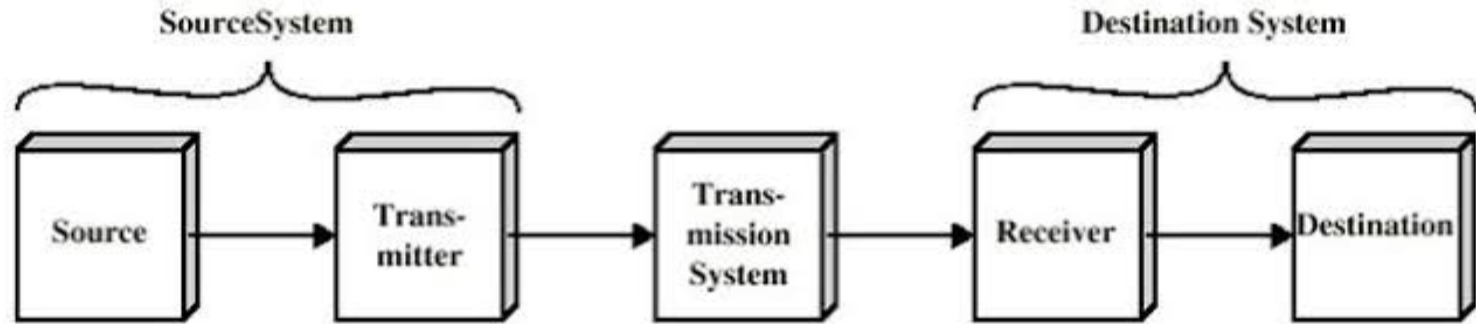# INTRODUCTION
16.09.2019

BLM 3051 Veri İletişimi
(Data Communication)

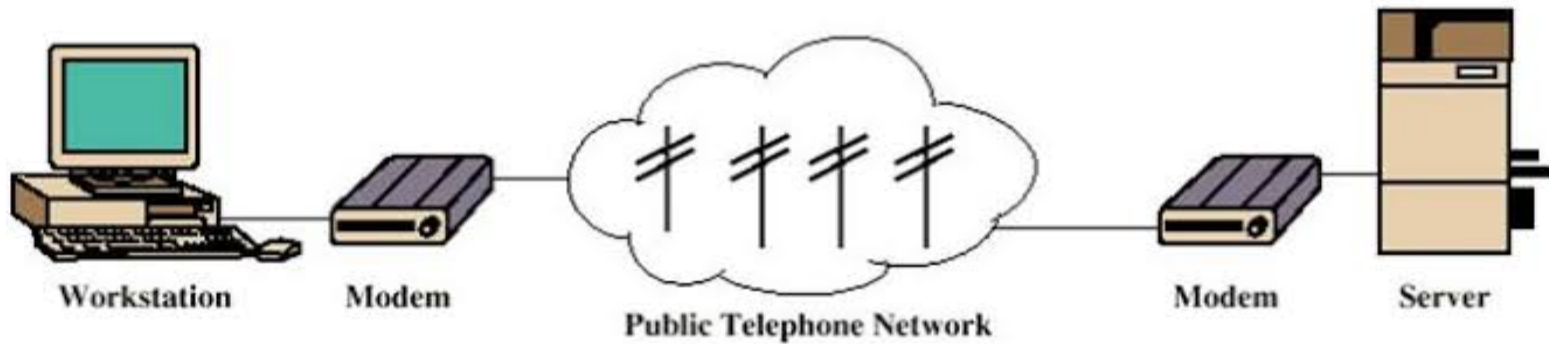## Tech. Assist. Kübra ADALI
Assoc. Prof. Dr. Veli Hakkoymaz

References:

•*Computer Networks*, Andrew Tanenbaum, Pearson, 5th Edition,2010.

•*Computer Networking, A Top-Down Approach Featuring the Internet*, James F.Kurose, Keith W.Ross, Pearson-Addison Wesley, 6th Edition, 2012.

.**BLG 337 Slides** from İTÜ prepared by Assoc. Prof.Dr. Berk CANBERK
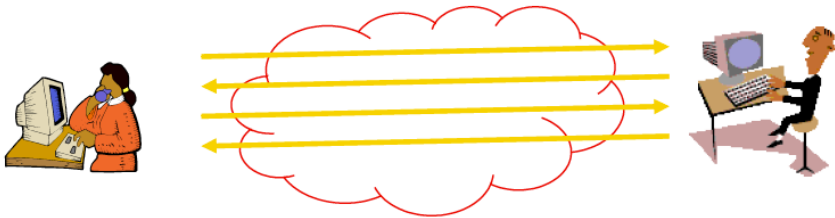
Communications Model

SourceSystem

Destination System

Source → Trans-mitter → Trans-mission System → Receiver → Destination

(a) General block diagram

Workstation — Modem — Public Telephone Network — Modem — Server
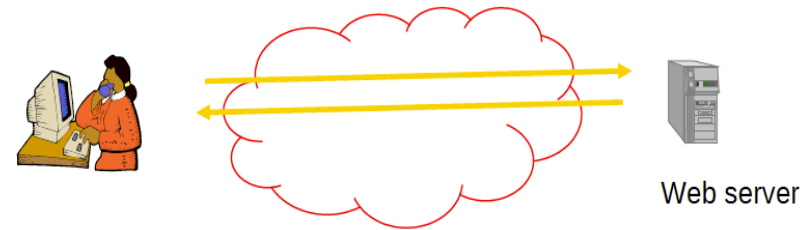
(b) Example

Usage of Communication Services
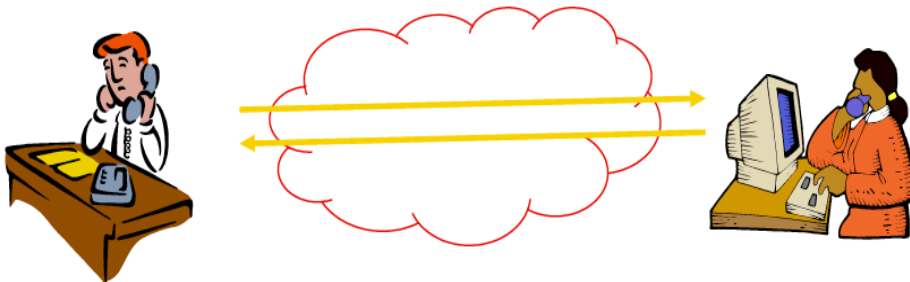
Instant Messaging

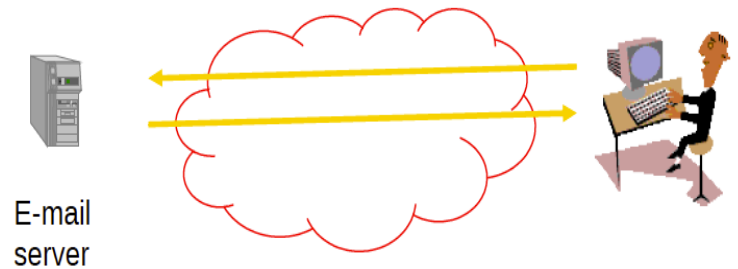Direct exchange of text messages

Web Browsing

Web server

Telephone

Real-time bidirectional voice exchange

E-mail

E-mail server

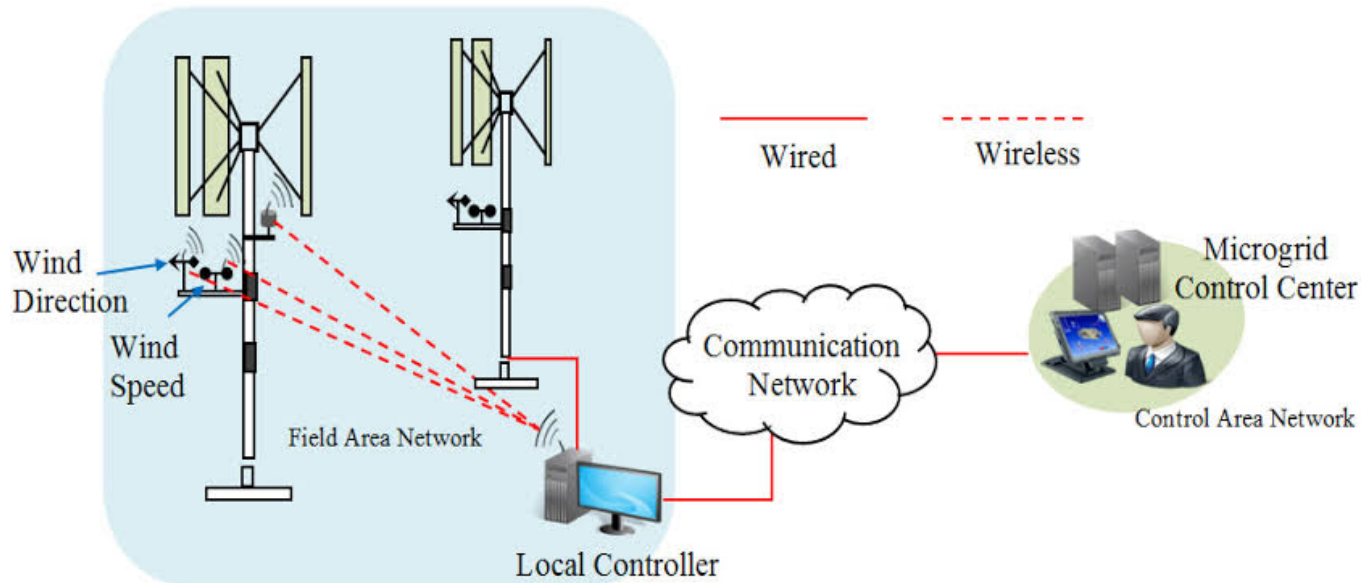Exchange of text messages via servers

Solution to the huge amount of connections…

✓ If one point to point connection is planned to be set for each communication;

  ➢ there would be N*N connections…

✓ The solution is Communication Network…

Communication Network
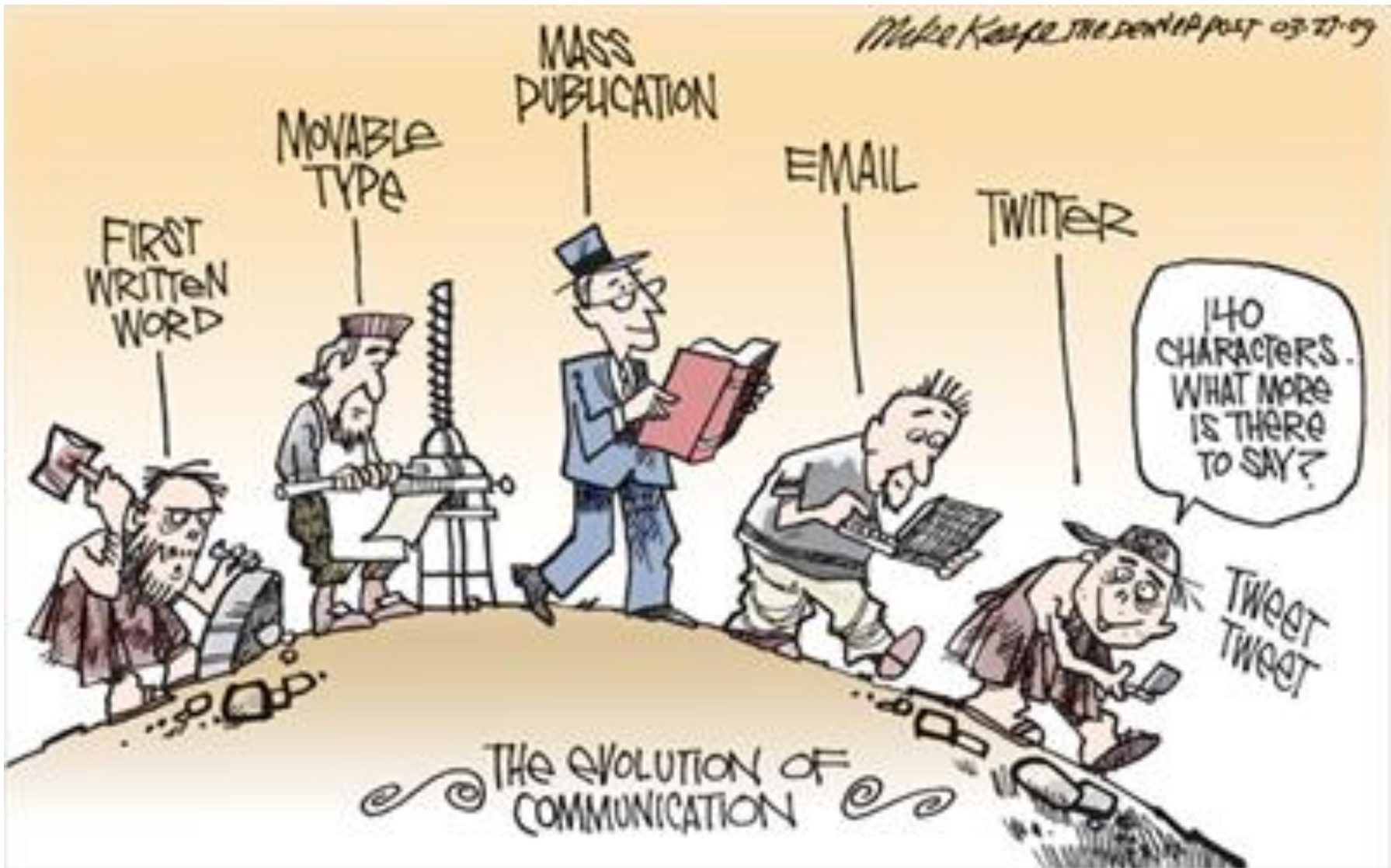

✓ Communication Network: is the sum of all the means and methods (equipment and facilities) that an organization employs to communicate.

  o Equipments: Switches, routers etc.
  o Facilities: Copper wires, optical fiber, air etc.
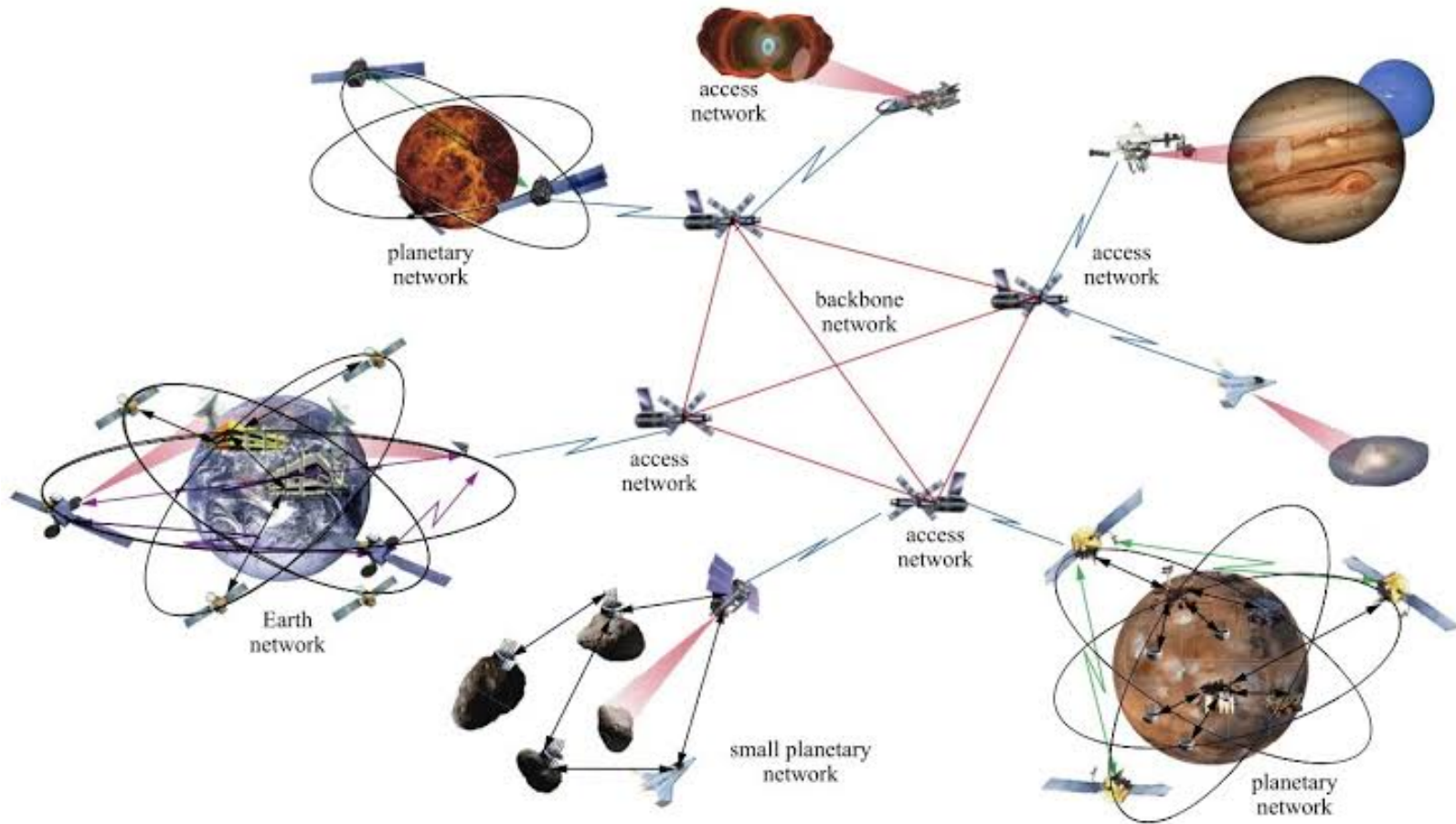 o Methods : Protocols, Rules.. etc

Communication Network Architecture

✓ *Network Architecture :* the complete framework of an organization's computer network.

✓ Important tips about network architecture:

  o **Layers**: All the communication process is organized by the groups of rules that are classified by different functional areas called: ***"layers"***

  o **Network Services** : Protocols,rules and/or regulations that manage communication is provided by network services.
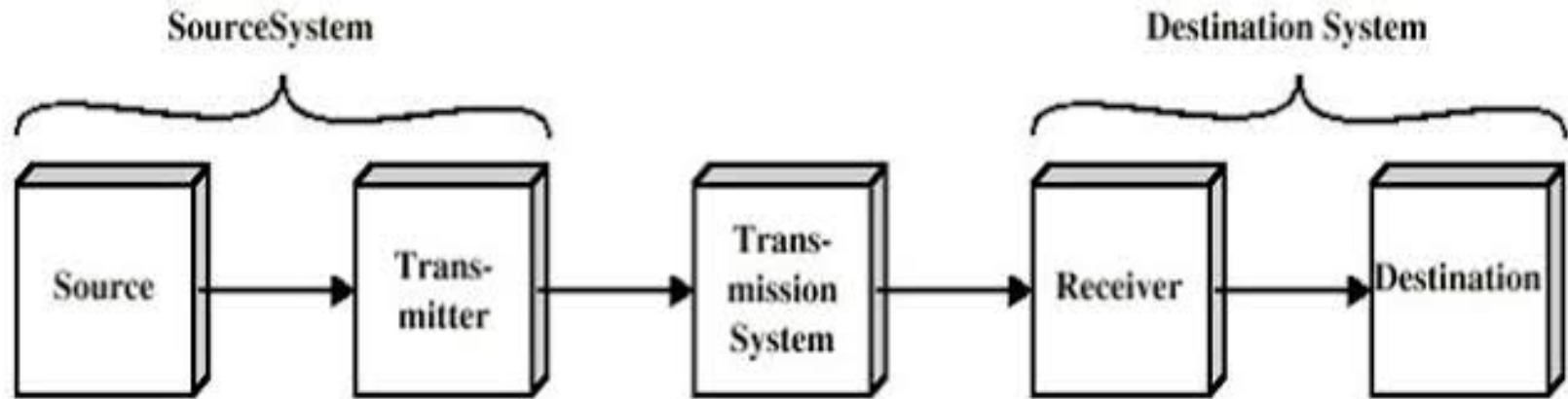
History of Communication Networks
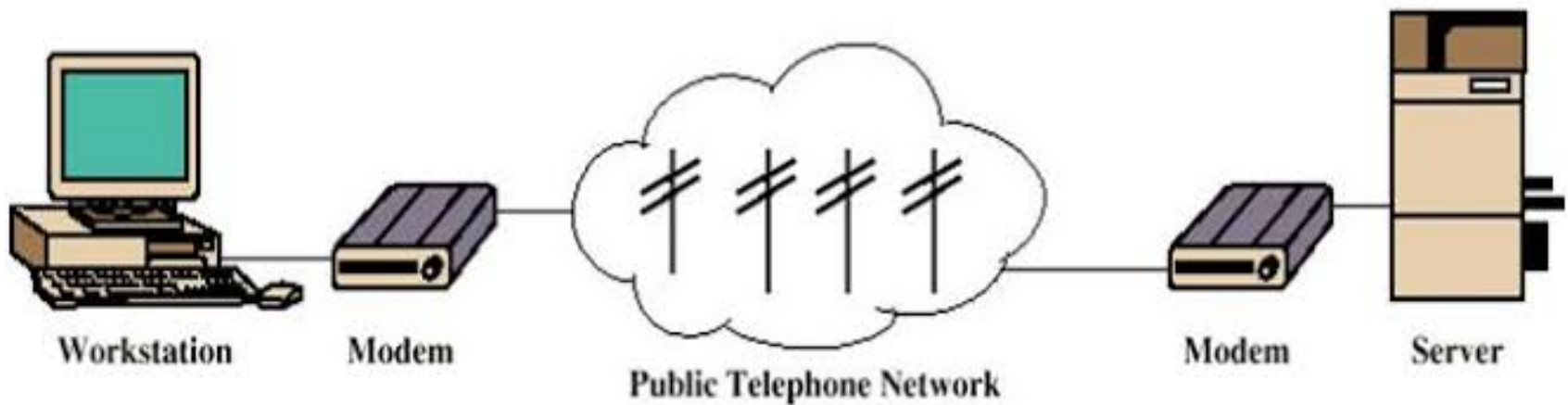
Current Network Architectures….

Network architectures for InterPlaNetary Internets…

Communications Model

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(a) General block diagram

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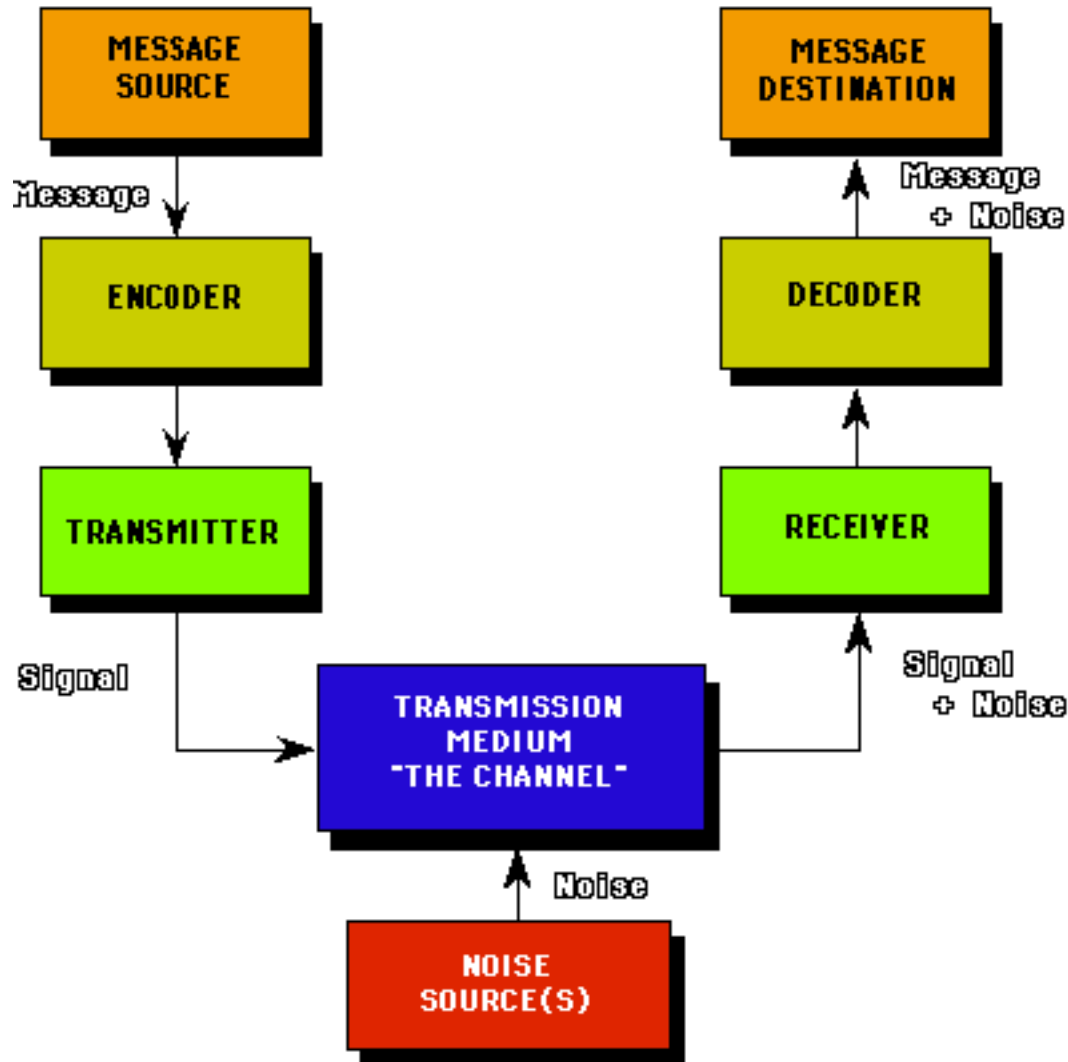
(b) Example

Shannon Communications Model

Data Communications Model