
Lecture 6

Datalink - Framing, Switching

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From Signals to Packets

Analog Signal



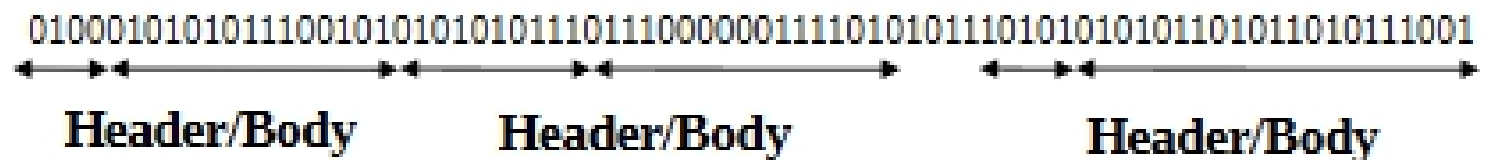
“Digital” Signal



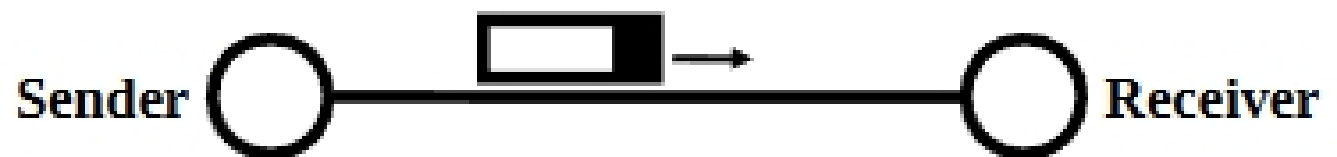
Bit Stream

0 0 1 0 1 1 1 0 0 0 1

Packets



Packet
Transmission



Datalink Functions

- **Framing: encapsulating a network layer datagram into a bit stream.**
 - » Add header, mark and detect frame boundaries, ...
- **Media access: controlling which frame should be sent over the link next.**
 - » Easy for point-to-point links; half versus full duplex
 - » Harder for multi-access links: who gets to send?
- **Error control: error detection and correction to deal with bit errors.**
 - » May also include other reliability support, e.g. retransmission
- **Flow control: avoid that the sender outruns the receiver.**