

# INTRODUCTION TO LAN , MAN & WAN

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# OVERVIEW

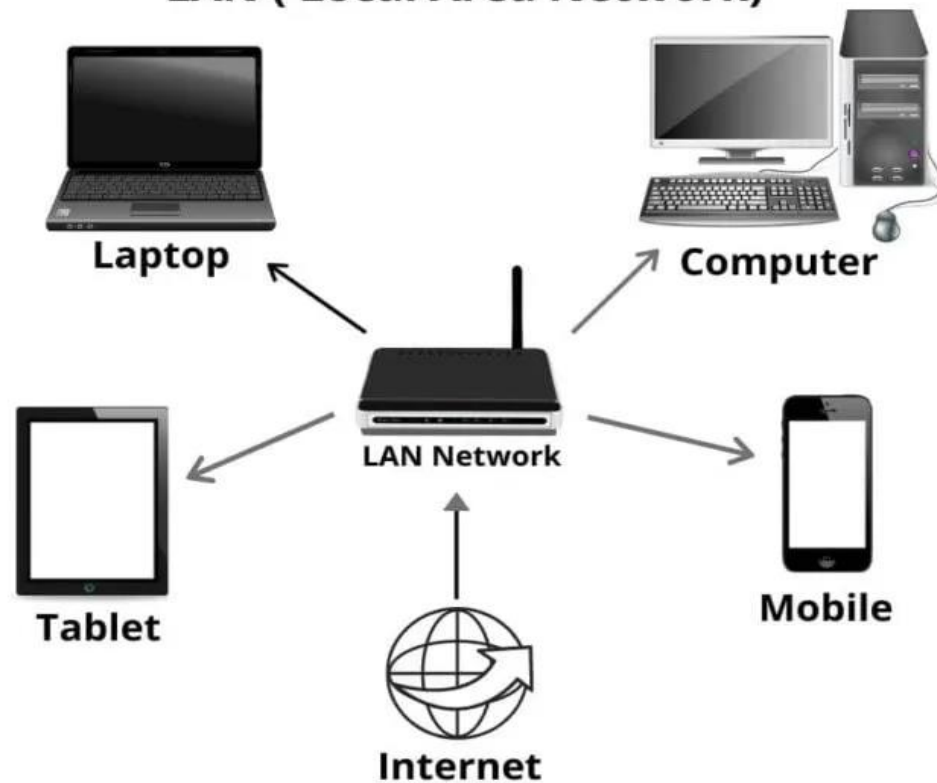
- ❑ LAN(Local Area Network):Introduction
- ❑ Advantages and Disadvantages of LAN
  
- ❑ MAN(Metropolitan Area Network ):Introduction
- ❑ Advantages and Disadvantages of MAN
  
- ❑ WAN(Wide Area Network):Introduction
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## Local Area Network (LANs)

- Local Area Networks are privately-owned networks within a small area, usually a single building or campus of up to a few kilometers.
- Data transferred in high speed.
- The transmission rate of LAN ranges from 4Mbps to 16Mbps and can maximize up to 100 Mbps.
- The bonus point of this network is its high speed, lower expenses, and security.
- Ethernet and Wi-Fi are the two most common technologies in use for local area networks.

# Local Area Network

## LAN ( Local Area Network)



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# Advantages of LAN

- Resource Sharing
- Software Applications Sharing
- Easy and Cheap Communication
- Centralized Data
- Data Security
- Internet Sharing

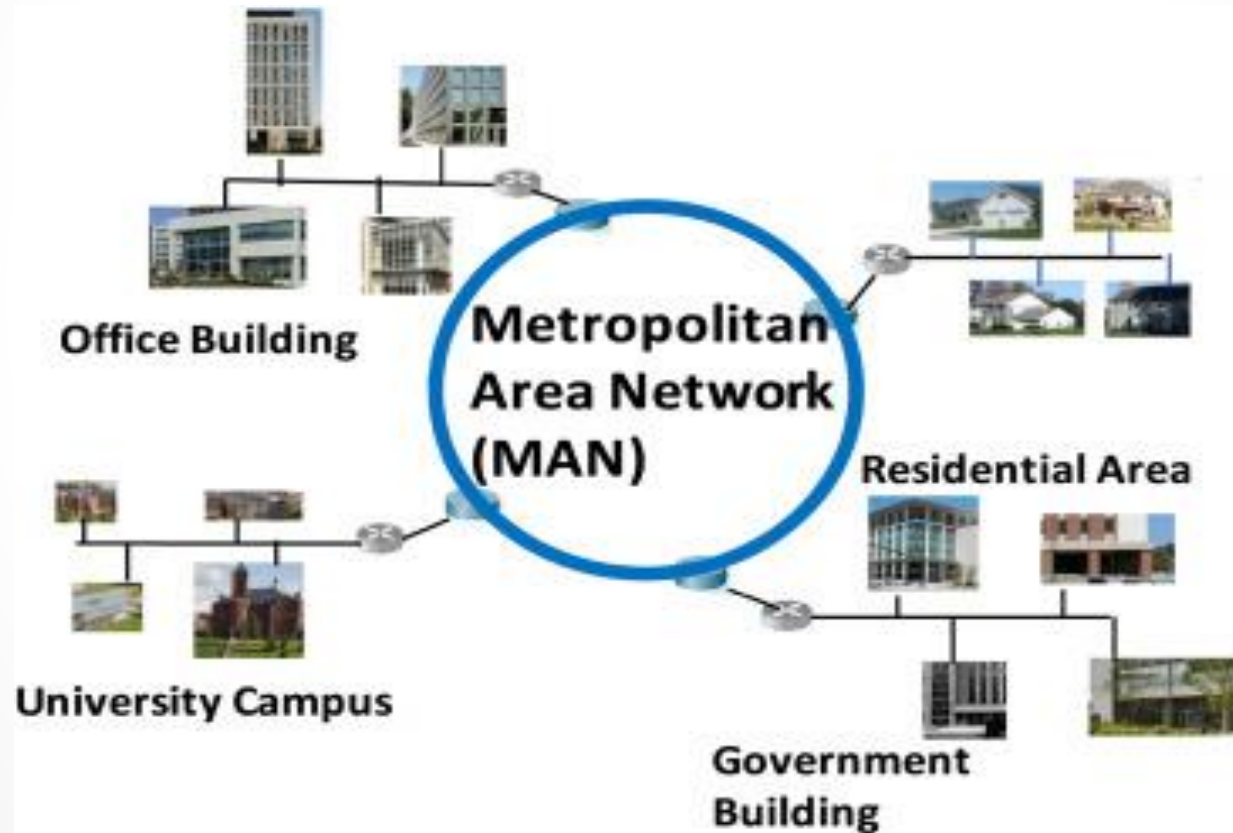
# Disadvantages of LAN

- High Setup Cost
- Privacy Violations
- Data Security Threat
- LAN Maintenance Job
- Covers Limited Area

## Metropolitan Area Network(MANs)

- MAN is a superior version of the LAN network connected throughout a city or metropolitan area.
- Branch office are connected to head office through MANs.
- The data transmission speed is moderate.
- Its ownership can be public or private parties.
- The network ranges from 5 to 60km.
- Examples of organizations that uses MANs are universities and colleges , grocery chains and banks.

# Metropolitan Area Network





# Advantages of MAN

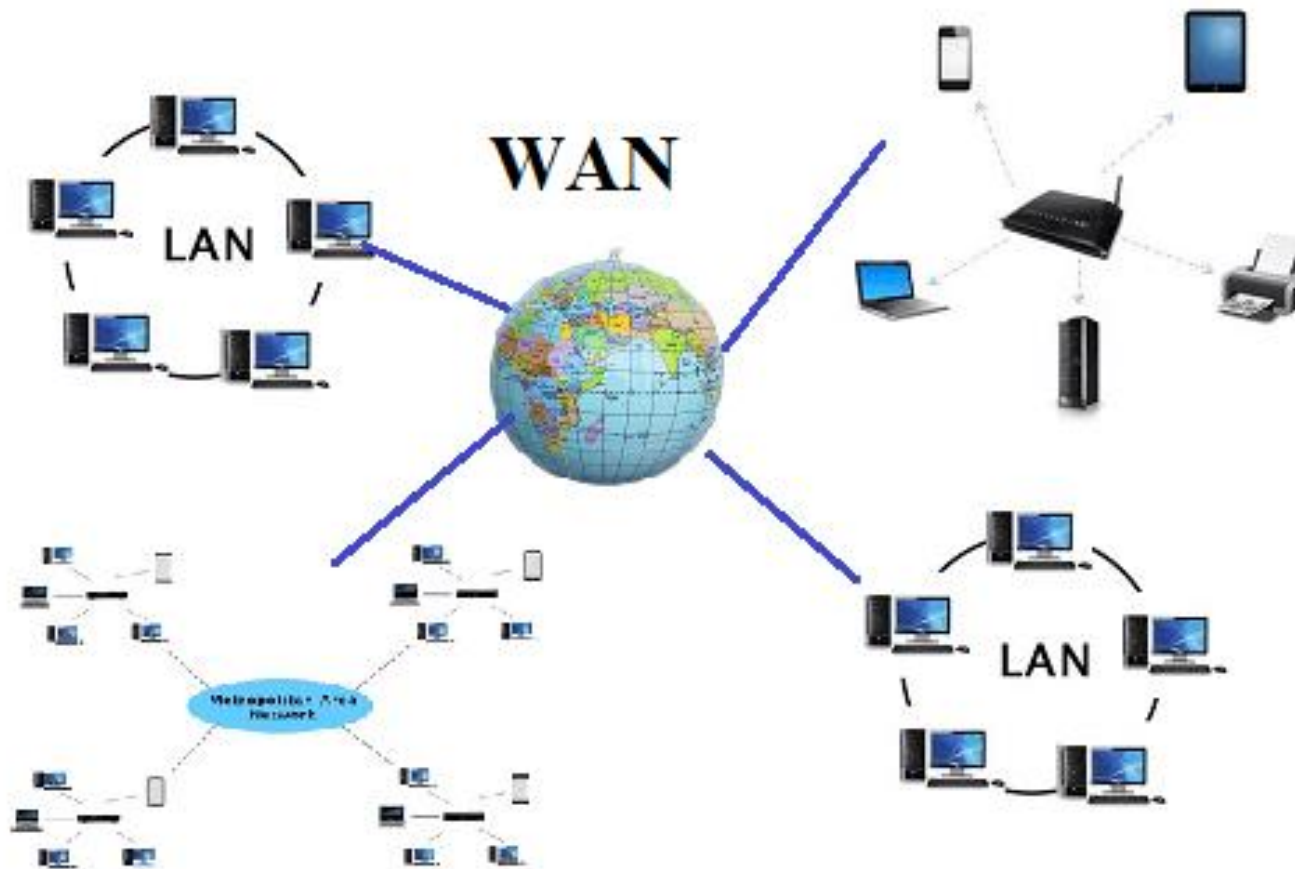
- Less Expensive
- Sending Local Emails
- High Speed than WAN
- Sharing of the Internet
- Conversion of LAN to MAN is Easy
- High Security

# Disadvantages of MAN

- Difficult To Manage
- Internet Speed Difference
- Hackers Attack
- Technical Staff Required to Set up
- Need More wires

## Wide Area Network(WANs)

- Network that provides transmission of voice, data, images, and videos over the large geographical area.
- WAN is made with the combinations of **LAN** and **MAN**.
- WAN can be owned publicly or privately.
- Largest WAN example is Internet. Also, it is used in Satellite Systems, in banks, Network providers, Large communication companies and other such sectors.



**Wide area network (WAN)**

# Advantages of WAN

- Covers large geographical area.
- Centralized data used in bank.
- Get updated files in less amount of time.
- Increased bandwidth

# Disadvantages of WAN

- The setup cost is high
- Security problems
- Needs firewall and antivirus software
- High configuration process
- Server down and disconnection issue

# References

- <https://digitalworld839.com/>
- <https://computernetworktopology.com>

THANK YOU