Inter-Layer Communication

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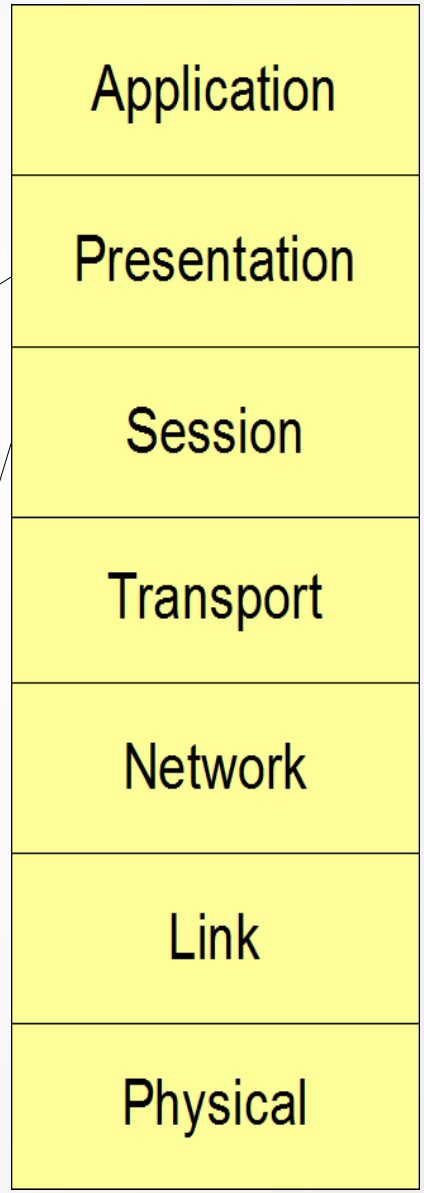
OSI (Open Systems Interconnection) Stack

- Standard that specifies the functionality of the layers and the interface between them

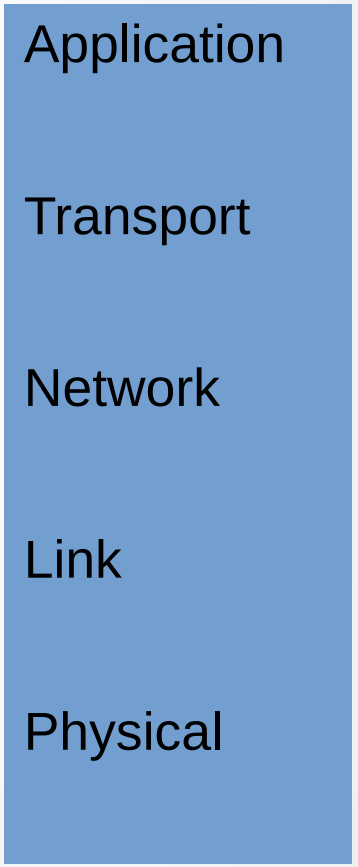


Presentation: Delivery and formatting of information
E.g. Convert rich text format (RTF) to Ascii

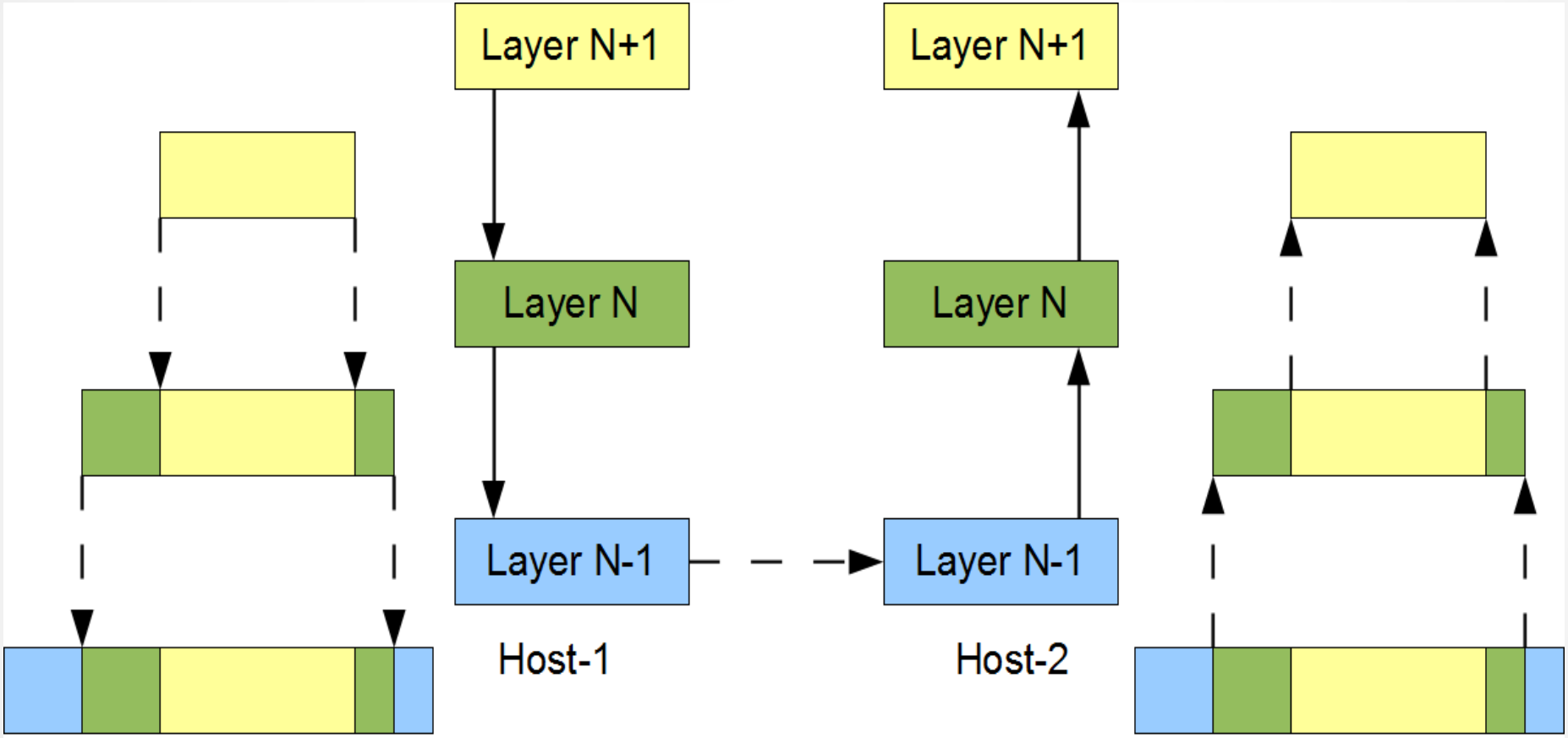
Session: Manages sessions between processes
E.g. combining audio, video streams; authentication

Internet Protocol Stack

- Application
  - Supports application processes which generate messages
  - E.g. Email, Web, File-transfer
- Transport
  - Supervises process to process communication (multiplexing/demultiplexing messages, reliability)
  - E.g. TCP, UDP
- Network
  - Enables end-to-end routing of messages (from source to destination hosts)
  - E.g. IP
- Link
  - Enables hop-to-hop message transfer (between neighbors)
  - E.g. Ethernet, 802.11
- Physical
  - Enables bit transmissions on media (wire/air)
  - E.g. 10Base-T, OFDM

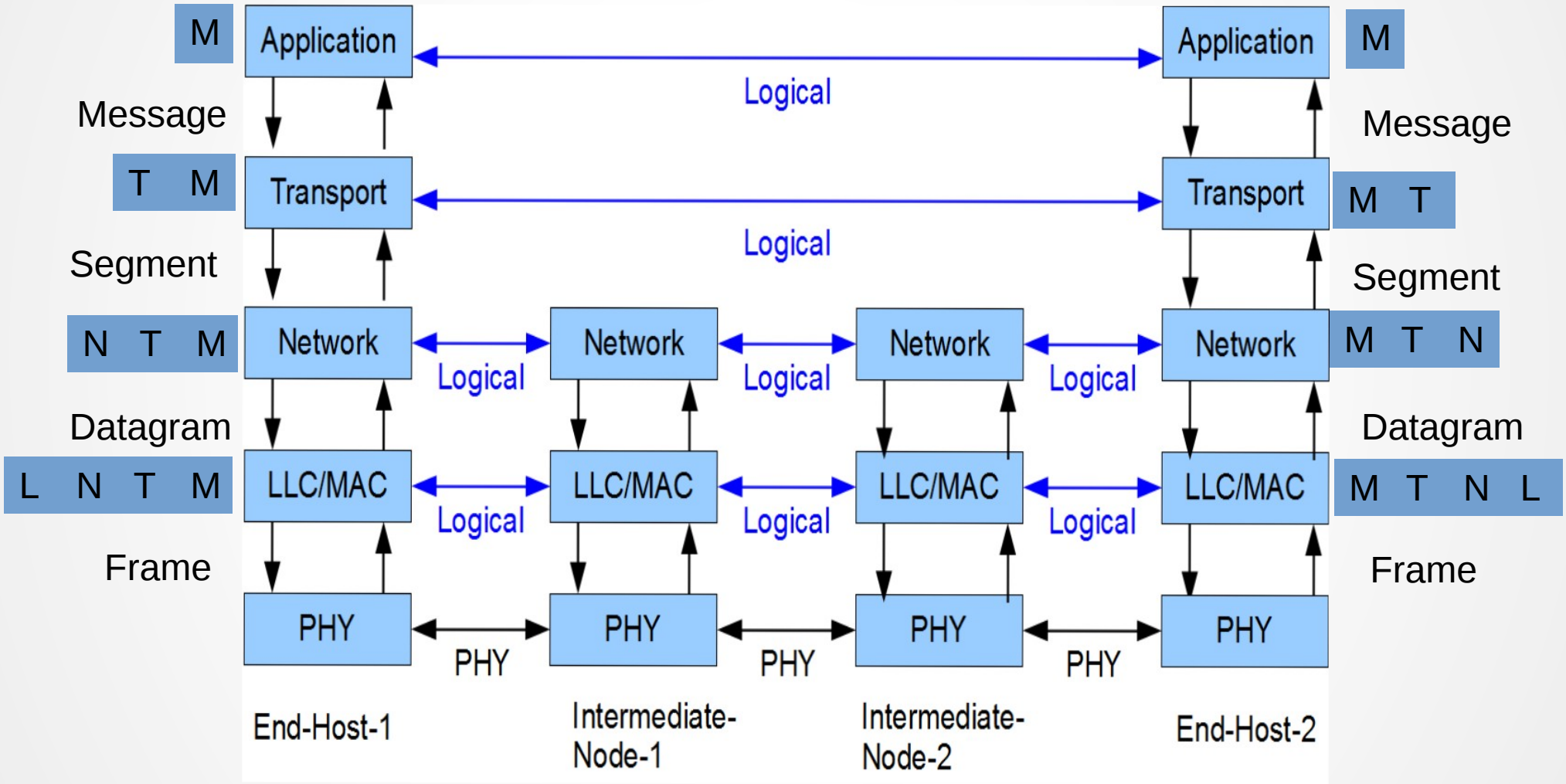


Encapsulation/Decapsulation

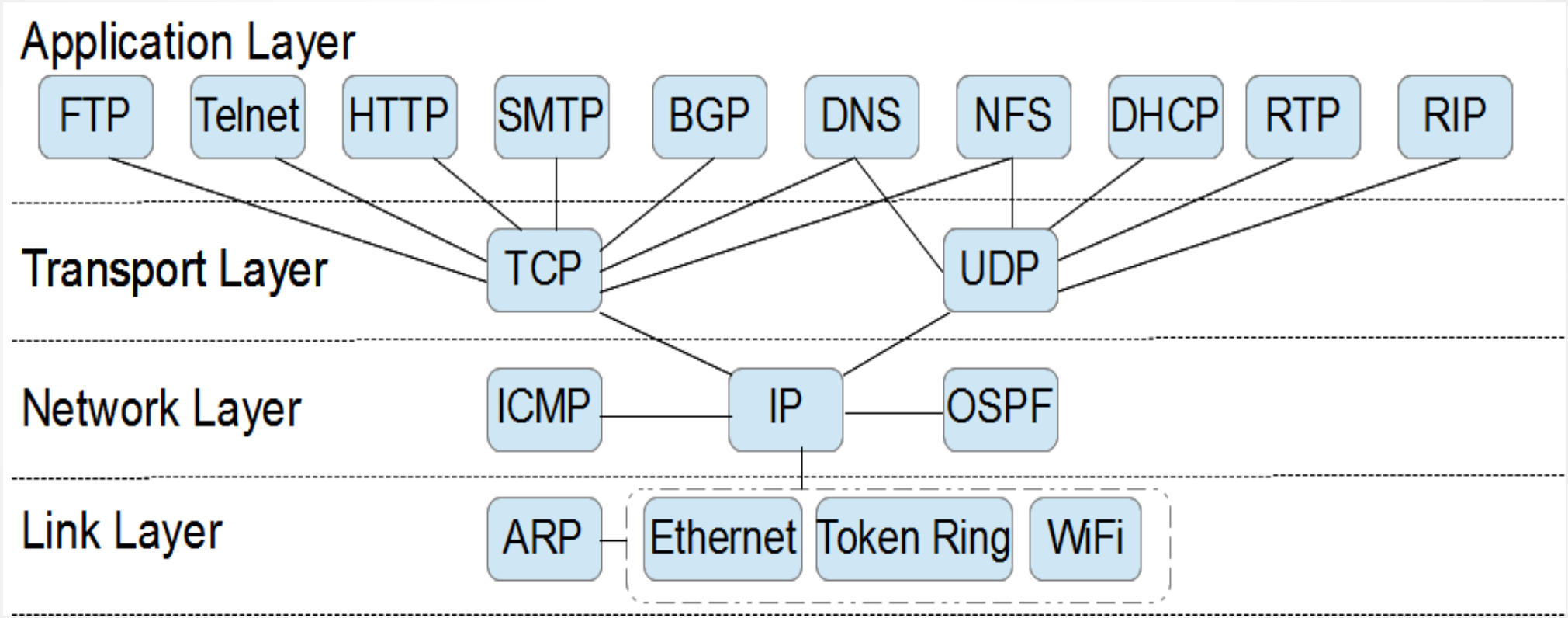


Each layer adds/removes its header

End to End vs Hop to Hop



Protocols in Different Layers



Multiplexing/Demultiplexing