

# Networking



## OSI Model

# OSI Model

- Conceptual framework
  - Controlled by the International Standards Organization
- 7 Layers
  - From bit level to human readable
- A tool created to visualize how data moves on a network



# Physical Layer

- Concerned with signal propagating from "here" to "there"
- 1 and 0 – however that may be expressed
  - Light, voltage, radio wave

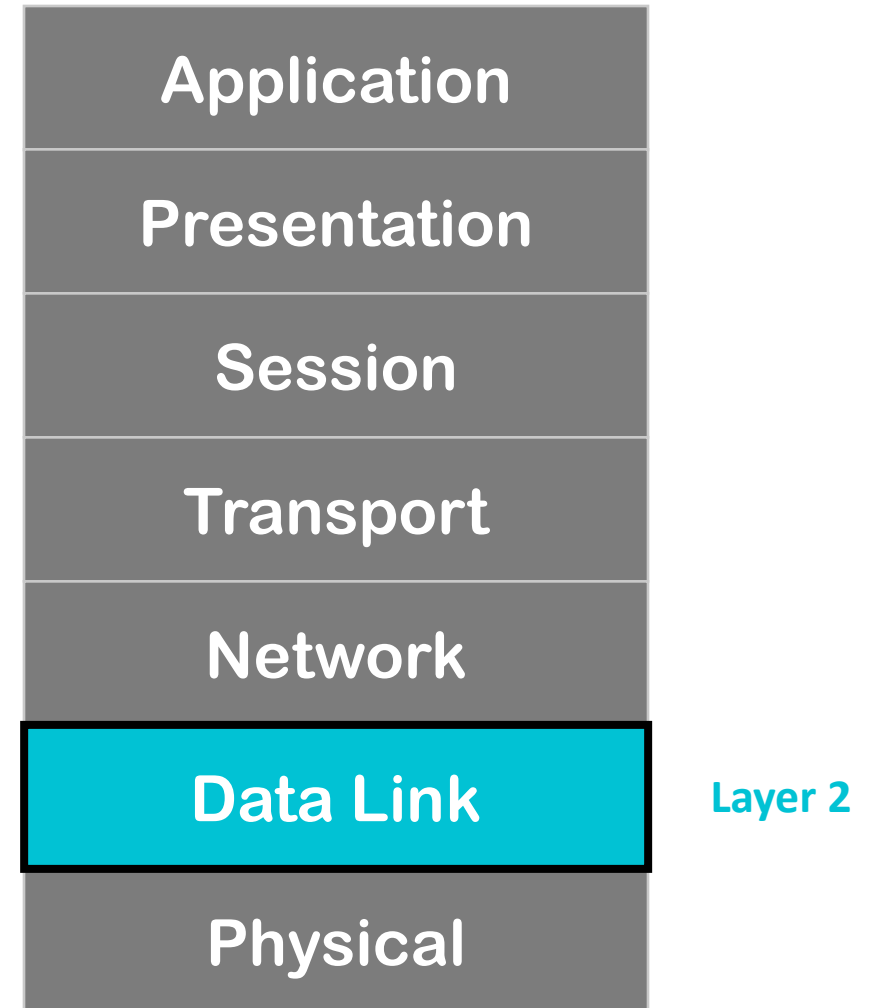


Layer 1



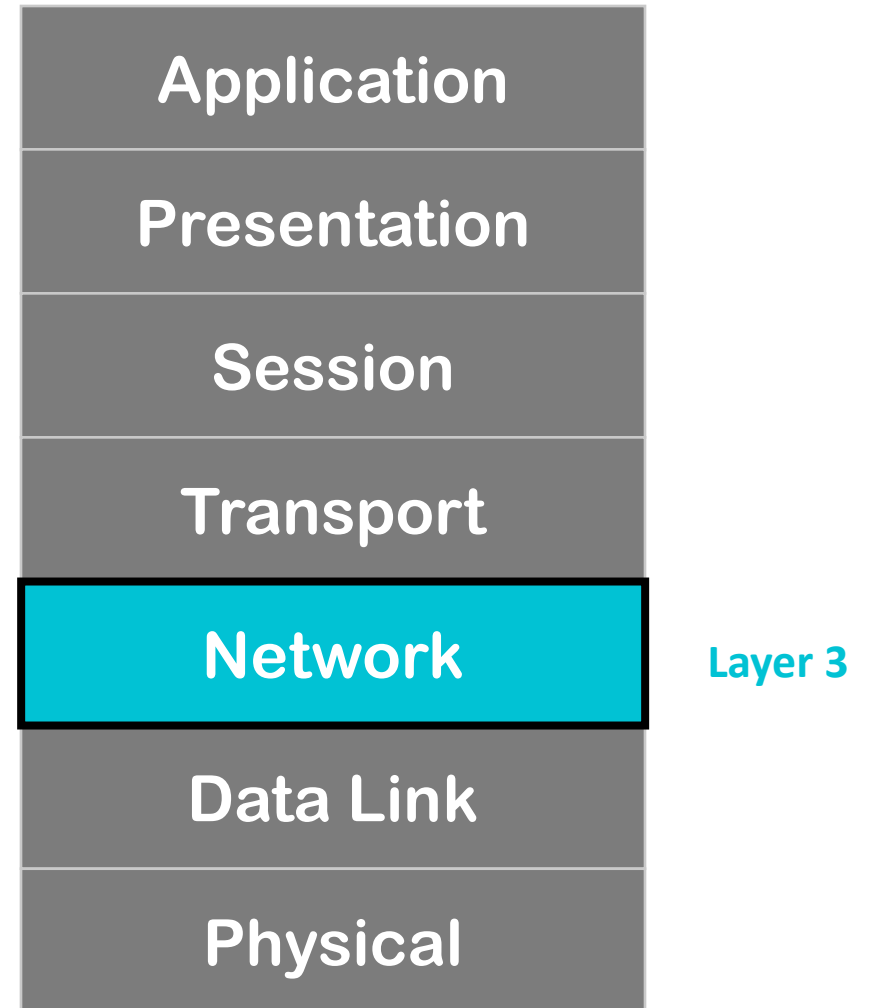
# Data Link Layer

- Makes sense of pulses, the 1s and 0s
- Recombines the pulses into collections of data



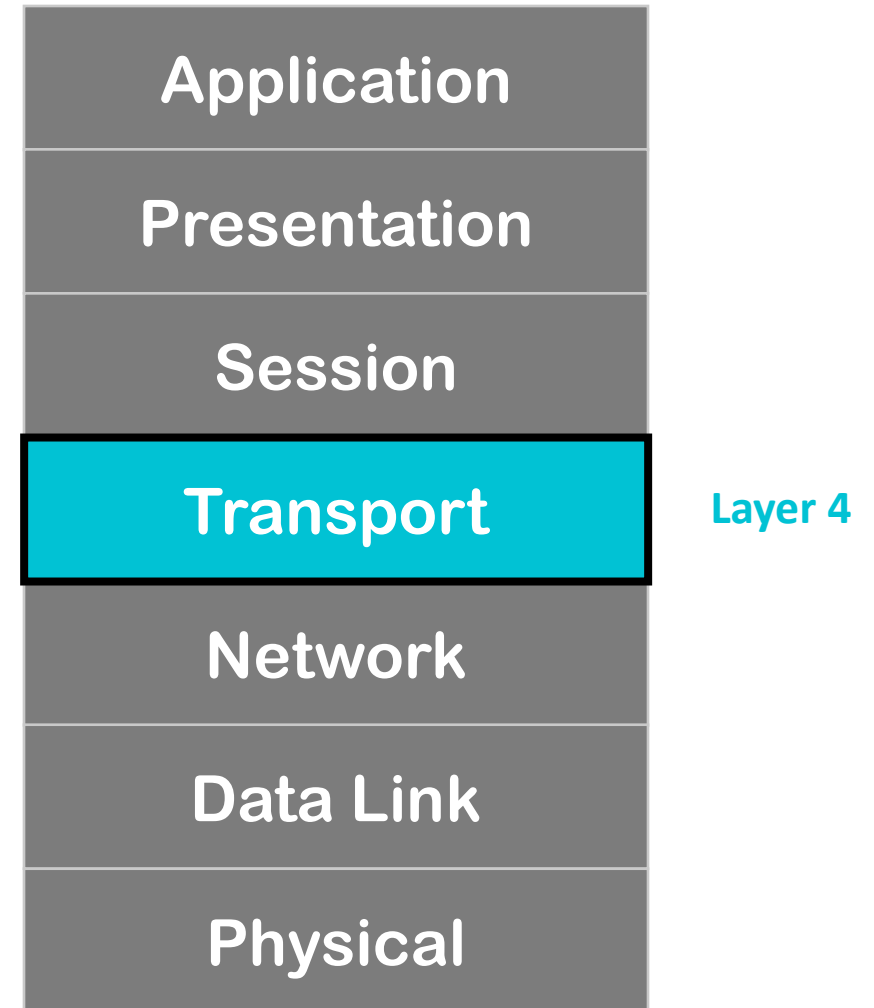
# Network Layer

- Addressing, routing, path finding, collision detection/avoidance
- Which *path* the data takes from here to there



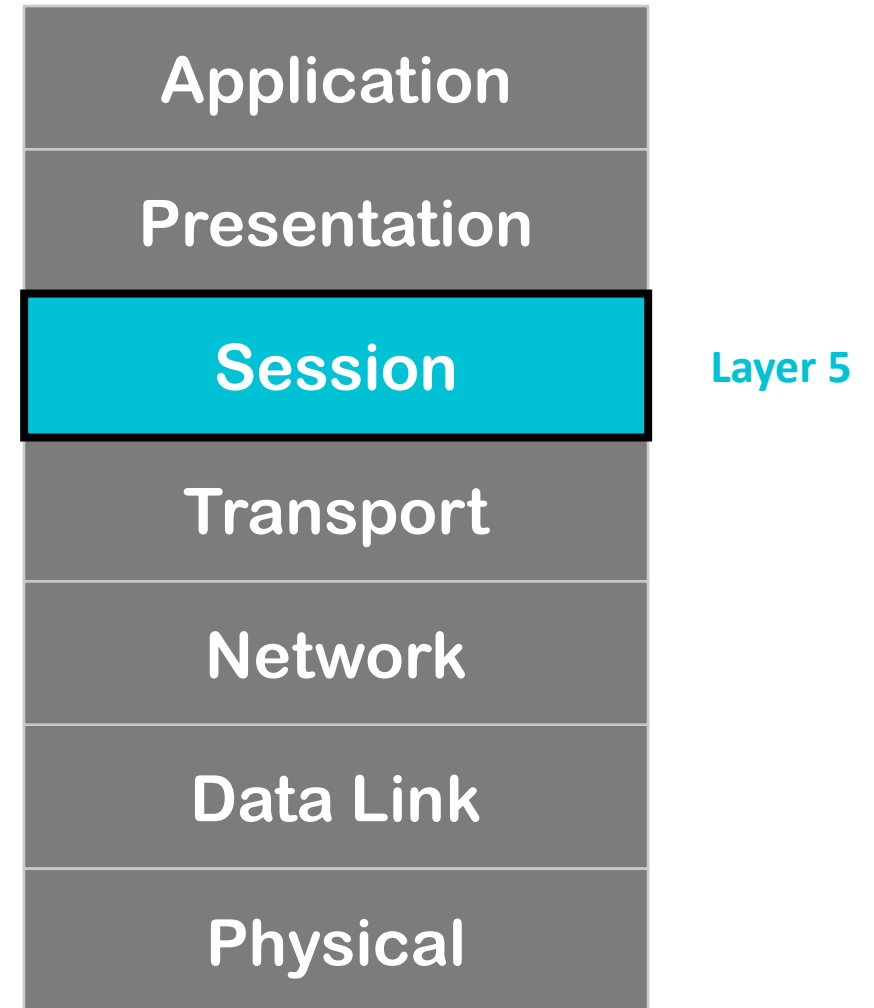
# Transport Layer

- Supports reliable communication over unreliable medium\*
- Synchronization, acknowledgement of sending/receiving



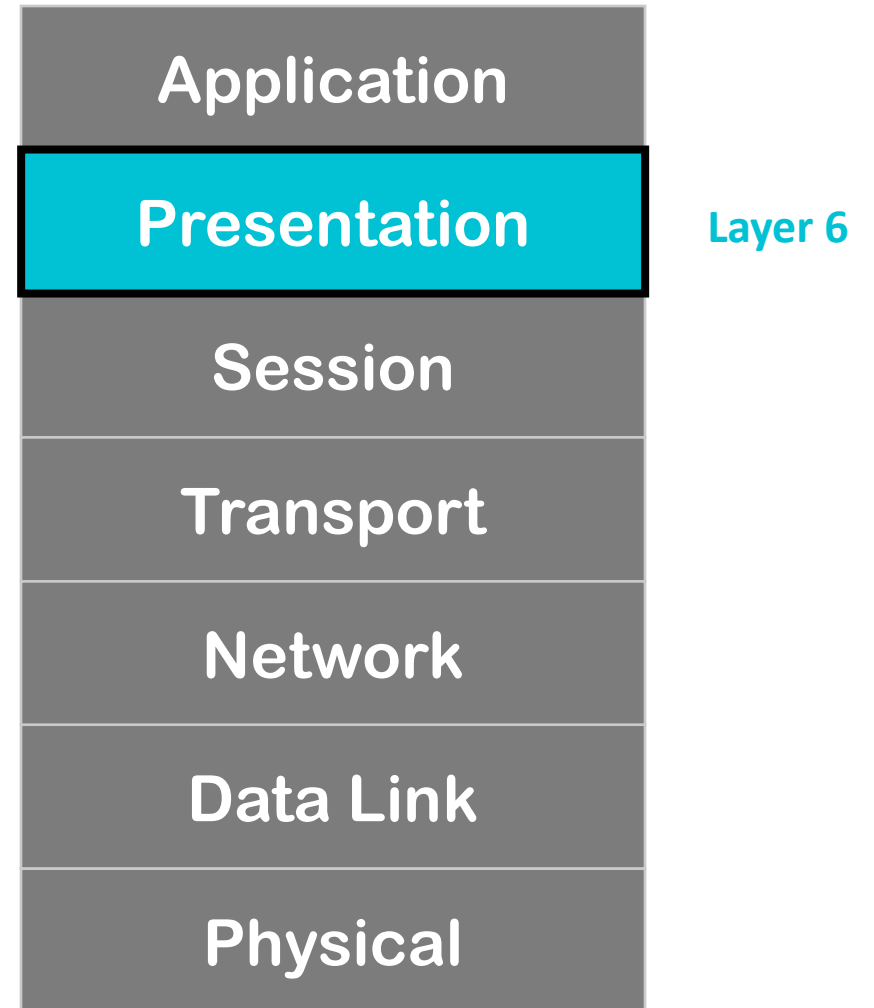
# Session Layer

- Breaks data into "chunks" to be transmitted or received across several sessions.
- Phone book through tube



# Presentation Layer

- Converts data from compressed, encrypted, encoded form into digestible "plain text" form





# Application Layer

- Links the user and the information
- Provides meaning and visualization of data for human (or device) use

