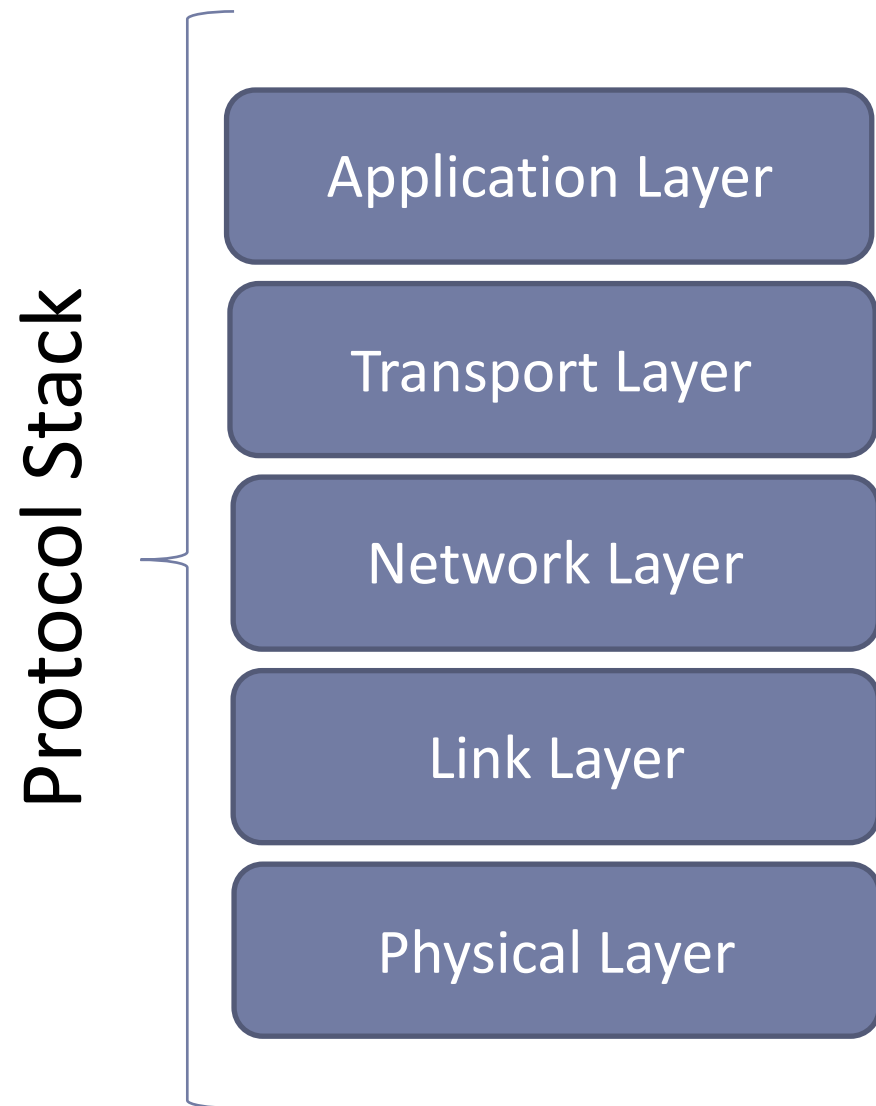


Computer Networks 101: Internet Protocol Stack

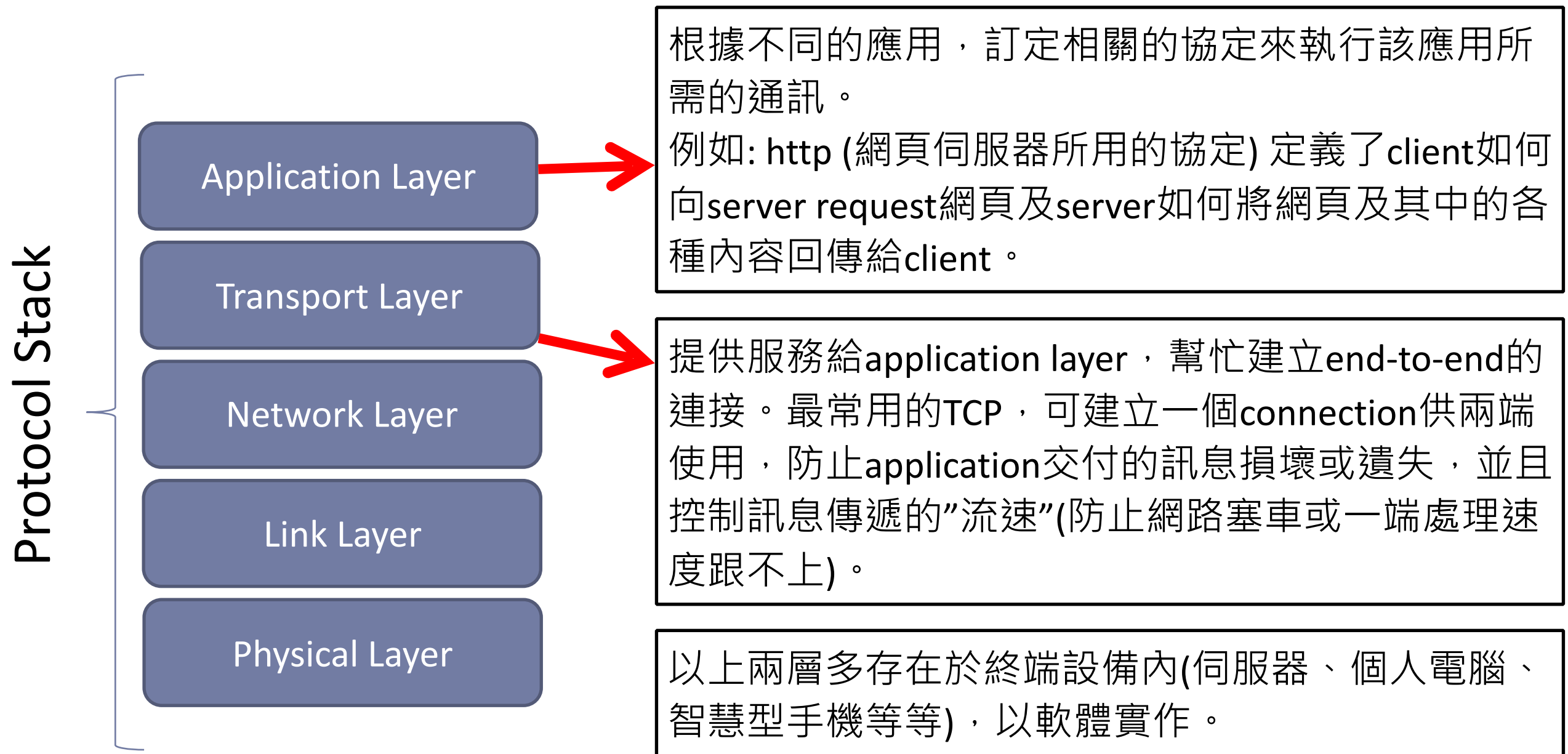
Michael Tsai
2019/02/18

Internet: 5-Layer Architecture

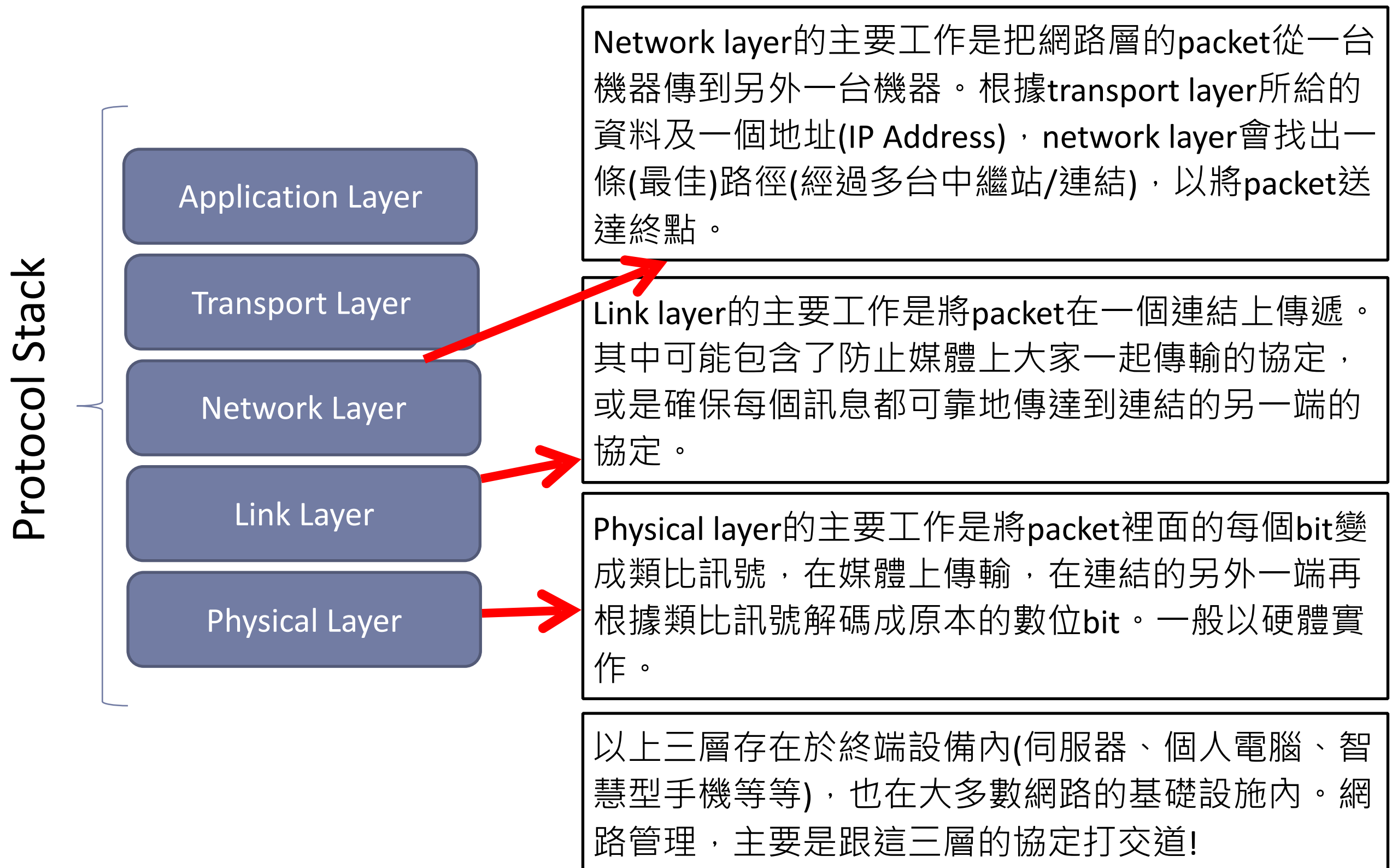


- 每一層使用下一層的服務來達成它的任務
- (優點) 模組化。所以只要大家定義好介面(上下層的溝通方式)，那麼可以任意抽換某一層的協定。
 - 例如我們可以將Link Layer + Physical Layer從100 Mbps的Fast Ethernet有線網路抽換成866.7 Mbps的802.11ac無線網路
- (缺點) 部分功能可能會重複出現在不同layer。
 - 例如: Retransmission 在 transport layer及link layer都有類似的設計

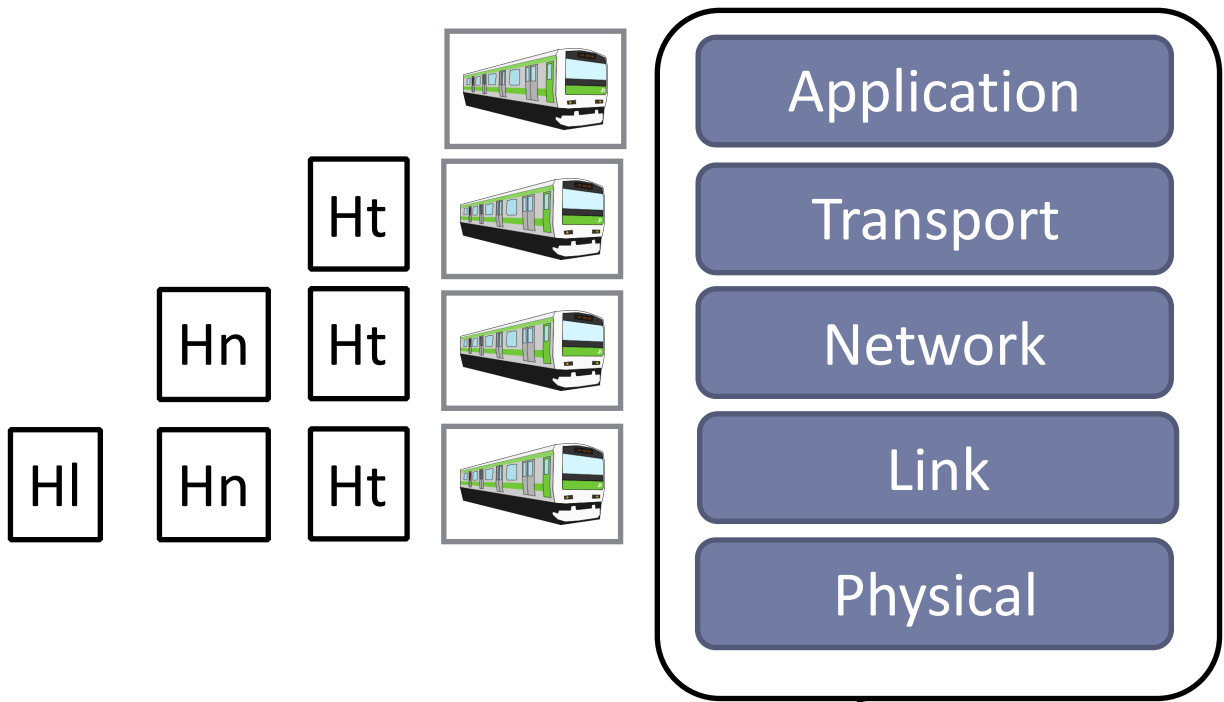
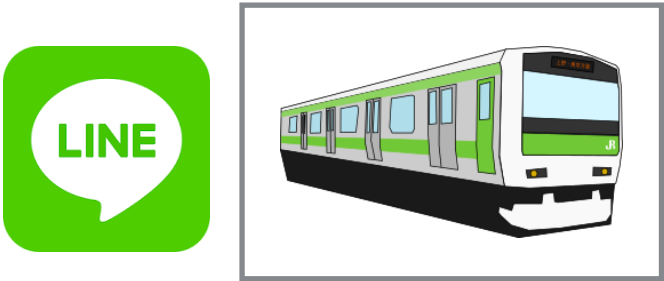
Internet: Application & Transport Layers



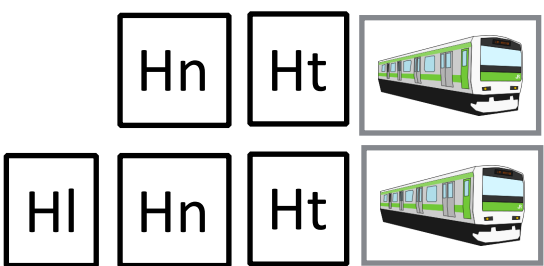
Internet: Network, Link, & Physical Layers



Send a photo via Line to the server (then to a friend)



10 Gb/s 光纖

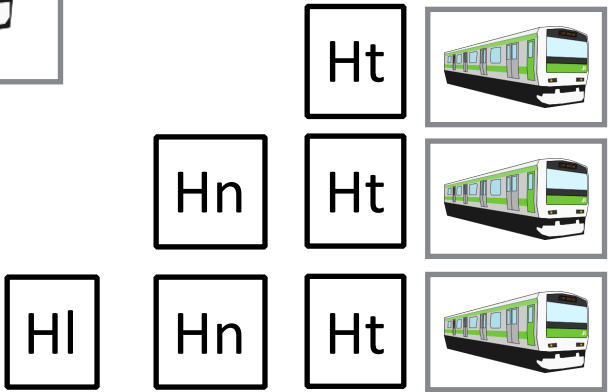


Router

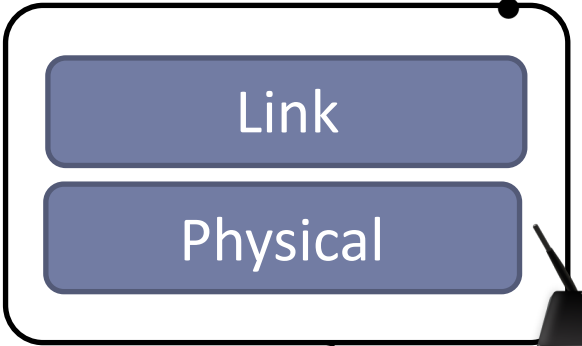


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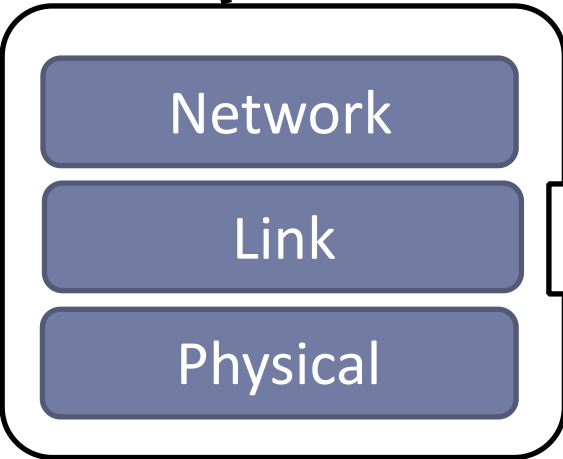
1 Gb/s 光纖



802.11n
150 Mbps



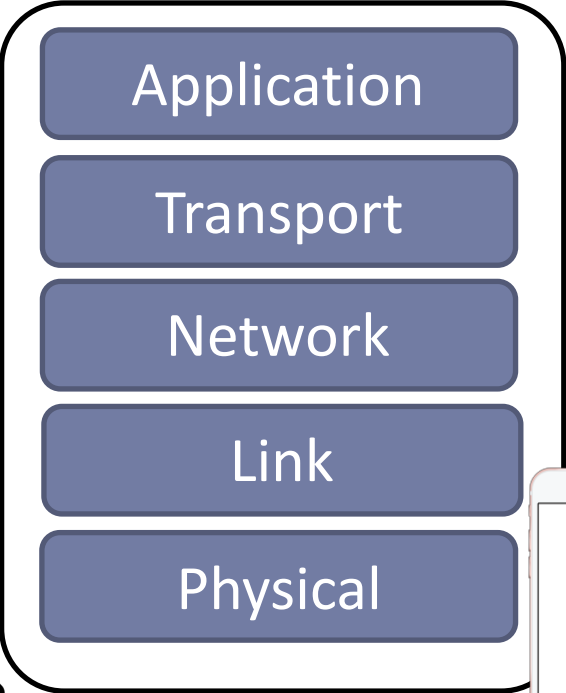
1 Gb/s
Cat 5e UTP



Router



Your Smartphone



WiFi
Access Point

