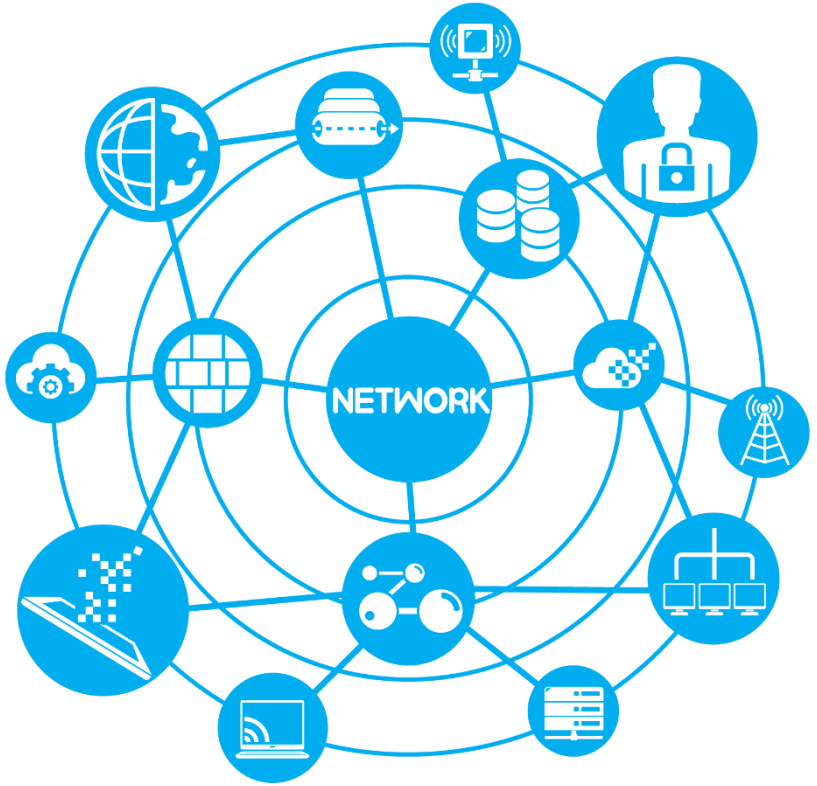
Computer Networks Fundamentals



Asst. Pro. Dr. Mazin S. Al-Hakeem

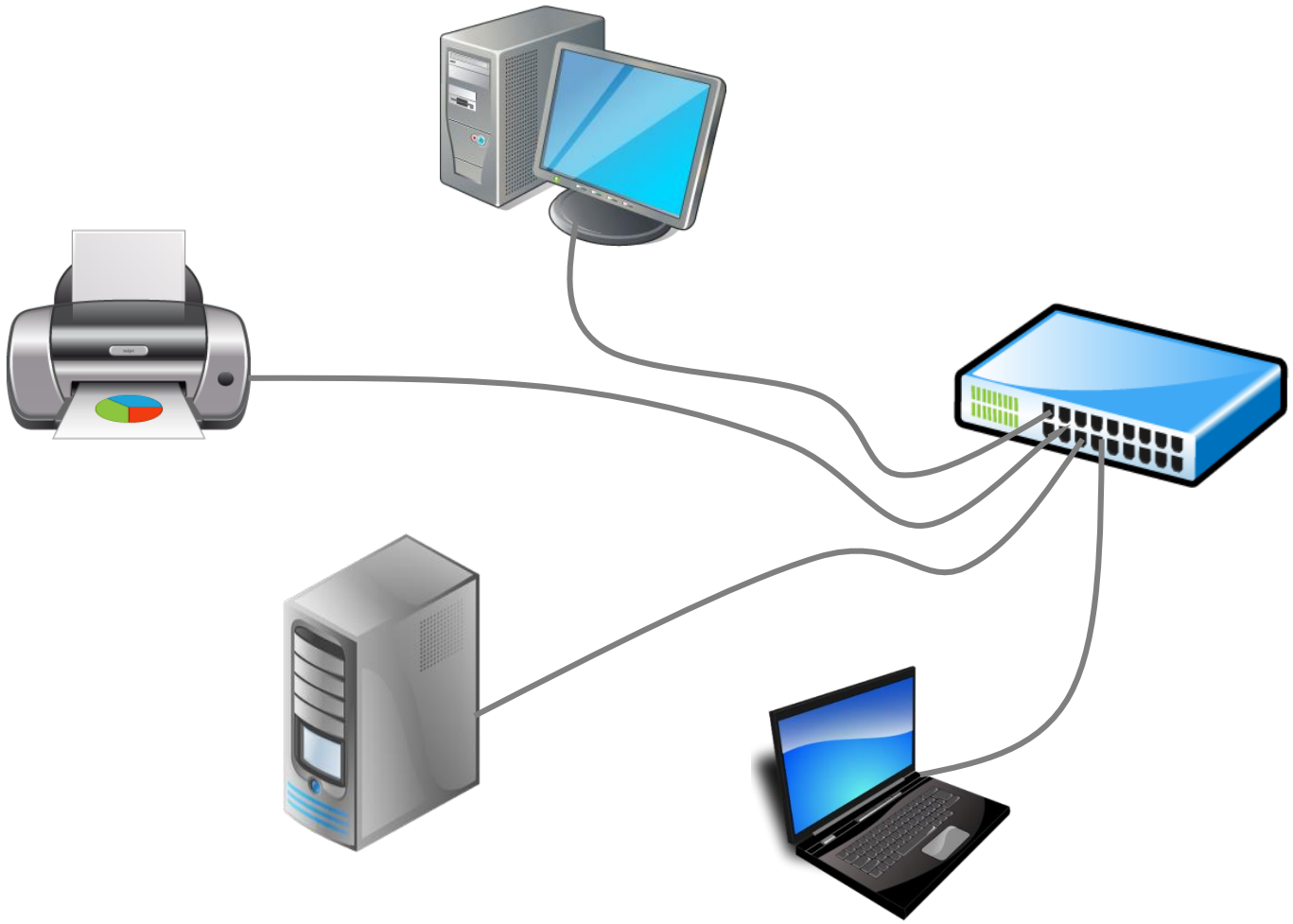
Computer Networks Fundamentals

Chapter One
Introduction to Networking

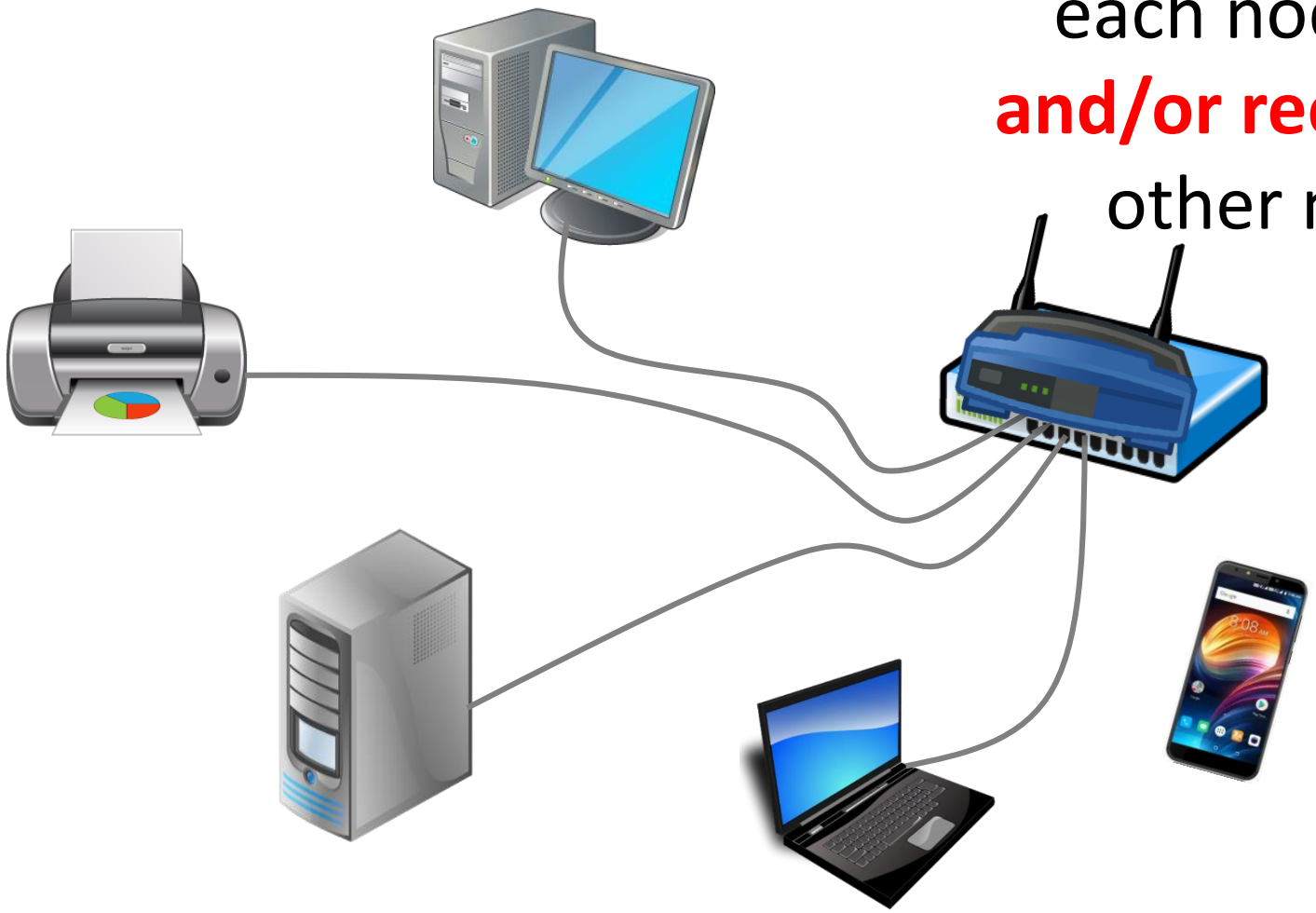
Lecture 1

Asst. Pro. Dr. Mazin S. Al-Hakeem

A **Network** is a set of devices (**nodes**) **connected** by **communication links**,



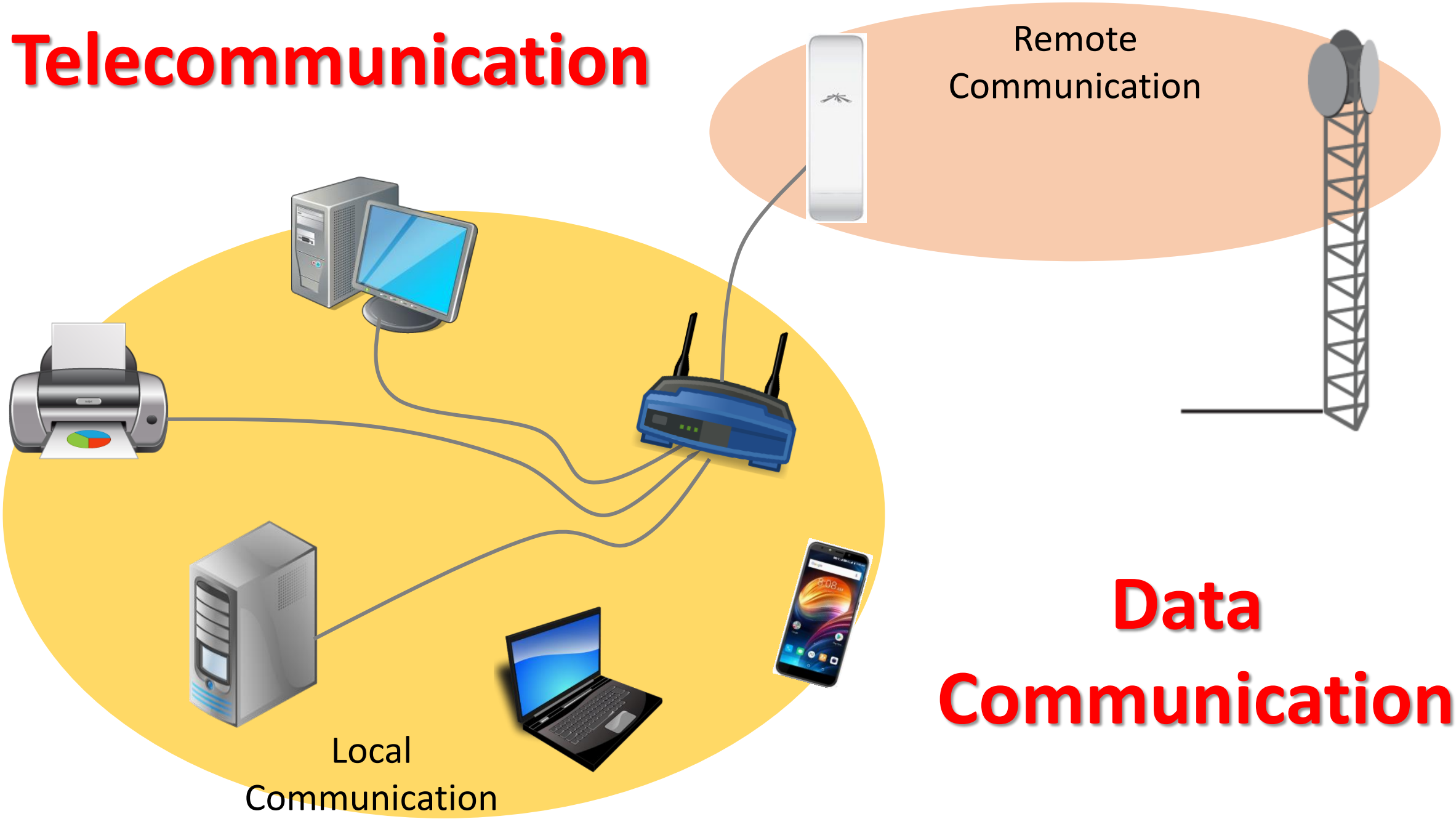
A **Network** is a set of devices (**nodes**) **connected** by **communication links**, each node is capable of **sending and/or receiving data** generated by other nodes on the network.



Data Communication

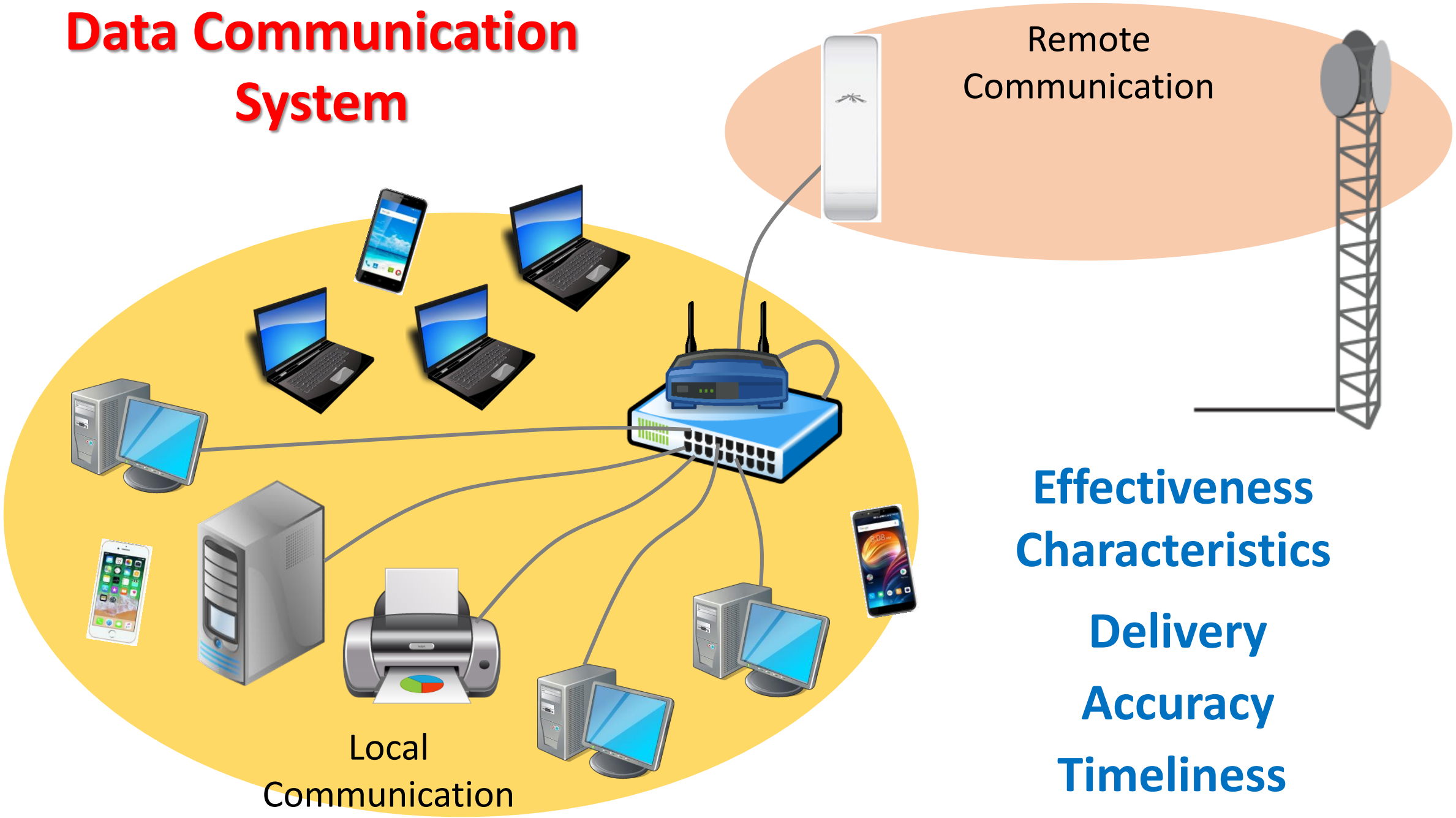
Information Sharing

Telecommunication



Data Communication

Data Communication System

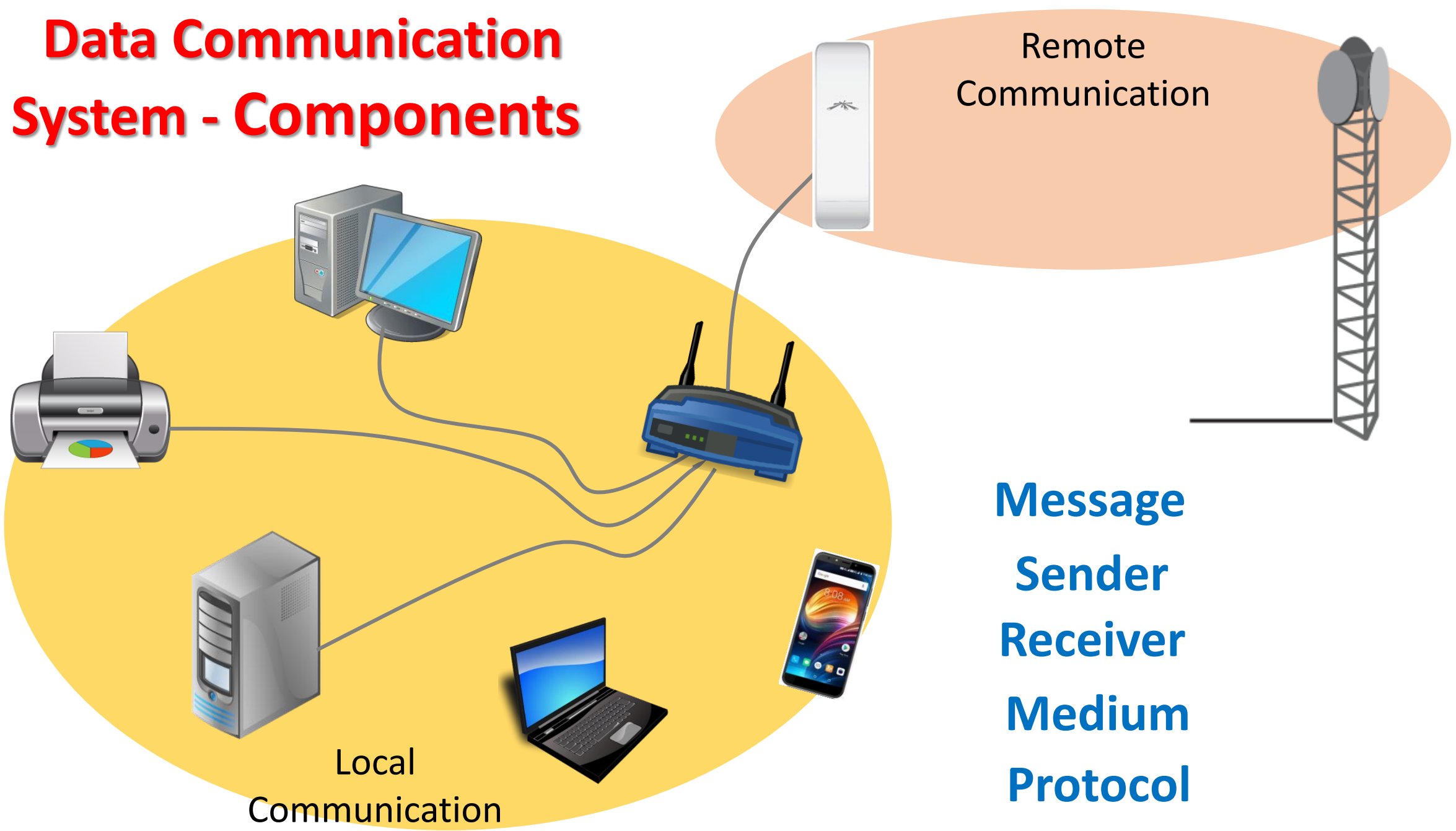


Effectiveness Characteristics

- Delivery
- Accuracy
- Timeliness

Power
On/Off
Wireless On/Off
USB1
USB LED
USB2
1
2
Ethernet
3
4
WPS/Reset

Data Communication System - Components



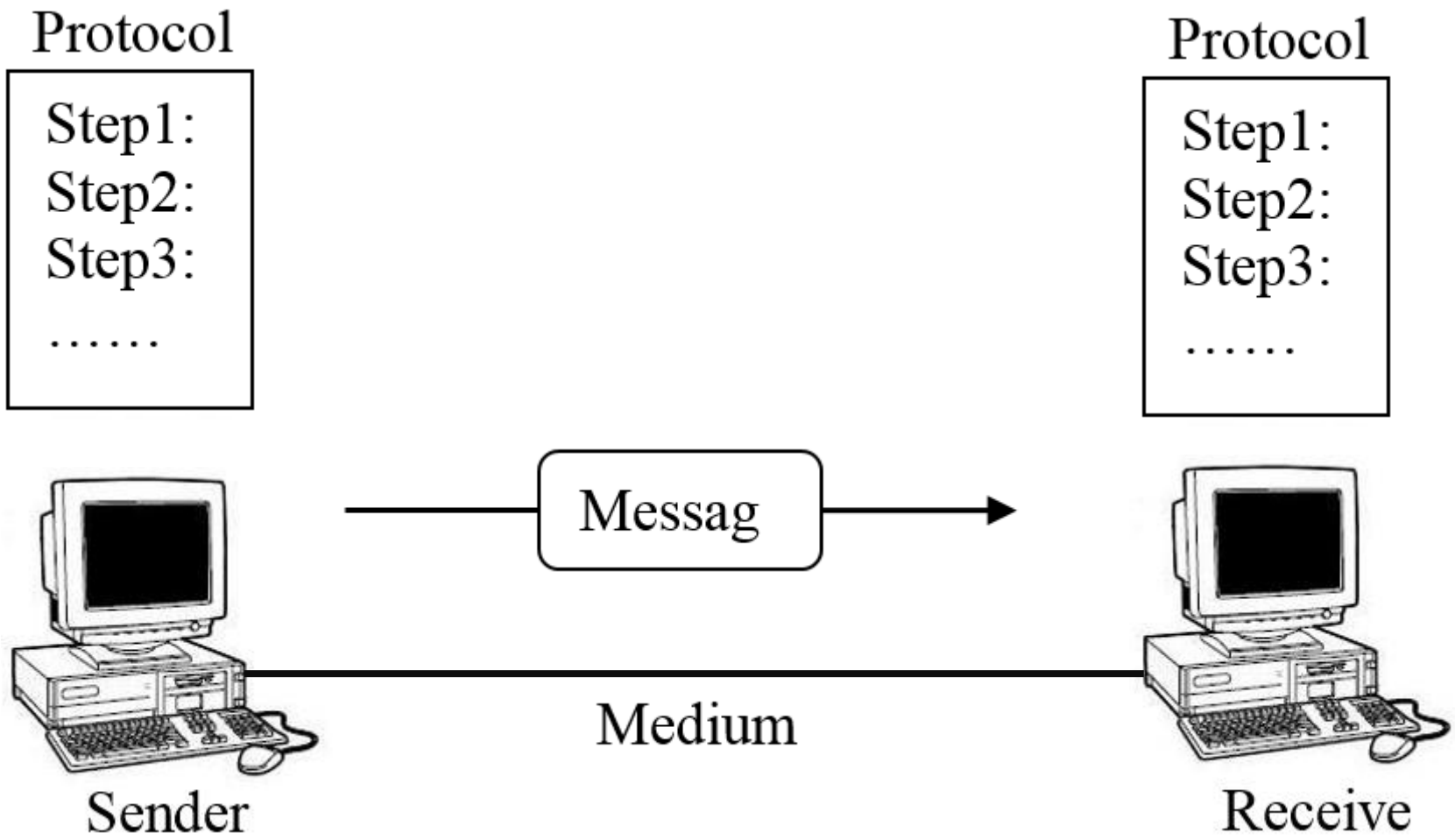
Message

Sender

Receiver

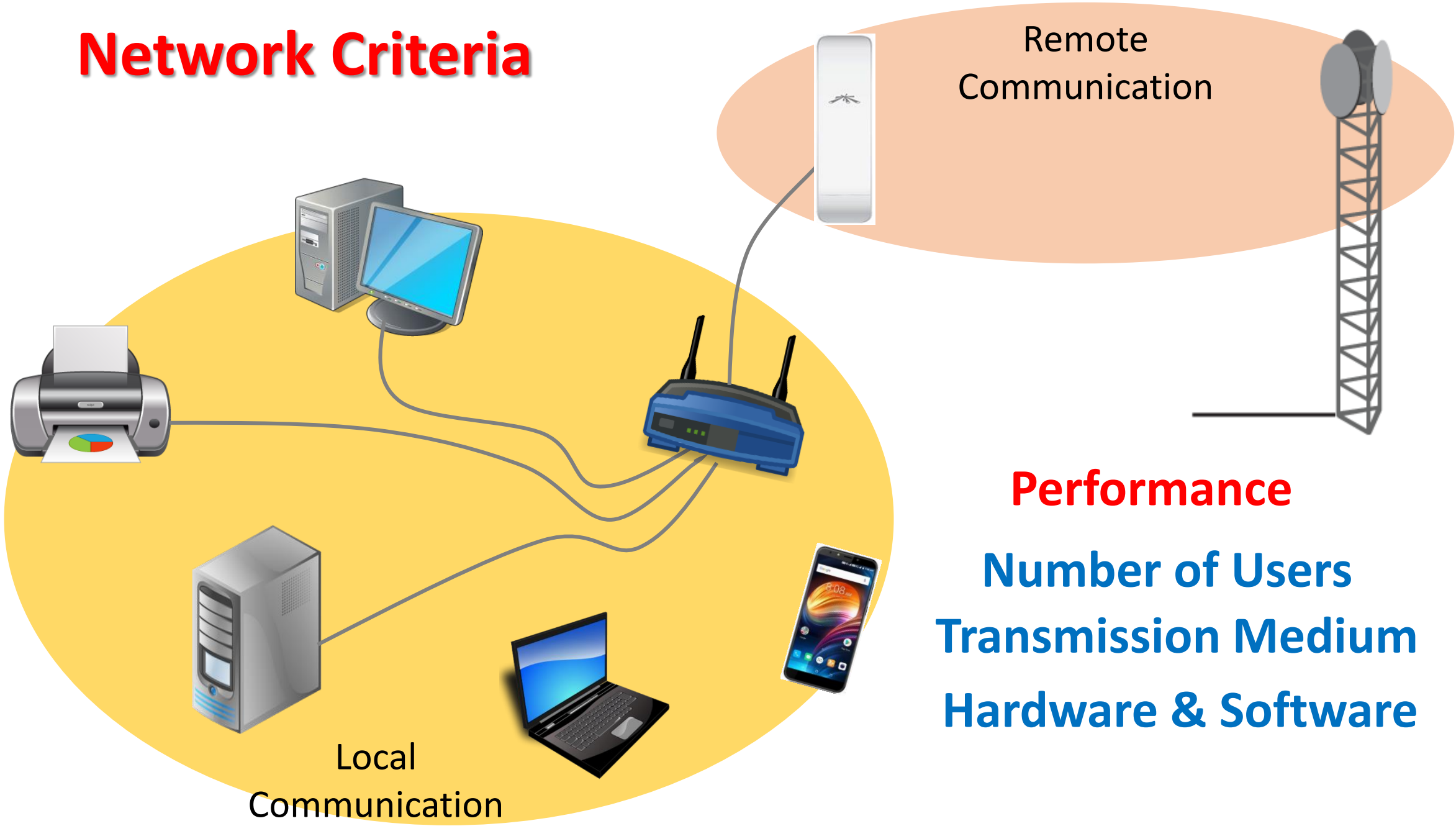
Medium

Protocol



Components of a Data Communication System

Network Criteria



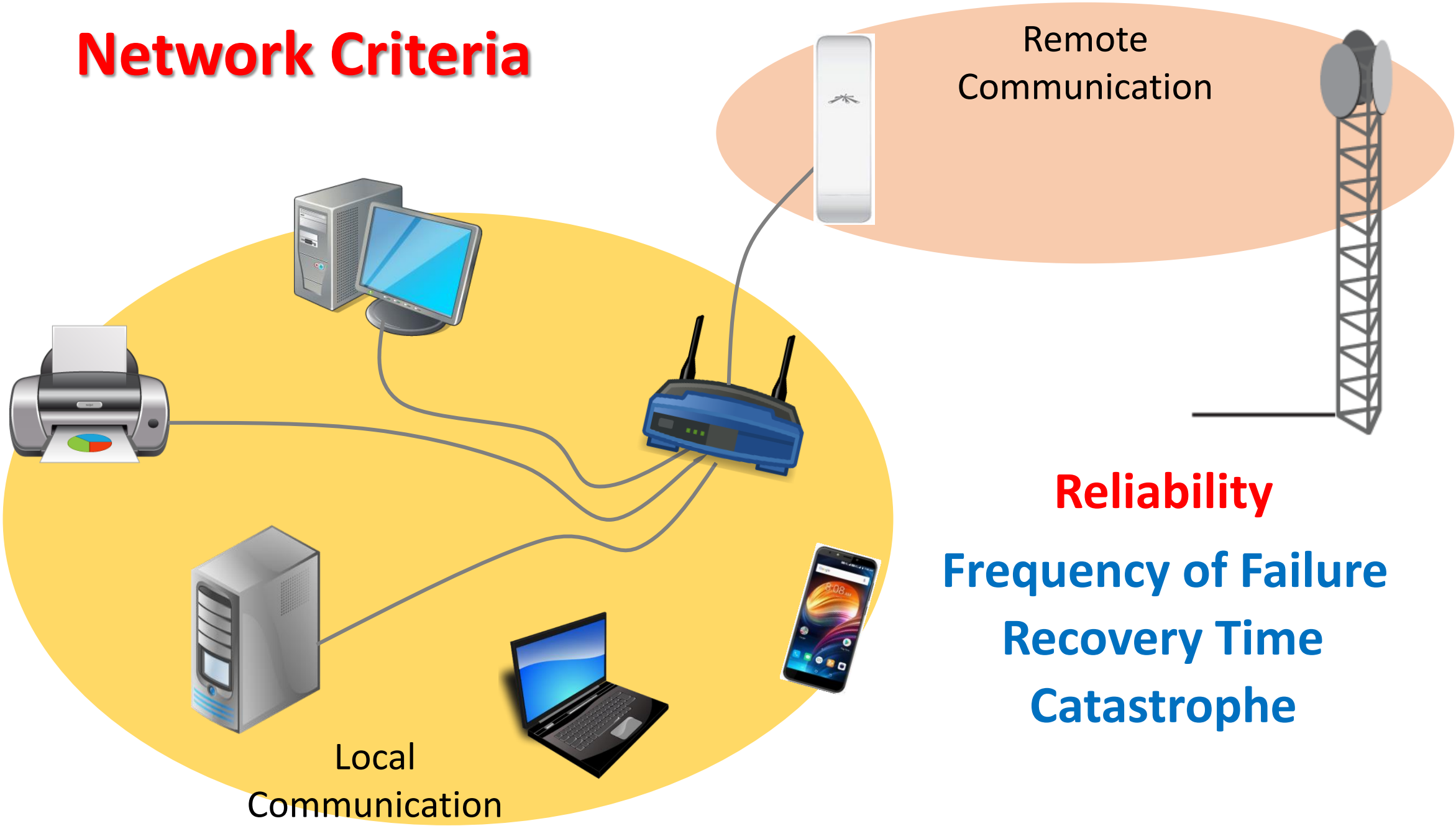
Performance

Number of Users

Transmission Medium

Hardware & Software

Network Criteria



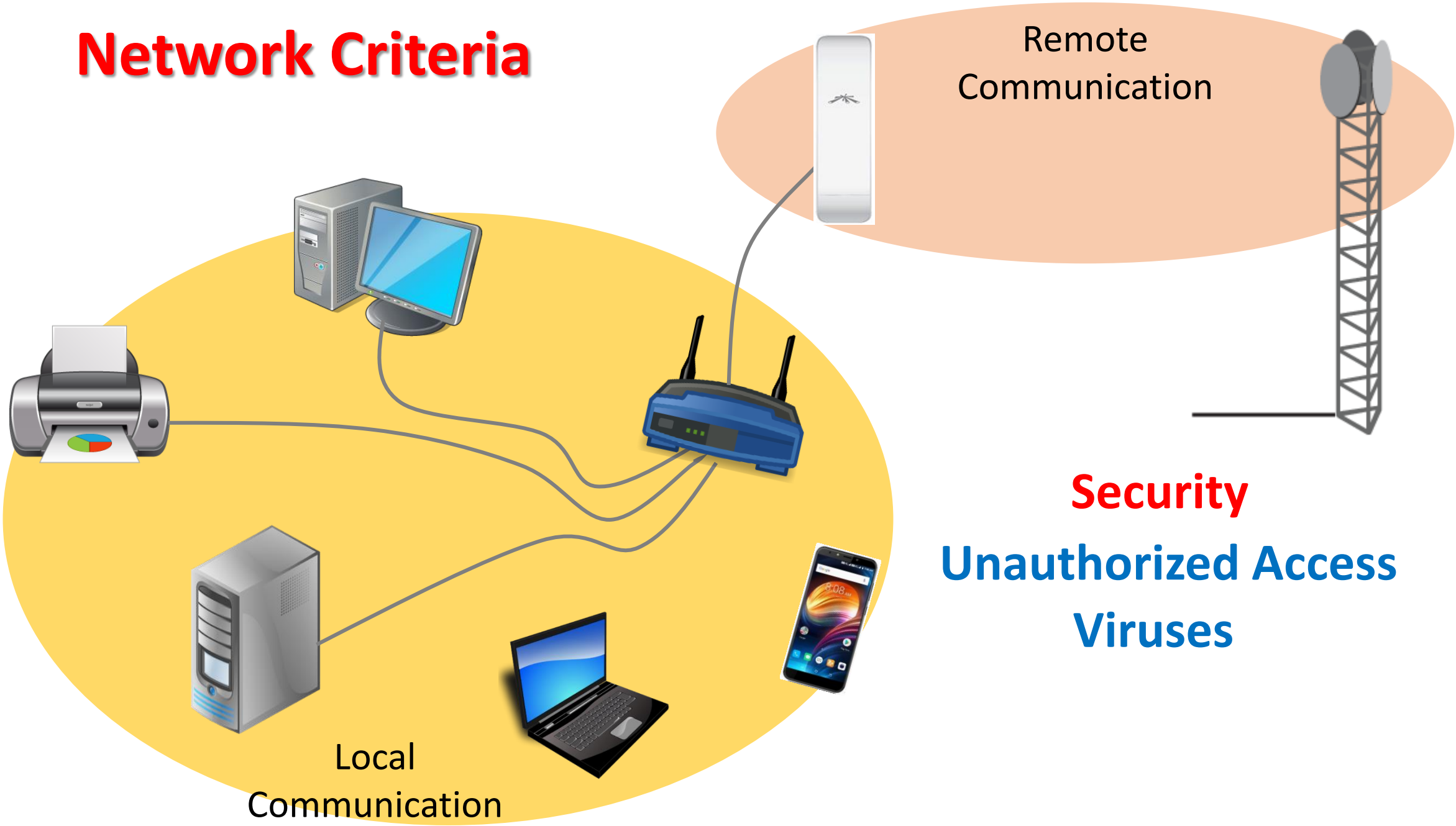
Reliability

Frequency of Failure

Recovery Time

Catastrophe

Network Criteria



Security

Unauthorized Access

Viruses

Network Criteria

Performance

- Number of Users
- Type of Transmission Medium
- Hardware & Software

Reliability

- Frequency of Failure
- Recovery Time
- Catastrophe

Security

- Unauthorized Access
- Viruses

EARTHLINK

شركة الجزيرة العربية
لخدمات الإتصالات و الإنترنت

SCOPESKY
COMMUNICATIONS

SATGATE-IRAQ

EARTHLINK

SCOPESKY
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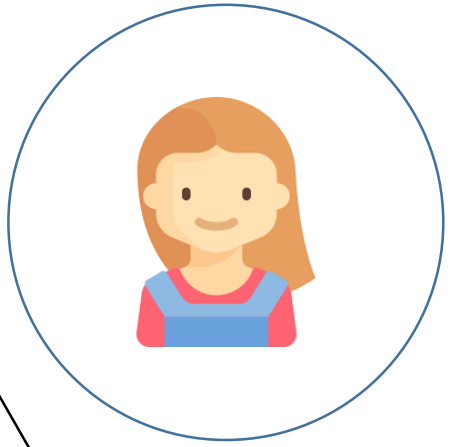
شركة الجزيرة العربية
لخدمات الإتصالات و الإنترنت



Performance

- Number of Users
- Type of Transmission Medium
- Hardware & Software

Reliability

- Frequency of Failure
- Recovery Time
- Catastrophe

Security

- Unauthorized Access
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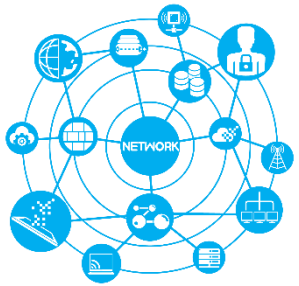
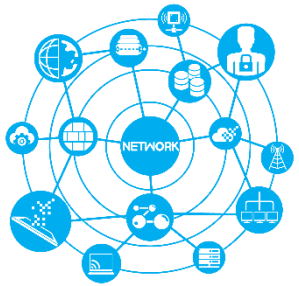
Computer Networks Fundamentals
Chapter One
Introduction to Networking



Lecture 1

- Network
- Data Communication
- Data Communication System
- The Effectiveness Characteristics
- Data Communication Components
- Network Criteria



Any Question ?

Thank You