CSET 2200

Lecture 3 - OSI Model/TCP Model/Network Theory

Review network history

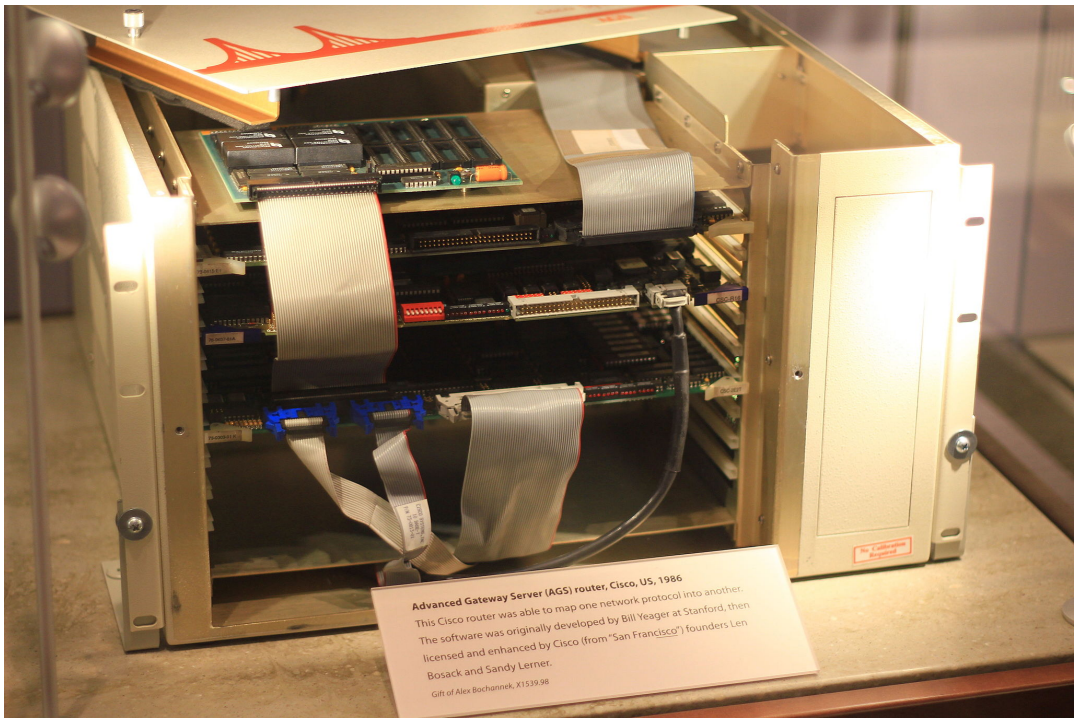

Figure 1: Cisco AGS

The OSI model

AKA that thing you need to learn but don't directly use

The OSI Model

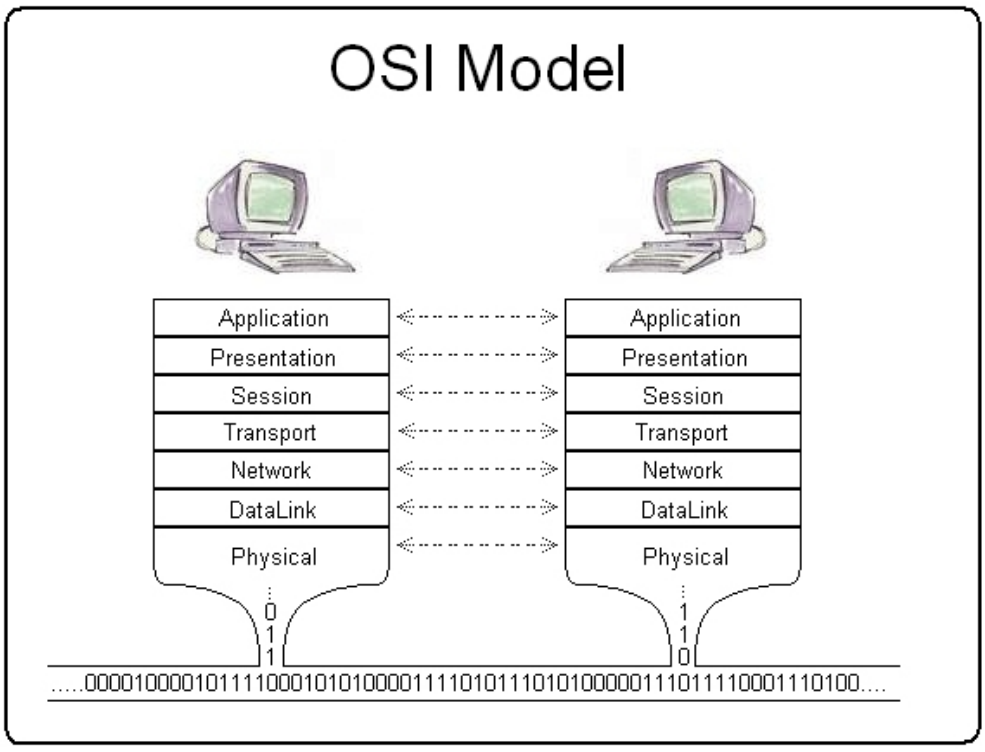

Figure 2: OSI Model

Ways to remember it

Programmer's don't need to see pretty applications

Ways to remember it

Please do not throw sausage pizza away

Figure 3: Mmmm Pizza

Ways to remember it

People don't need those stupid packets anyways

Figure 4: Token Ring

Ways to remember it

Please do not teach students pointless acronyms

Physical Layer

- Data Unit: Bit
- Electrical
- Various technologies (Ethernet/Token Ring/Wifi)

Data Link Layer

- Data Unit: Frame
- Reliable Transport
- Ethernet - 802.2

Network Layer

- Data Unit: Packet
- Not guaranteed to be reliable
- May split packets if too big
- IP

Transport Layer

- Data Unit: Datagram, Segment
- Provides multiplexing and flow control
- UDP, TCP

Session Layer

- Handles Burrito Delivery (Just seeing if you're paying attention)
- Handles sessions and establishment of connections
- Nothing really in TCP/IP model

Presentation Layer

- Handles converting data between formats
- Allows program to be absolved of conversions
- Presentation layer is usually OS, but may be application

Application Layer

- Application all the things
- Handles higher level protocals implemented in the application
- Examples include SMTP, NNTP, FTP

TCP/IP Model

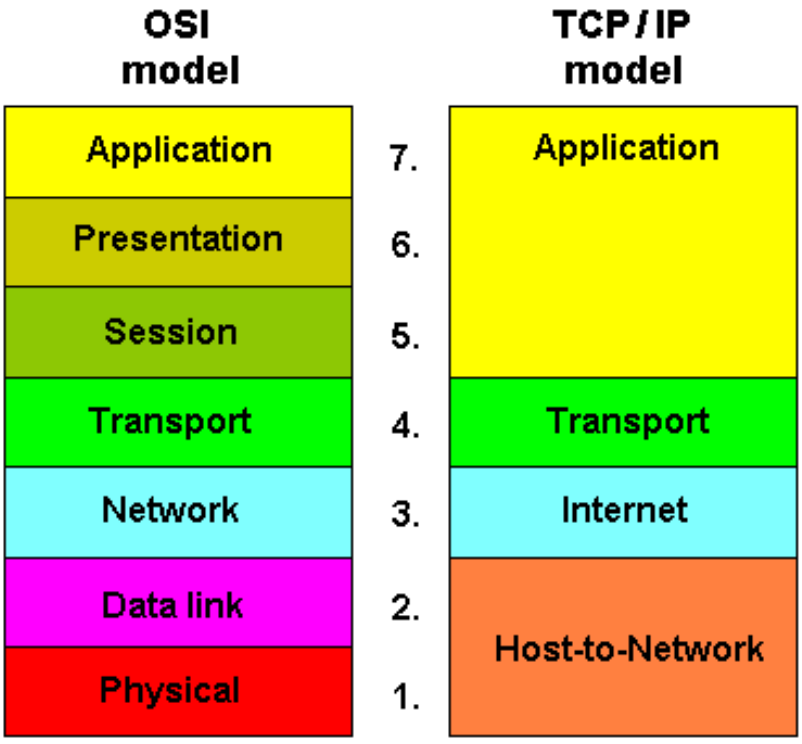

Figure 5: OSI vs TCP

Comparisons of Models

- TCP/IP simplified
- I believe 5 layers
- Segregates protocols more logically

Questions?

General Network Discussion

Next week