A Little Networking Background…
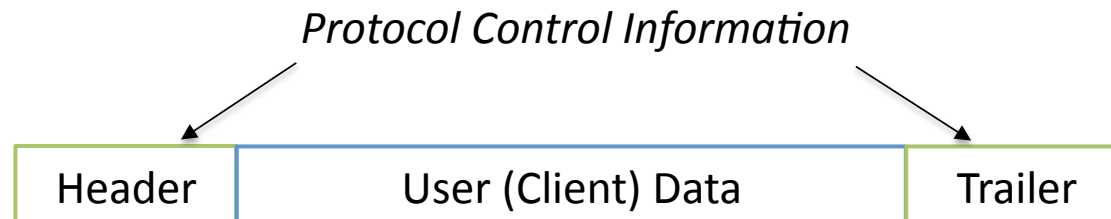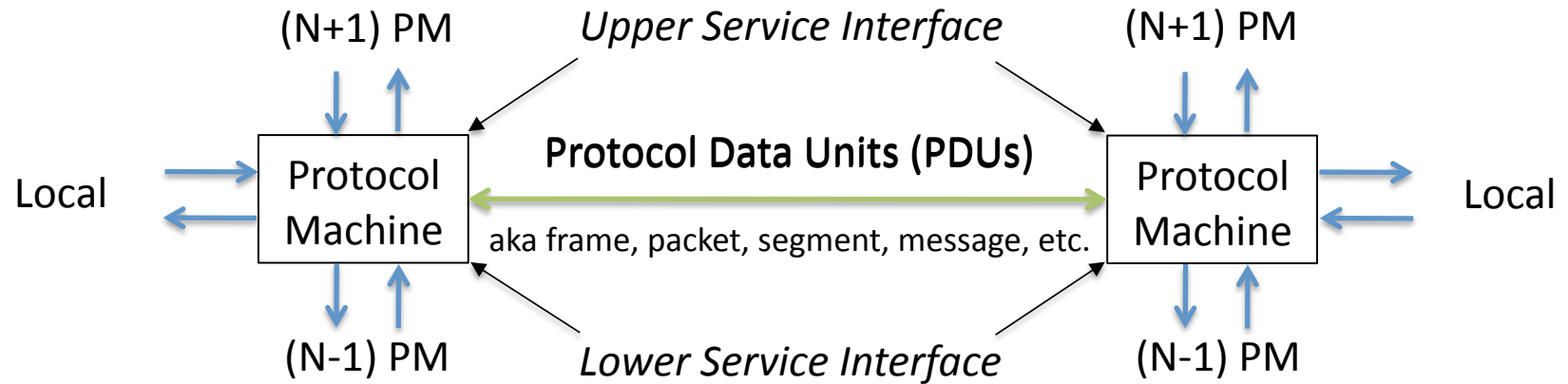
Main Ideas

- Protocol: "For two systems to communicate, they must have a shared conceptual schema. In other words, they must already have a common understanding about their world and the things in it that they want to talk about."

- Service: "An abstraction of the interface between layers that is system independent." Consists of *primitives* and a set of rules that determine the legal sequences in which the service primitives can be invoked.

Source: Day, John. Patterns in Network Architecture. Boston: Prentice Hall, 2008.

Recurring Patterns

(N+1) PM   *Upper Service Interface*   (N+1) PM

Local

Protocol
Machine

Protocol Data Units (PDUs)

aka frame, packet, segment, message, etc.

Protocol
Machine

Local

(N-1) PM   *Lower Service Interface*   (N-1) PM

Protocol Control Information

Header	User (Client) Data	Trailer

Source: Day, John. Patterns in Network Architecture. Boston: Prentice Hall, 2008.

UDP Encapsulation Example

Connections:

Network Connections
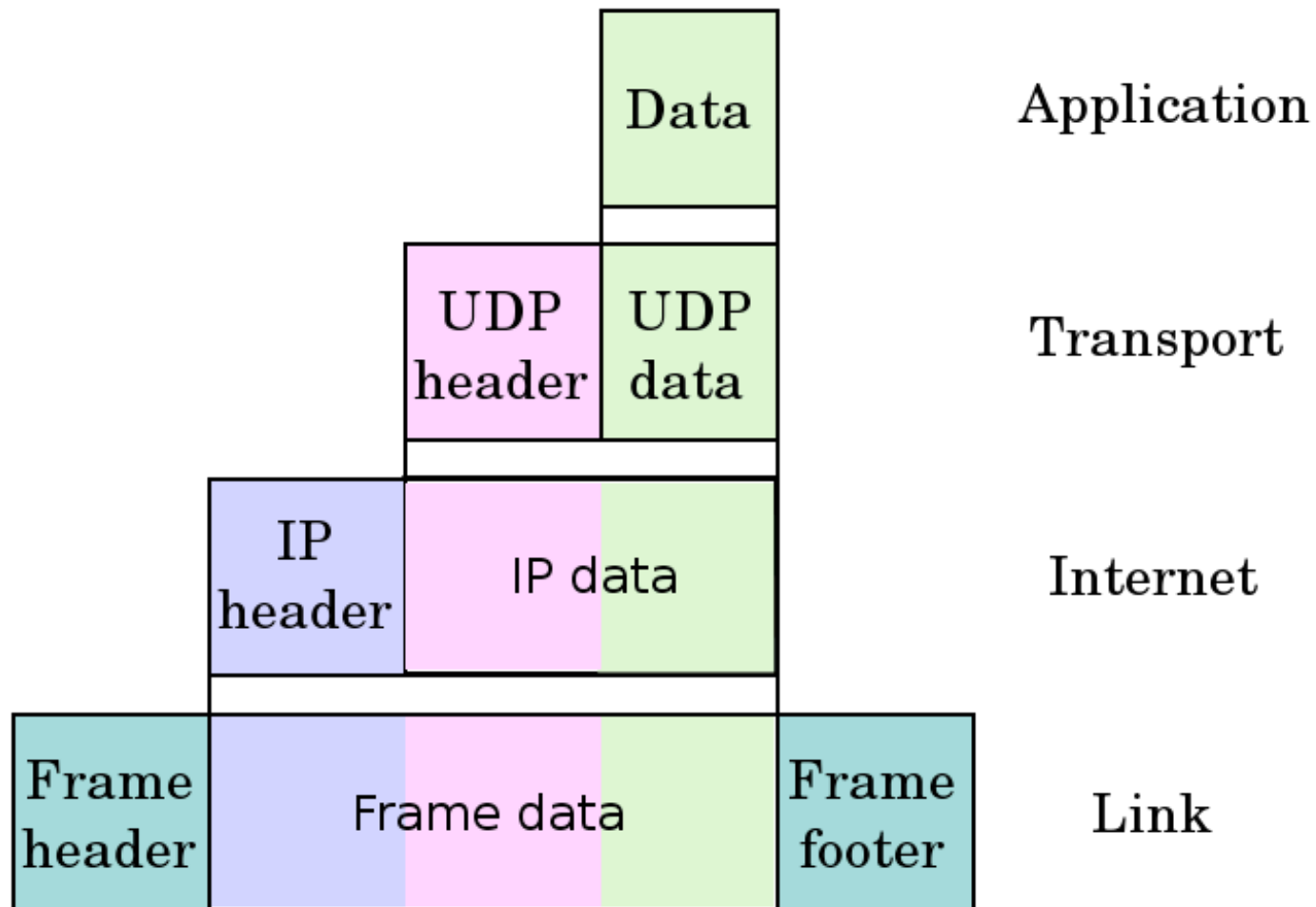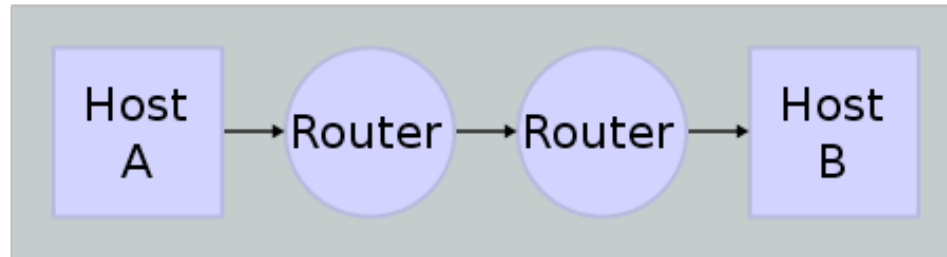
Stack Connections
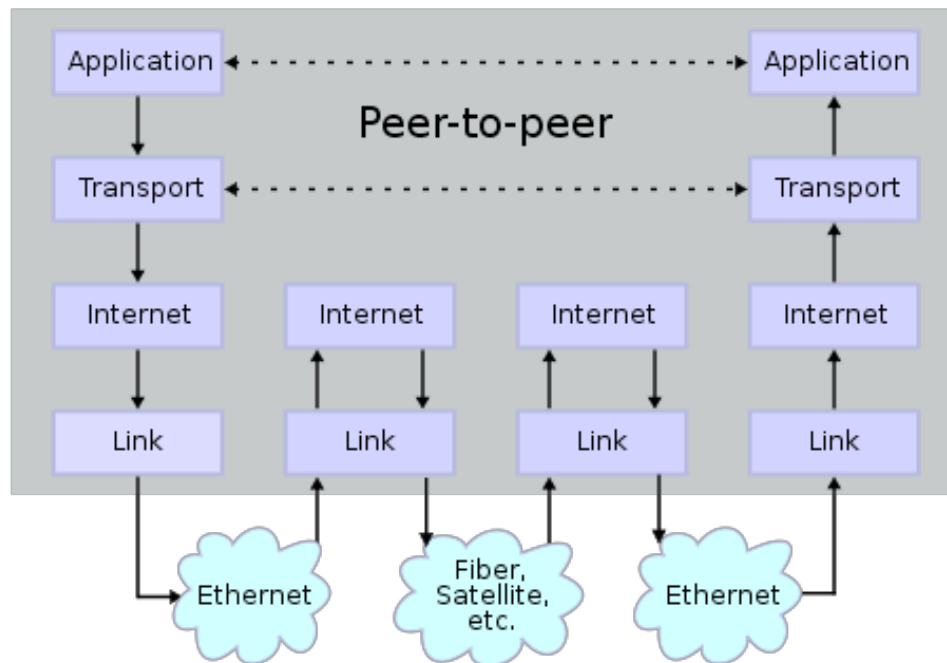
Source: http://en.wikipedia.org/wiki/File:IP_stack_connections.svg