



Computer Networks

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Networking and Data Communications

- Data communications
- Telecommunications
- Data communication network

Information

- Digital information – sequence of symbols
- Analog information – continuous signal
 - Frequency

Information

- Bit – 0 or 1
- Byte – 8 bits
- Kilo (storage) – 1024 bytes
- Kilo (communications) – 1000

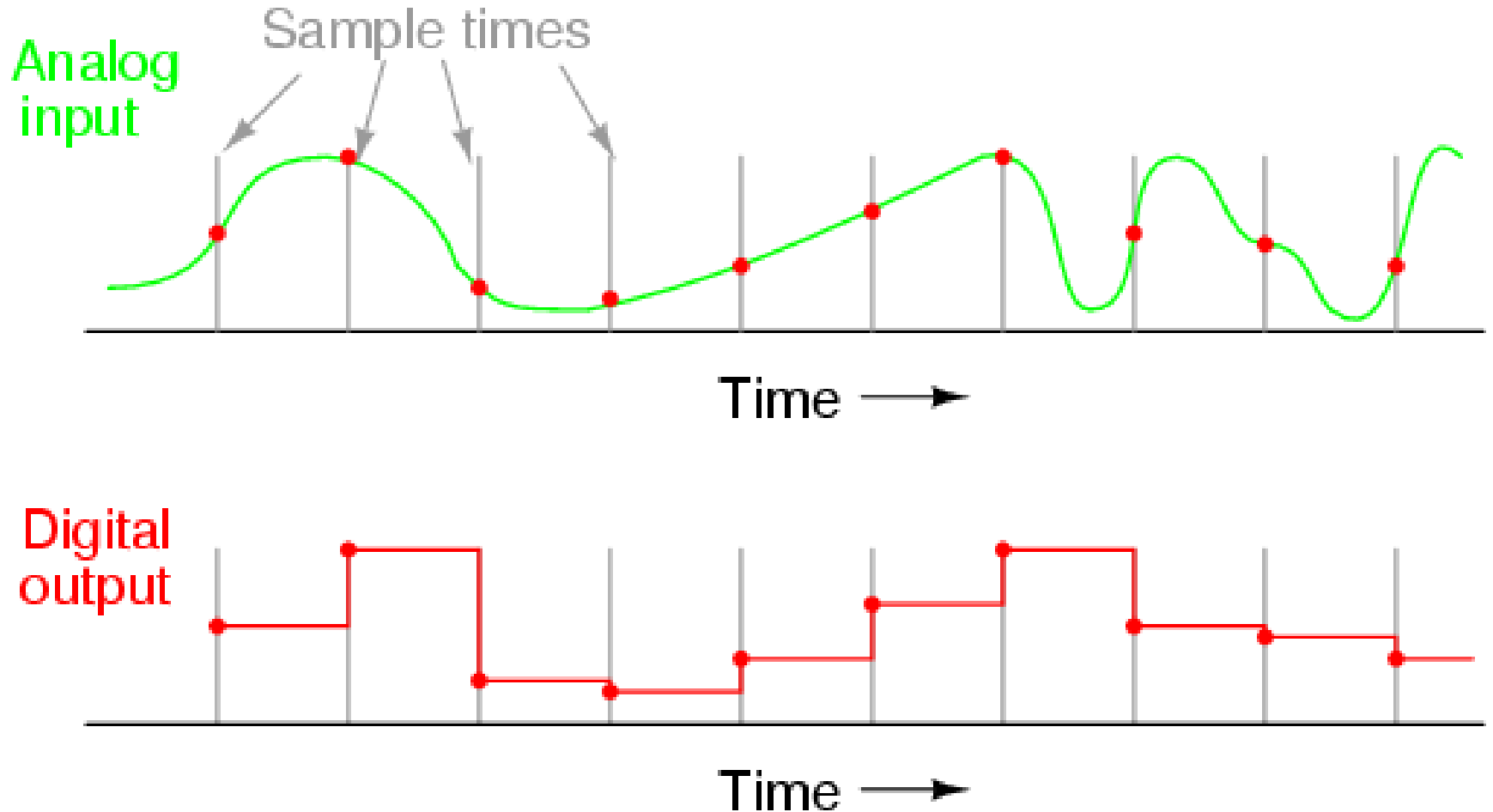
- Number systems
 - Decimal
 - Binary
 - Hex



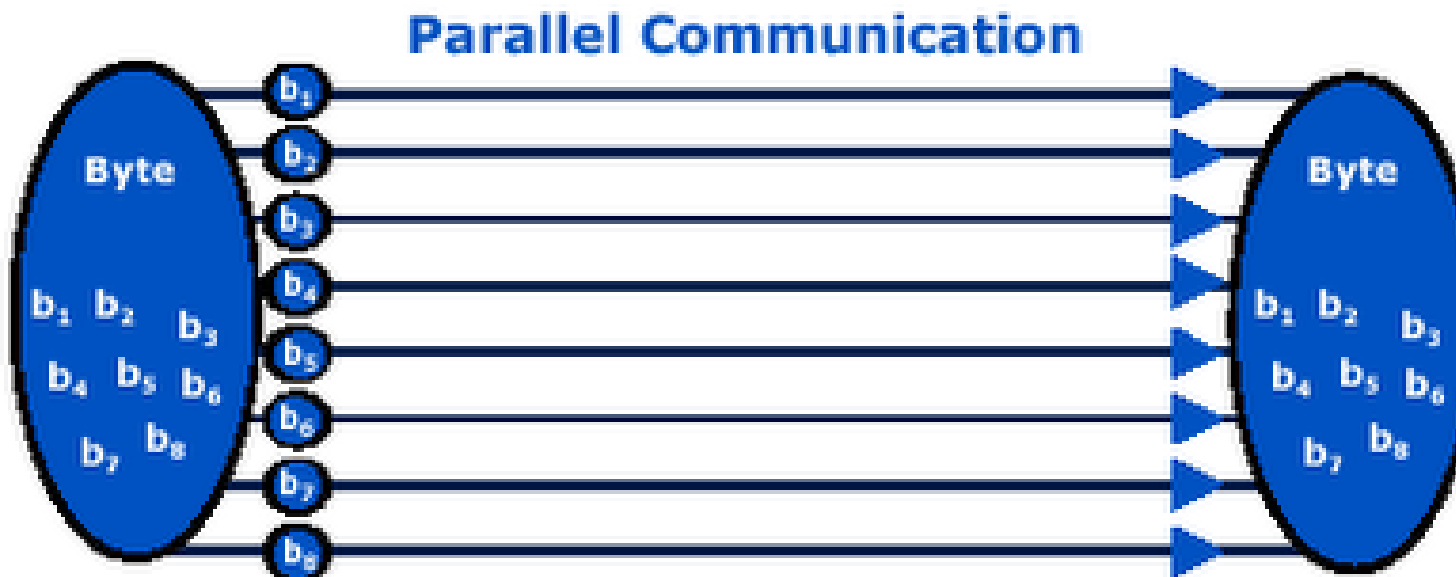
Data Transmission

- Bit rate / Data rate
- Bandwidth
- Throughput

Signals



Communication





Types of Communication

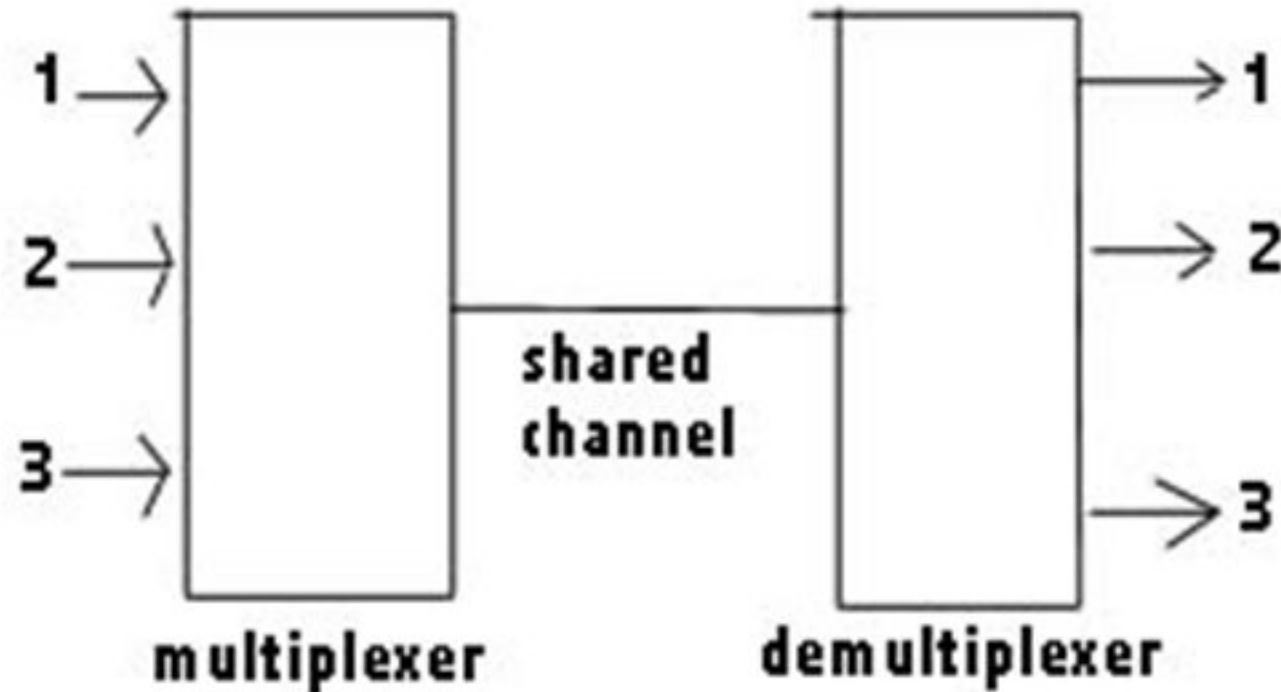
- Synchronous
- Asynchronous
- Isochronous



Communications Channels

- Simplex
- Half-duplex
- Full-duplex

Multiplexing / Demultiplexing



Traceroute

- www.traceroute.org
- Same network:
 - Same beginning 2 fields in IP address
 - Same ending 2 fields in host name