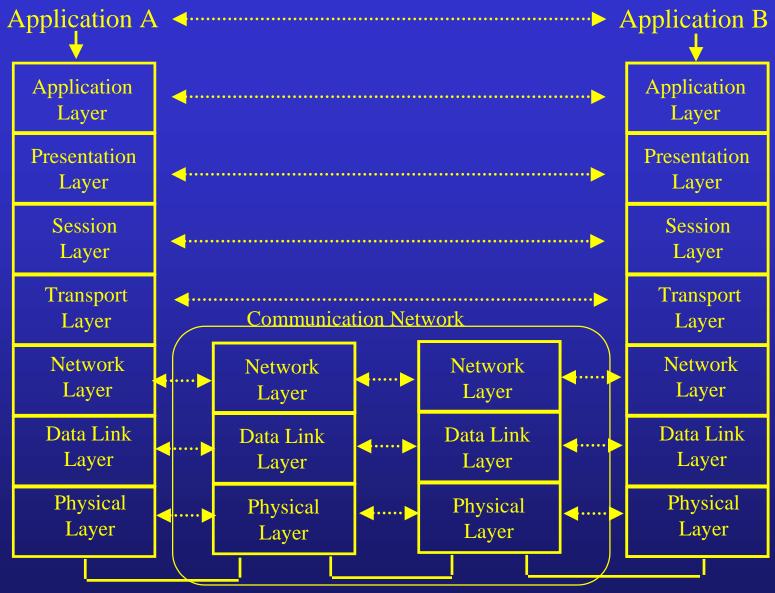
International Standards Organization Open Systems Interconnect (OSI) Reference Model





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Electrical and/or Optical Signals

Leon-Garcia & Widjaja: Communication Networks

Networks: OSI Reference Model

Figure 2.6

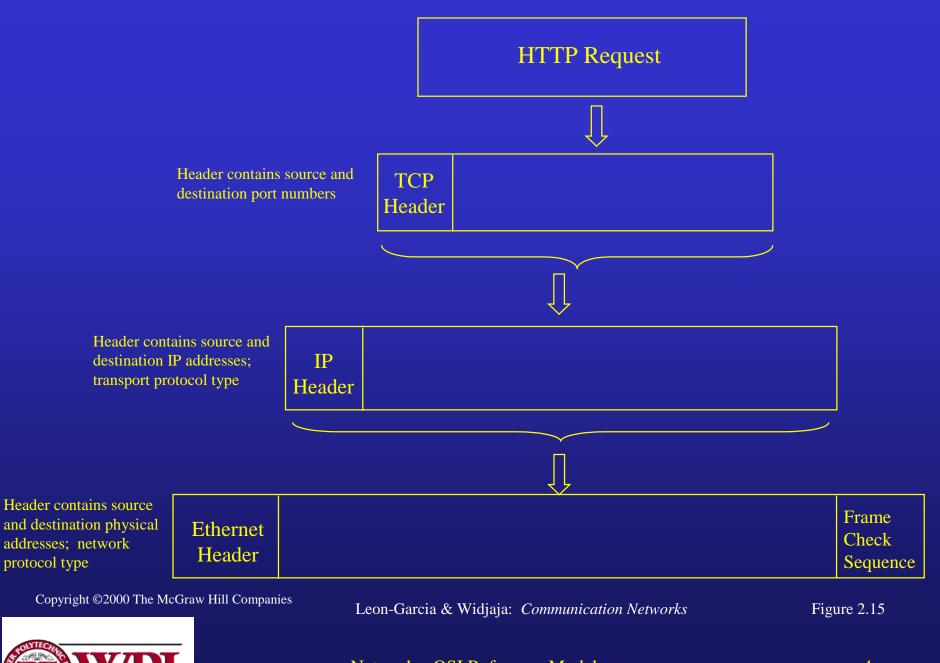




Layer

bits

Layer





Networks: OSI Reference Model

OSI versus TCP/IP

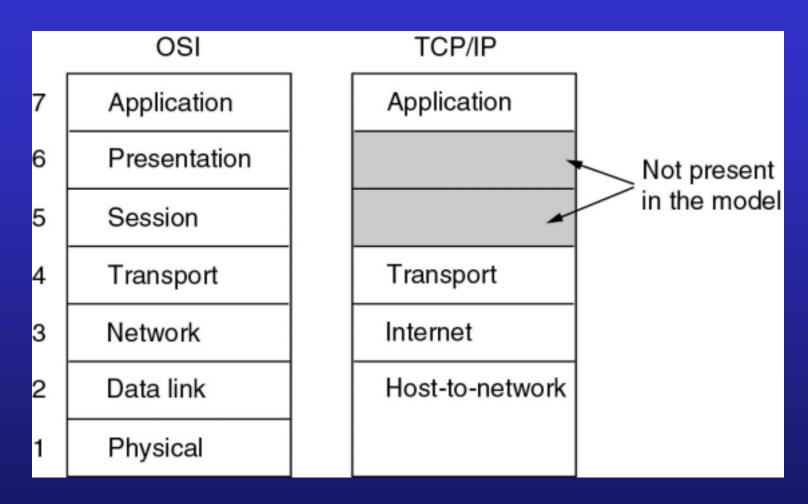
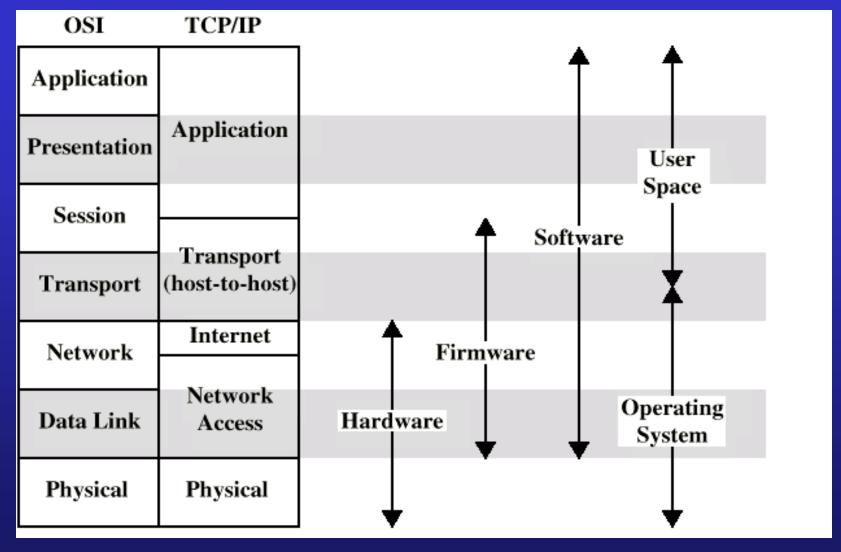


Figure 1-21. The TCP/IP reference model.



OSI versus TCP/IP





DCC 6th Ed., W. Stallings Figure 1.11

Networks: OSI Reference Model

Seven OSI Layers

Application

Provides access to the OSI environment for users and also provides distributed information services.

Presentation

Provides independence to the application processes from differences in data representation (syntax).

Session

Provides the control structure for communication between applications; establishes, manages, and terminates connections (sessions) between cooperating applications.

Transport

Provides reliable, transparent transfer of data between end, points; provides end-to-end error recovery and flow control.

Network

Provides upper layers with independence from the data transmission and switching technologies used to connect systems; responsible for establishing, maintaining, and terminating connections.

Data Link

Provides for the reliable transfer of information across the physical link; sends blocks (frames) with the necessary synchronization, error control, and flow control.

Physical

Concerned with transmission of unstructured bit stream over physical medium; deals with the mechanical, electrical, functional, and procedural characteristics to access the physical medium.

