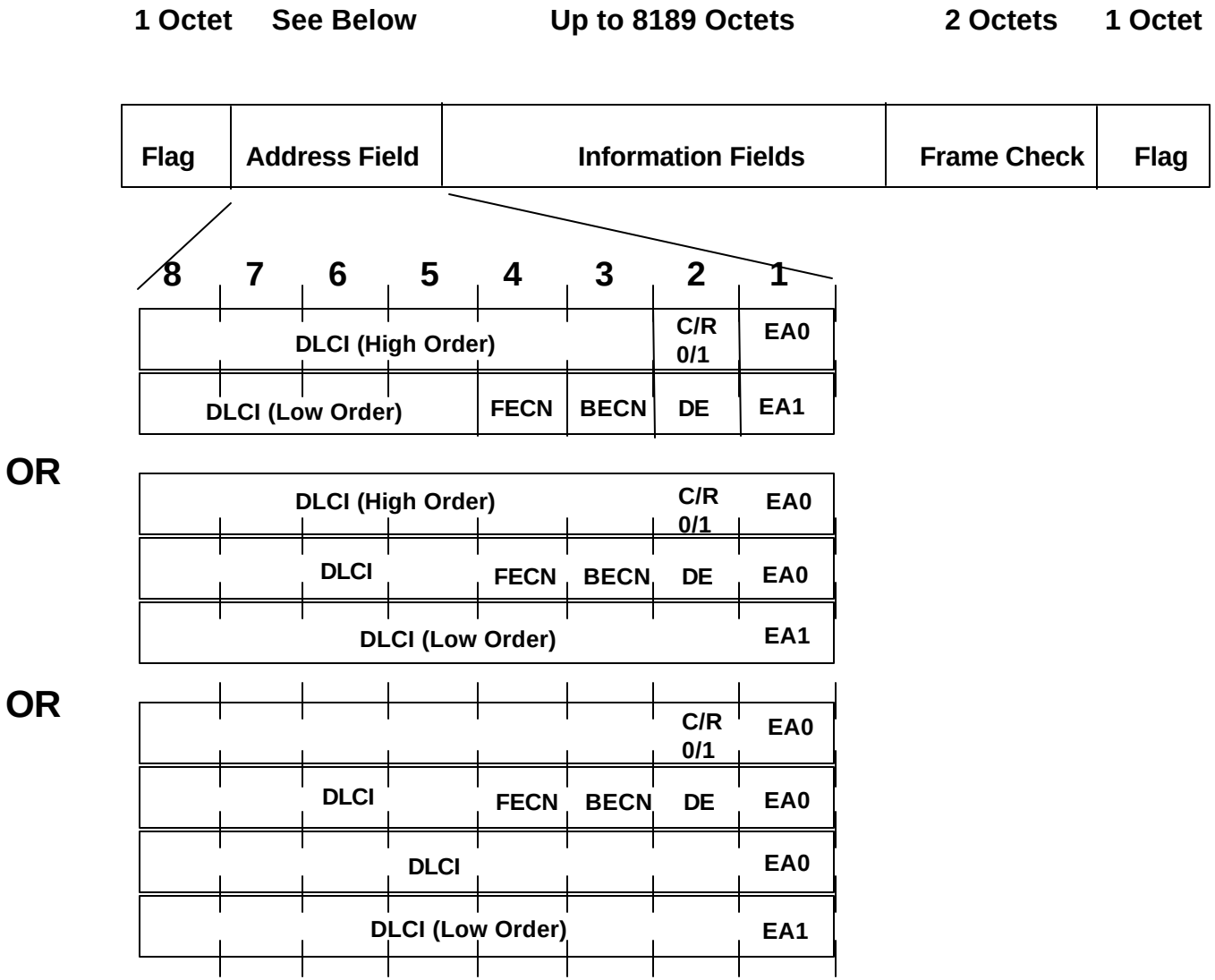
Relationship of C and U Planes



Effects of Network Congestion



Frame Structure



SUMMARY

Backbone, Network Access, and LAN Protocols

X.25 Protocol

OSI Layers 1 – 3
4 Types of connections
9.6 kb/s access speeds
Error correction at switches
Logical Channels & Virtual Circuits
Call Request, Data, and Call Termination Packets
Restart vs. Reset

Frame Relay

OSI Layers 1 – 2
Faster
No error checking
56 kb/s to 45 Mb/s
Control Plane & User Plane
Virtual Circuits
Frame Structure: Flag, Address, Information Check Sequence, Flag
Congestion Control: Explicit & Implicit
DLCI, FECN, BECN, DE, CIR