Previously

- Network Software
- Network Layers
- Message
- Design Issues
- Service Primitives

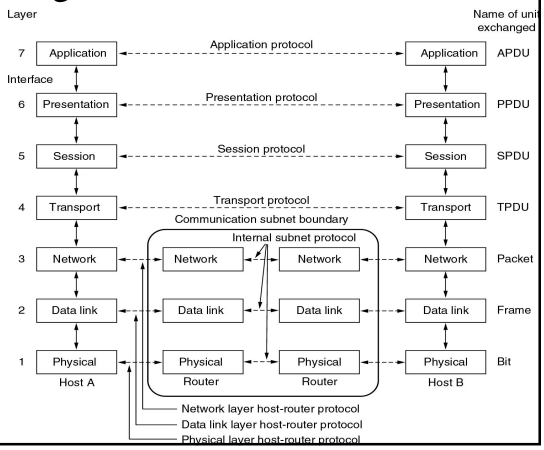
Reference Models

OSI
TCP/IP
Critiques

- OSI: _____
- TCP/IP: _____
- Critiques

OSI Reference Model

- ISO: _____
- Standard Model to which _____
- The OSI model distinguishes
  - Services
  - Interfaces
  - Protocols
- Has 7 _____
- Lowest 3 are _____



OSI Layers (1)

- Physical Layer
  - Concerned with _____
  - Provides _____ to the data link layer
- Data Link Layer
  - Concerned with using the physical layer to _____ _____
  - Handles sharing of the medium as well as providing _____ and _____
  - Provides _____ to the network layer
- Network
  - Determines how packets are _____
  - Provides _____ to the transport layer

OSI Layers (2)

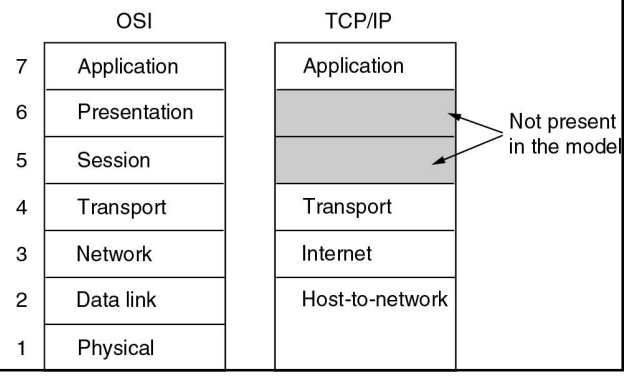
- Transport Layers
  - Independence
  - Provides segmentation and _____
  - Also provides _____ and _____
  - Provides a network independent _____ _____
- Session Layers
  - Allows users on different machines to _____ _____
  - Includes _____

OSI Layers (3)

- Presentation Layer
  - Provides functions to do with representation of _____ _____
- Application
  - Functionality _____
  - Uses the services _____

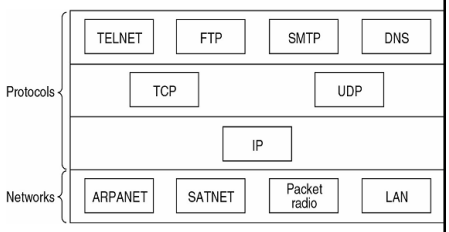
TCP/IP Reference Model

- One of the most common _____
- In is used for the _____
- Designed to deal with possible _____
- Designed with a very flexible _____



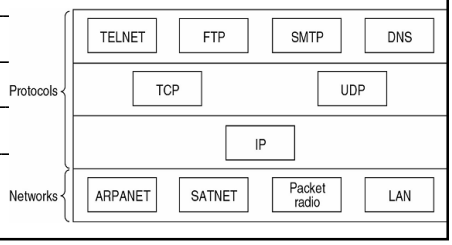
TCP/IP Layers

- Host-to-Network Layer
  - Not specified _____
- Internet Layer
  - Defines _____
    in order to provide
    _____
    - IP: _____



TCP/IP Layers

- Transport Layer
  - Allows peers to _____ using either
  - Transport Control Protocol (TCP):
    _____
  - User Datagram Protocol (UDP):
    _____
- Application Layer
  - Telnet: _____
  - FTP: _____
  - SMTP: _____
  - DNS: _____



OSI vs. TCP/IP

- Similarities
  - Are both end-to-end _____
  - Have similar _____
  - Support connectionless _____
- Differences
  - Number of layers although _____
    _____
  - Connection oriented protocol only supported by _____
  - Concepts of services, interfaces and protocols only defined _____

Critique of OSI Model

- Bad timing
  - No organization willing to _____
  - TCP/IP already there.
- Bad technology
  - Uneven layers: _____
  - Hard to implement: _____
  - Inefficient: _____
- Bad implementations: _____
- Bad politics: _____
- 5 layers of the model are popular for _____. However it's _____.

Critique of TCP/IP Model

- Concepts (_____) not distinguished
- Not a general model: _____
- Host-to-network "layer" not _____
- Some of the protocols very _____ although TCP & IP are well thought out.