
Module 2

Data Communication

Data Communication

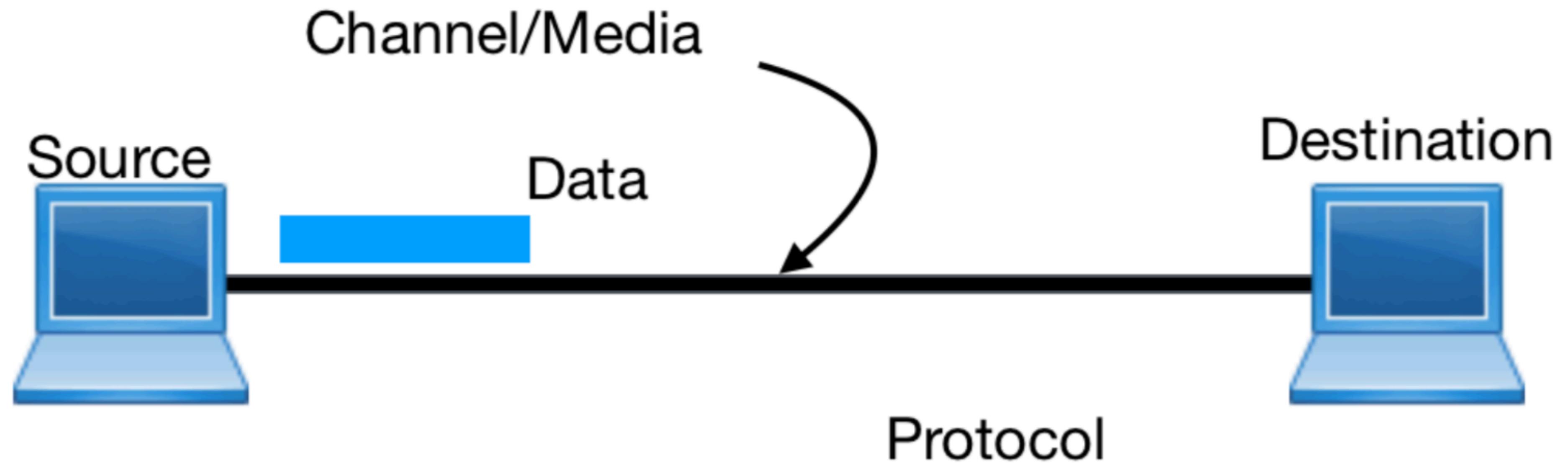
UbIN3\$
Ubiquitous Networked Embedded System

Data communication is data transmission from node to other node via media

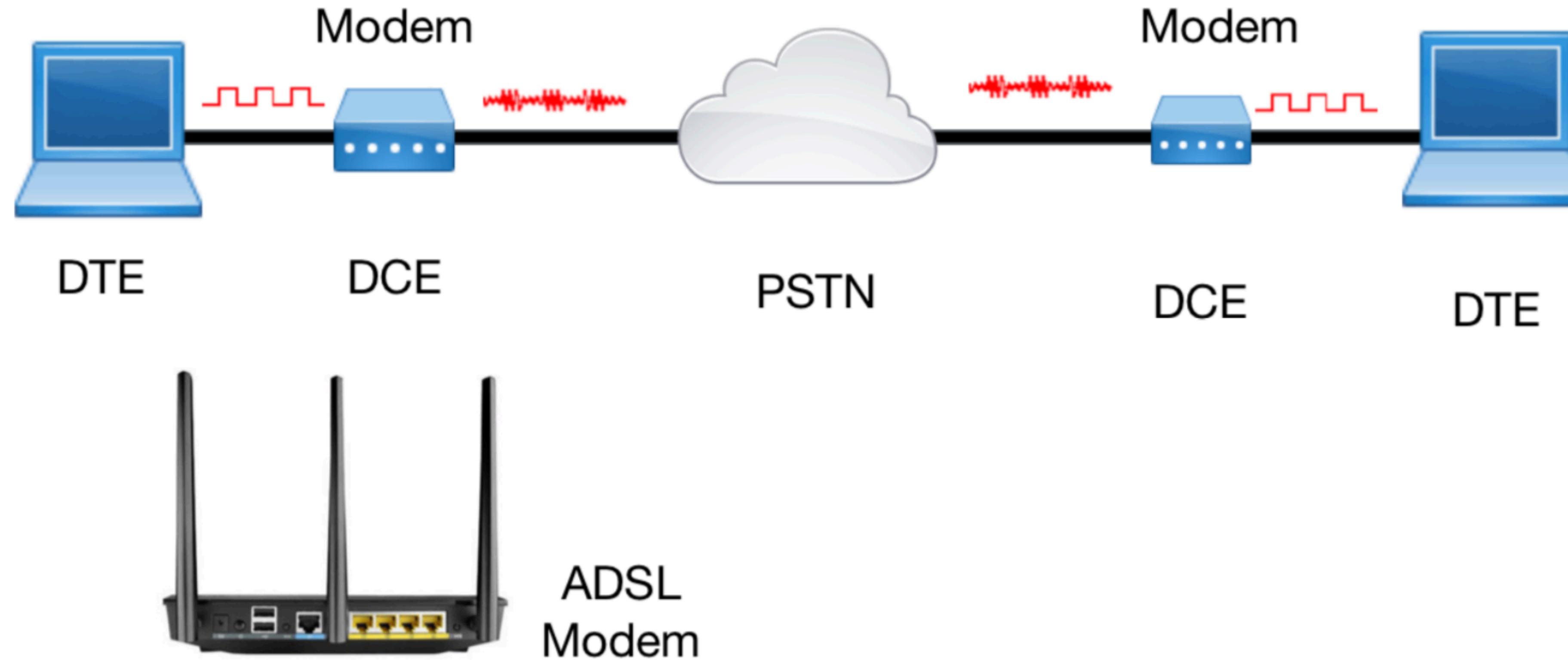
Objectives

- Accuracy
- Delivery
- Realtime
 - Non-realtime
 - Soft Realtime
 - Hard Realtime

Components



Source/Destination



Data Flow

Simplex



Data Flow

UbIn3\$
Ubiquitous Networked Embedded System



Half-duplex



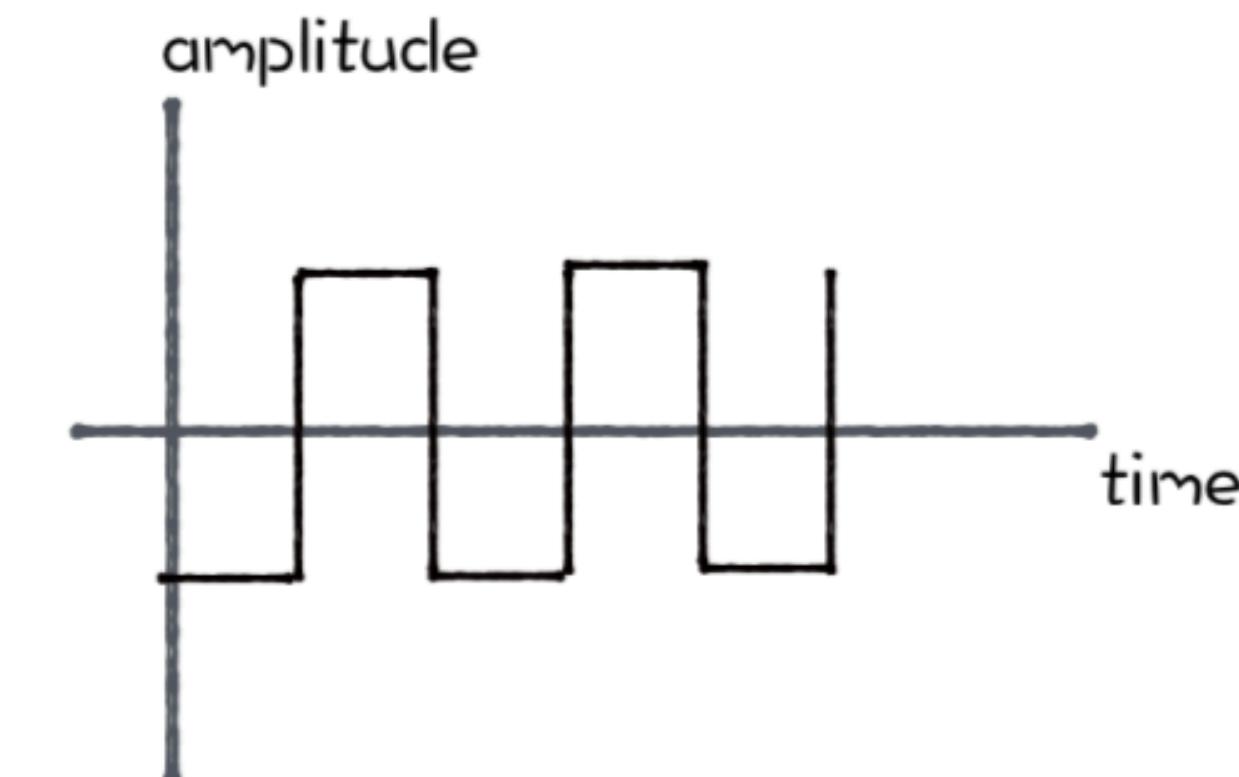
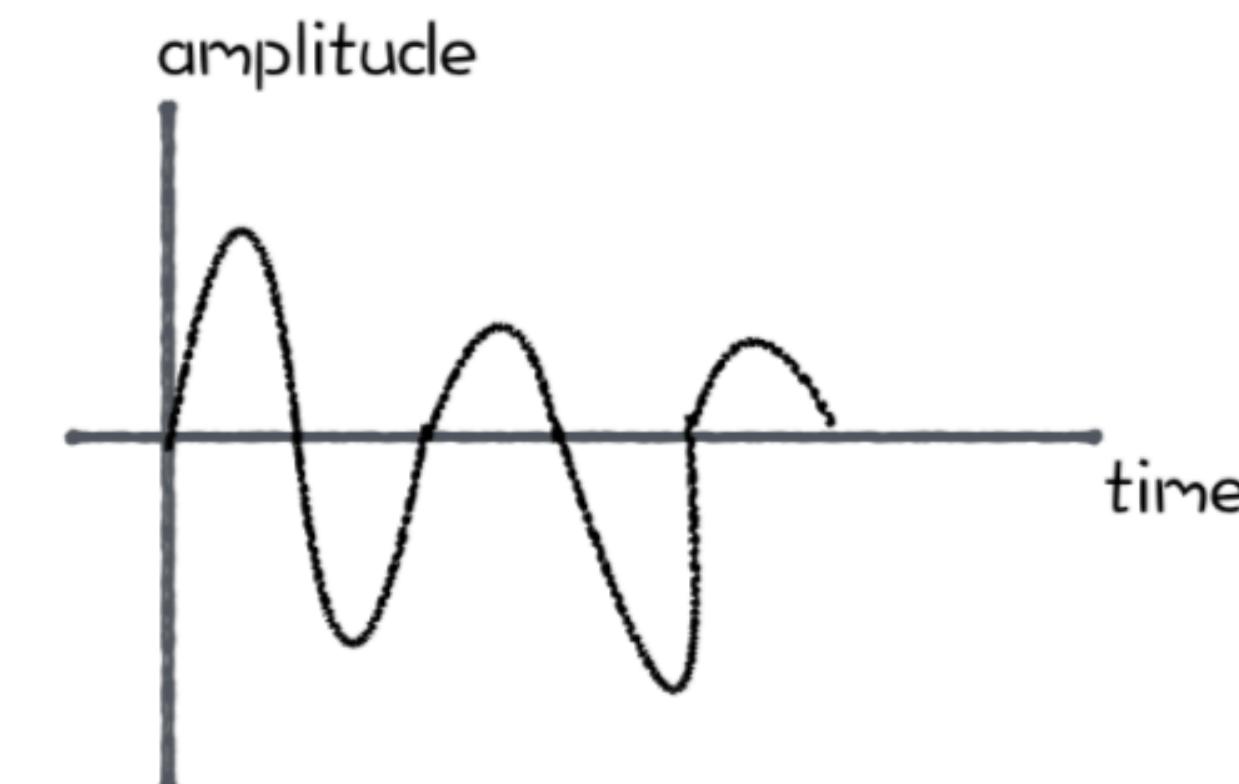
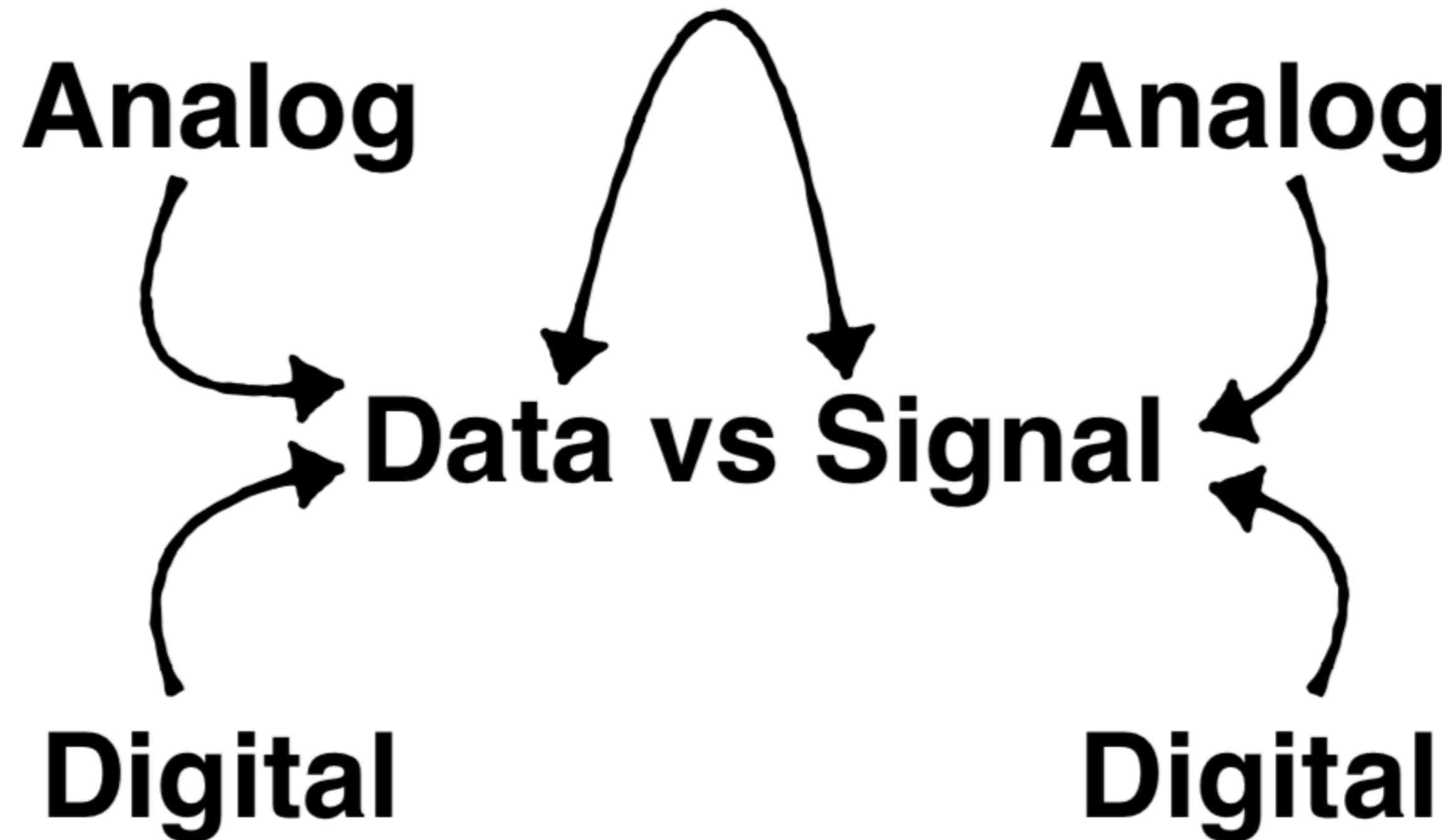
Data Flow



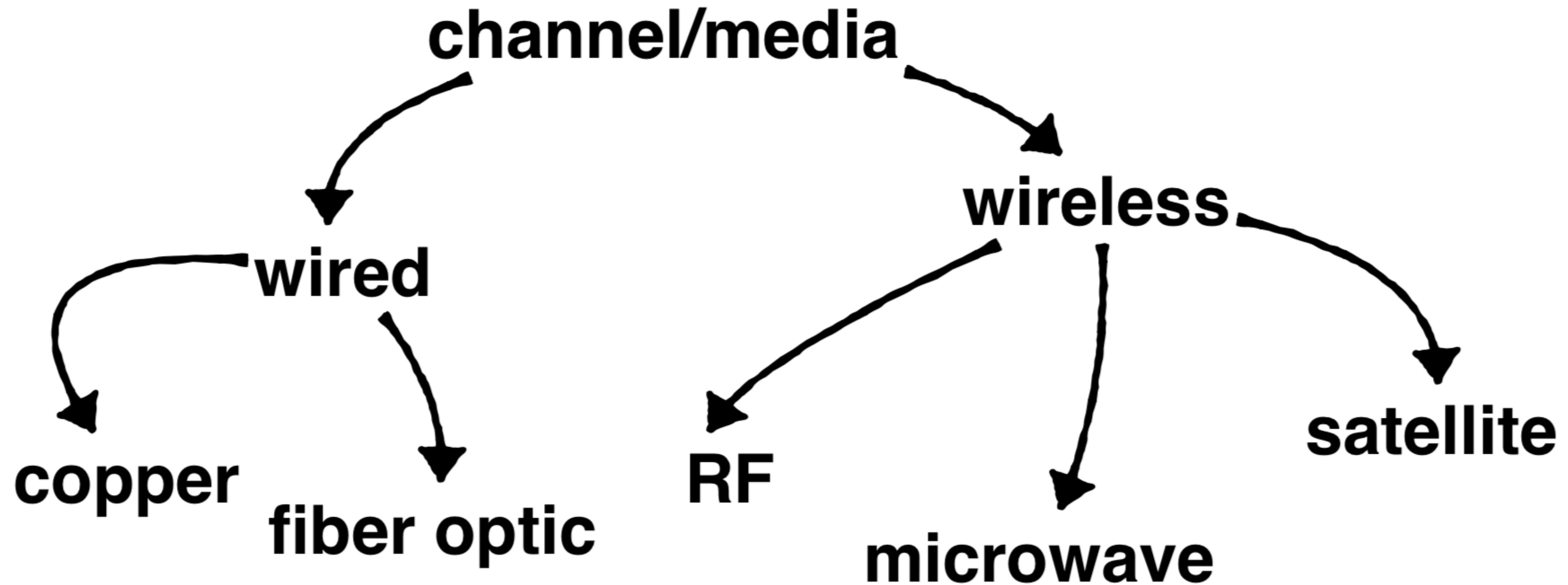
Full-duplex



Conversion

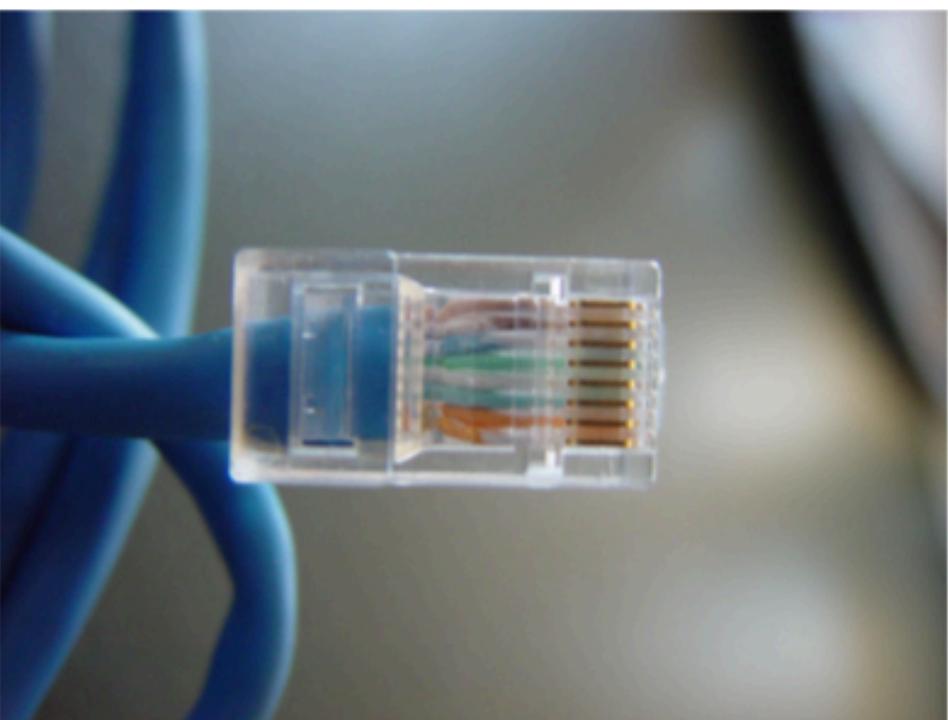
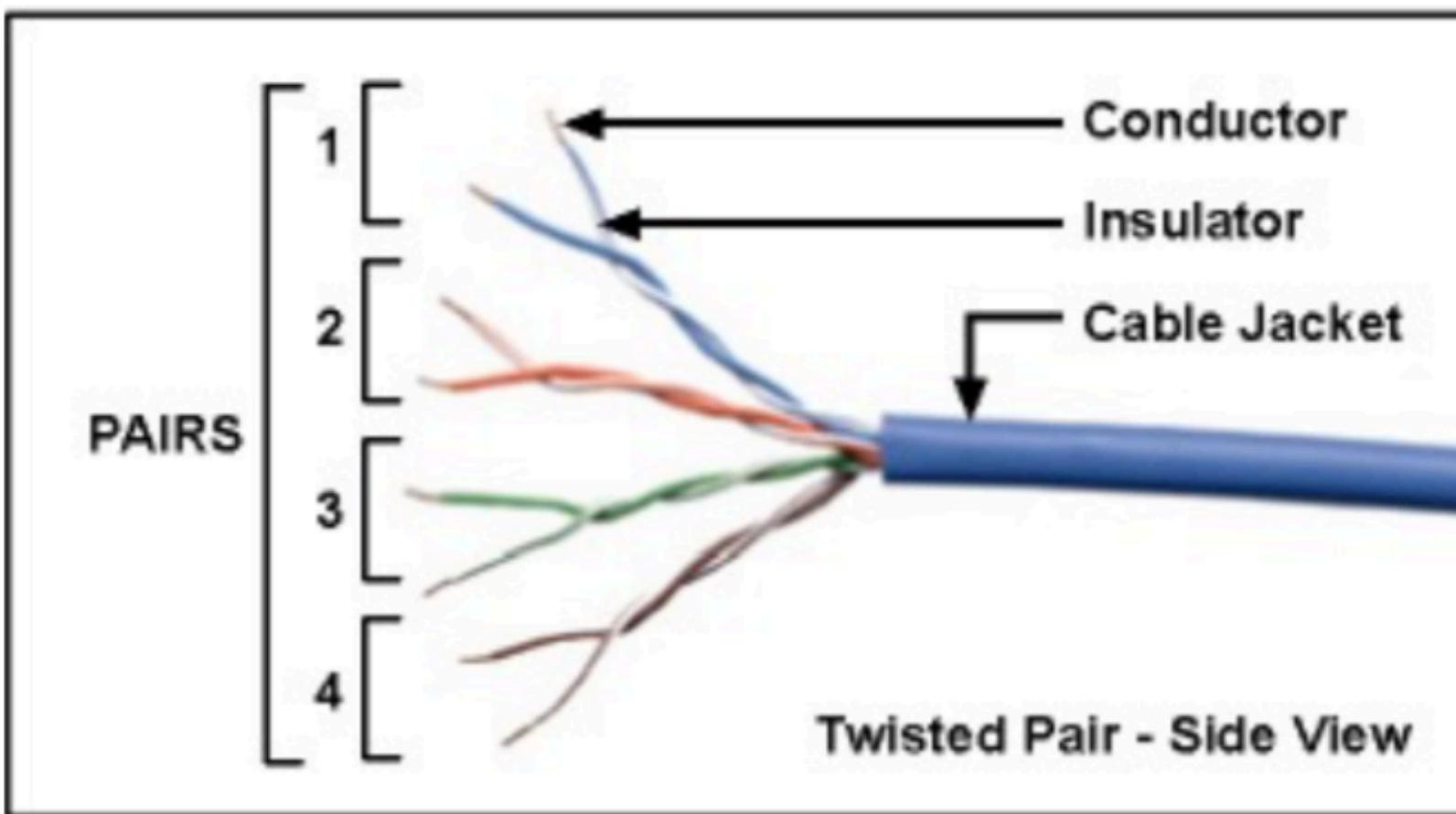


Channel/Media



Channel/Media

twisted pair



Channel/Media

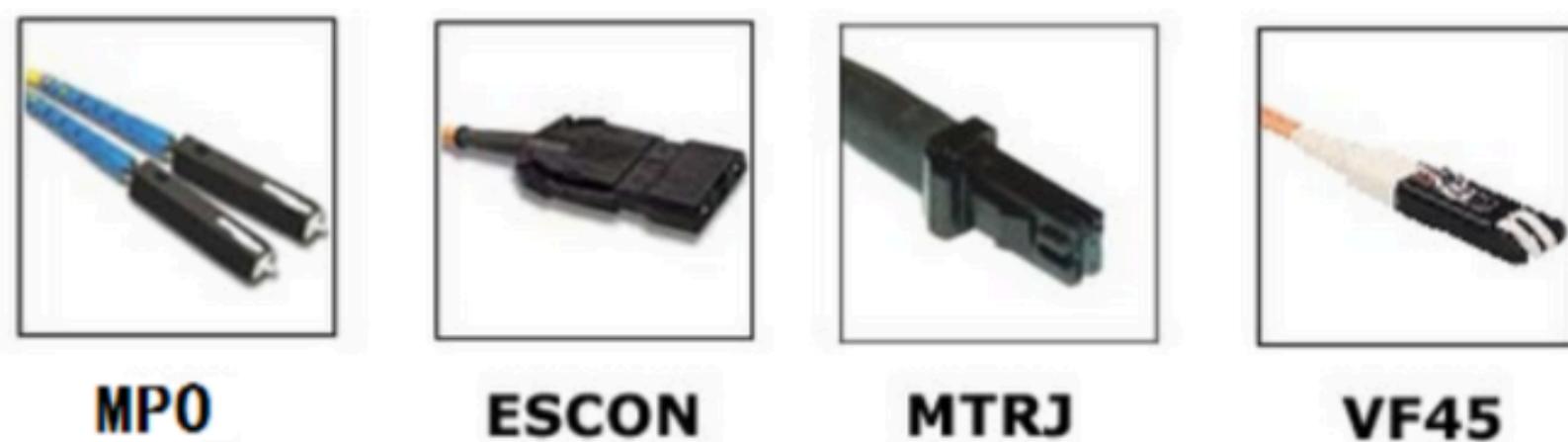
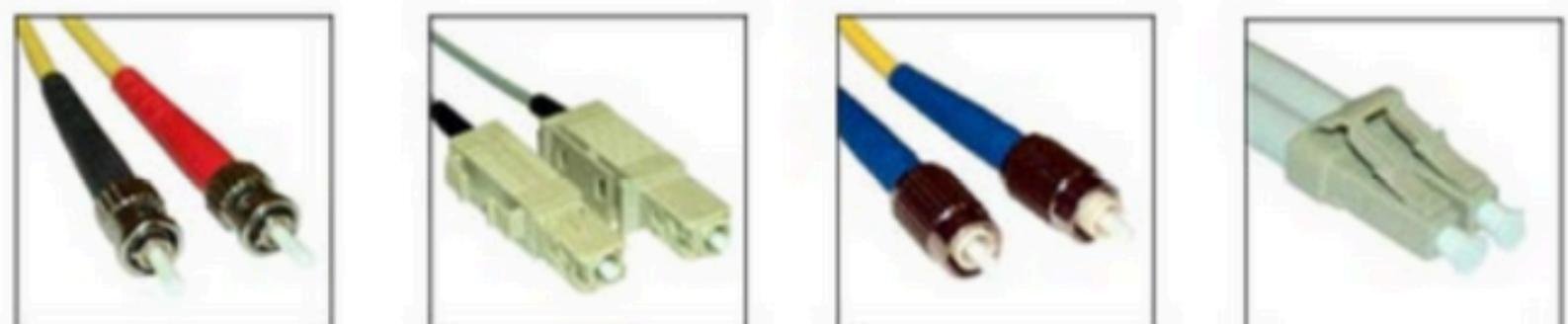
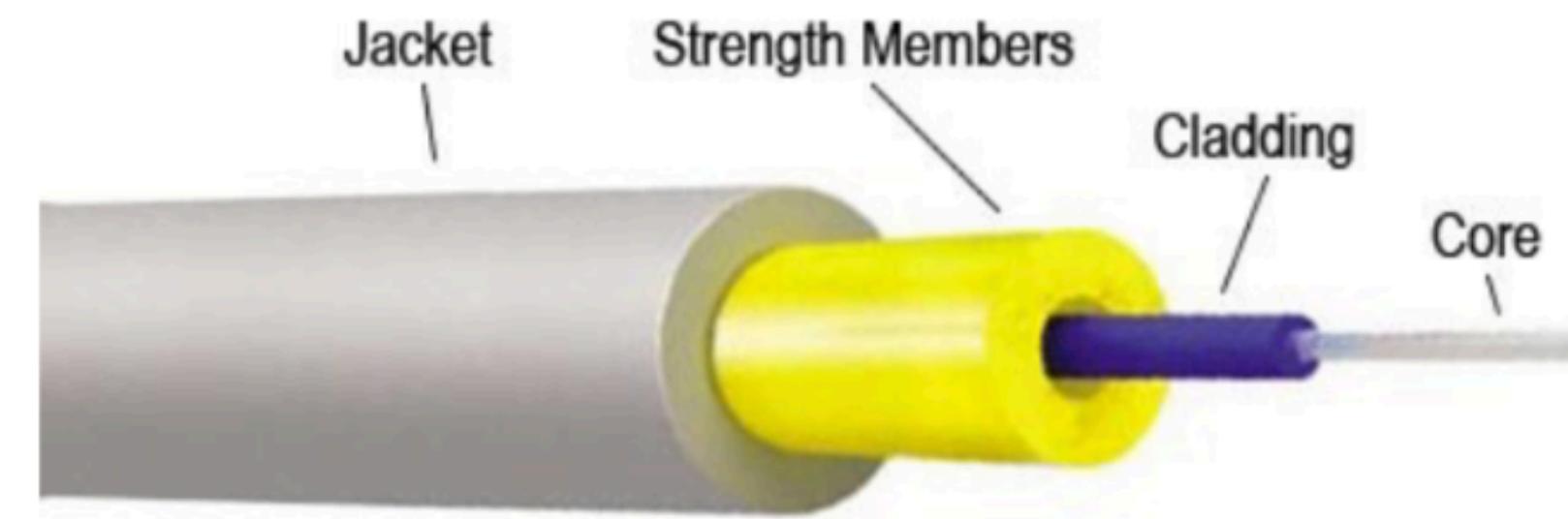
COAXIAL CABLE



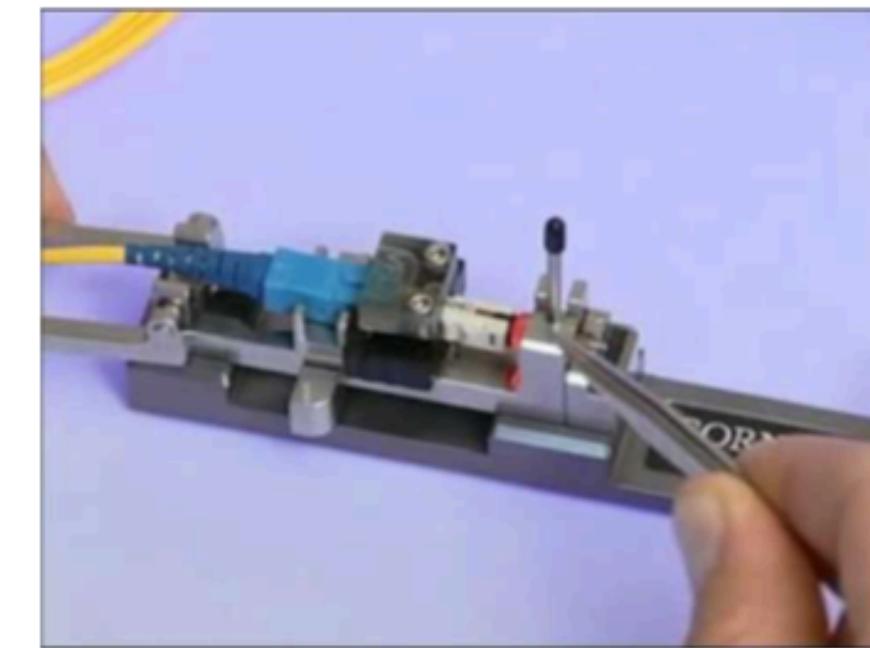
coaxial



Channel/Media



Fiber optics



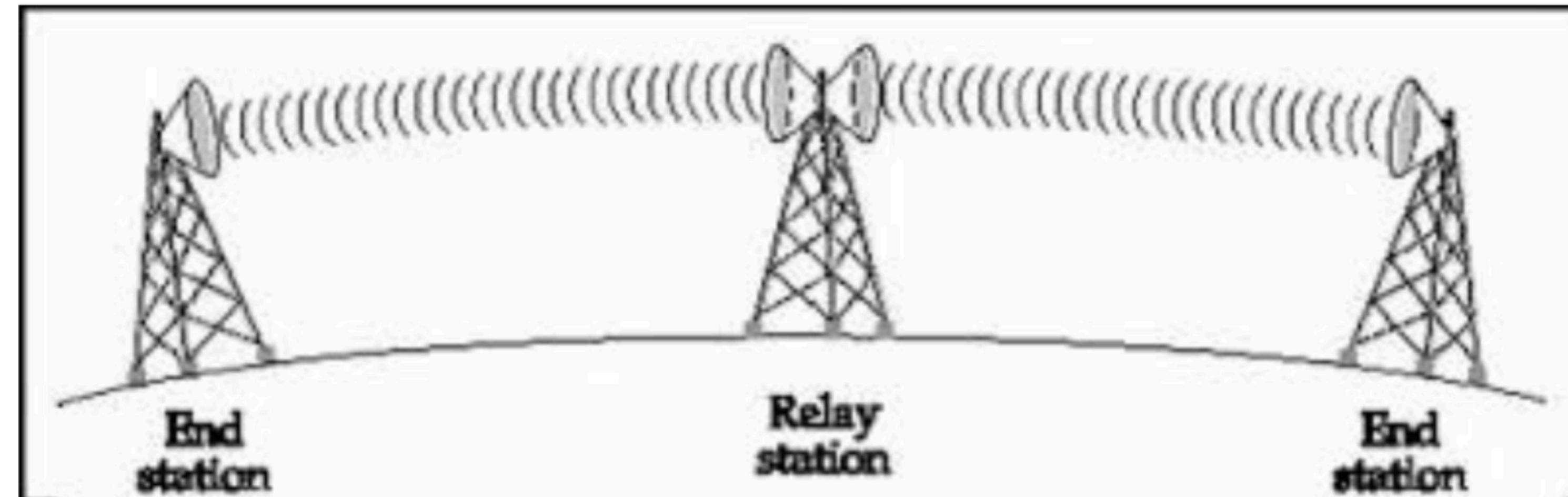
Radio Frequency (RF)



Channel/Media



Terrestrial Microwave



Channel/Media

Satellite System

