

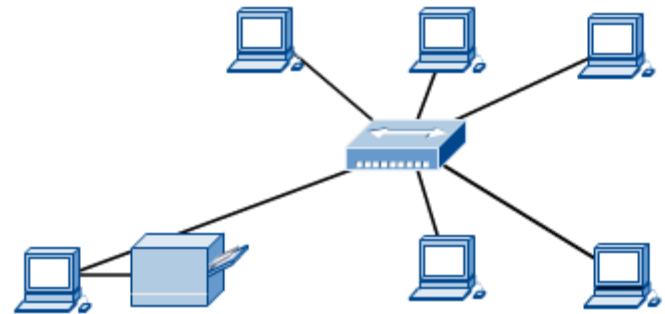
INTRODUCTION OF LAN , MAN & WAN

Computer Networks

❏ Computer network connects two or more autonomous computers.

❏ The computers can be geographically located anywhere.

CH: 8 A Computer Network



LAN, MAN & WAN

- ❑ Network in small geographical Area (Room, Building or a Campus) is called LAN (Local Area Network)
- ❑ Network in a City is call MAN (Metropolitan Area Network)
- ❑ Network spread geographically (Country or across Globe) is called WAN (Wide Area Network)

Applications of Networks

❏ Resource Sharing

- ❏ Hardware (computing resources, disks, printers)
- ❏ Software (application software)

❏ Information Sharing

- ❏ Easy accessibility from anywhere (files, databases)
- ❏ Search Capability (WWW)

❏ Communication

- ❏ Email
- ❏ Message broadcast

❏ Remote computing



LAN

Local Area Networks

Local Area Networks (LANs)

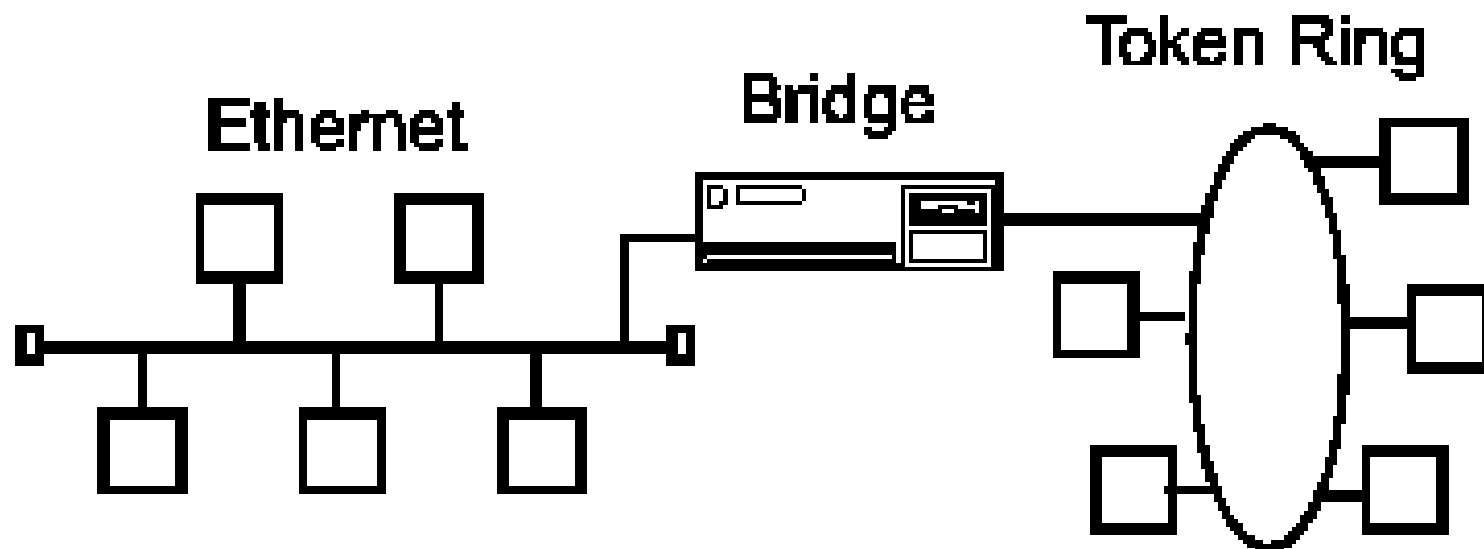
Local Area Networks are privately-owned networks within a small area, usually a single building or campus of up to a few kilometers.

Since it is restricted in size, that means their data transmission time can be known in advance, and the network management would be easier.

Advantages Of Local Area Networking

- **Cost reductions through sharing of information and databases, resources and network services.**
- **Increased information exchange between different departments in an organization, or between individuals.**
- **Improve the community security.**
- **Increasing number and variety of intelligent data terminals, PCs and workstations.**

Local Area Networks (LAN)



Local Area Network in a building



MAN

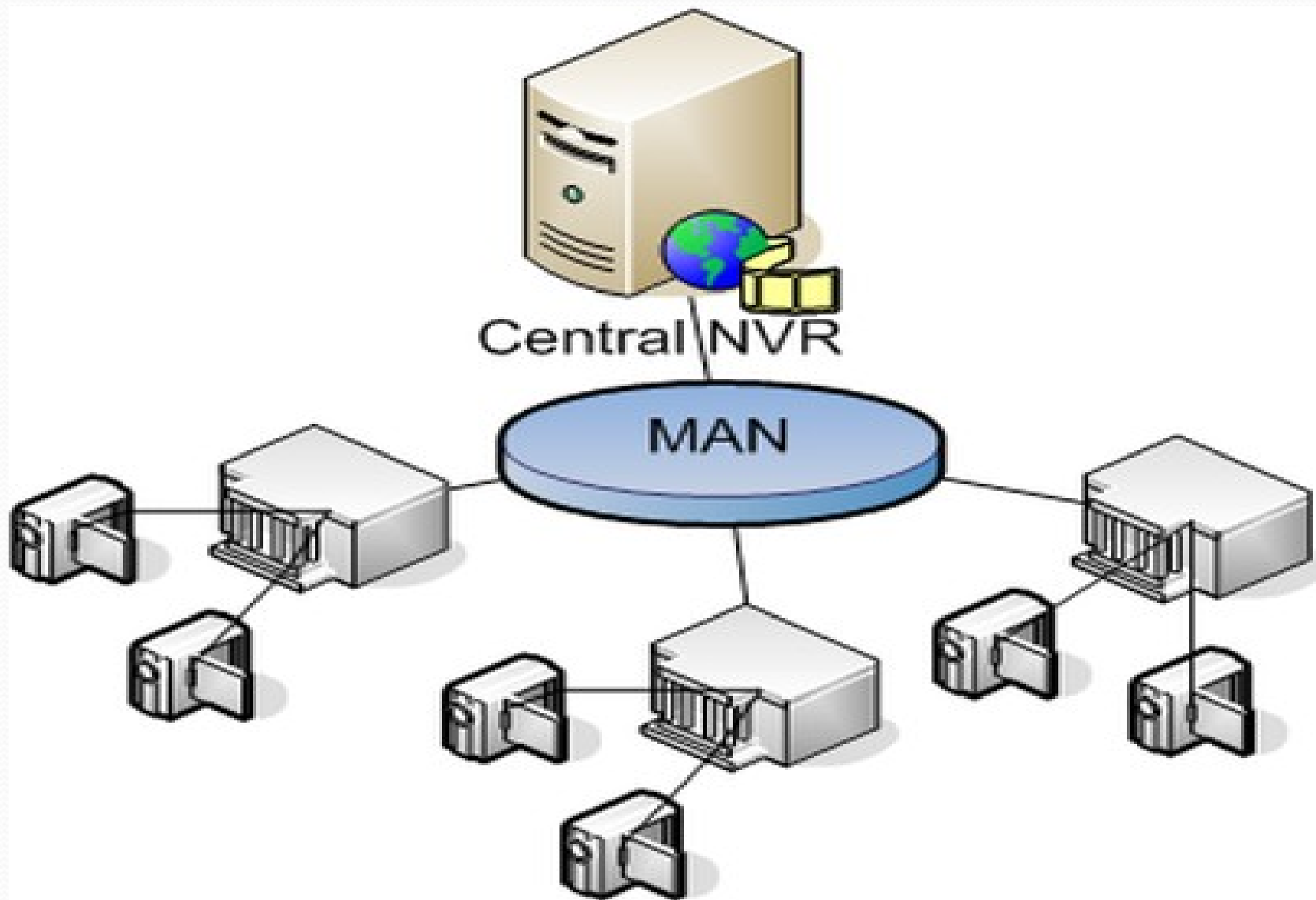
Metropolitan area network

Metropolitan Area Network

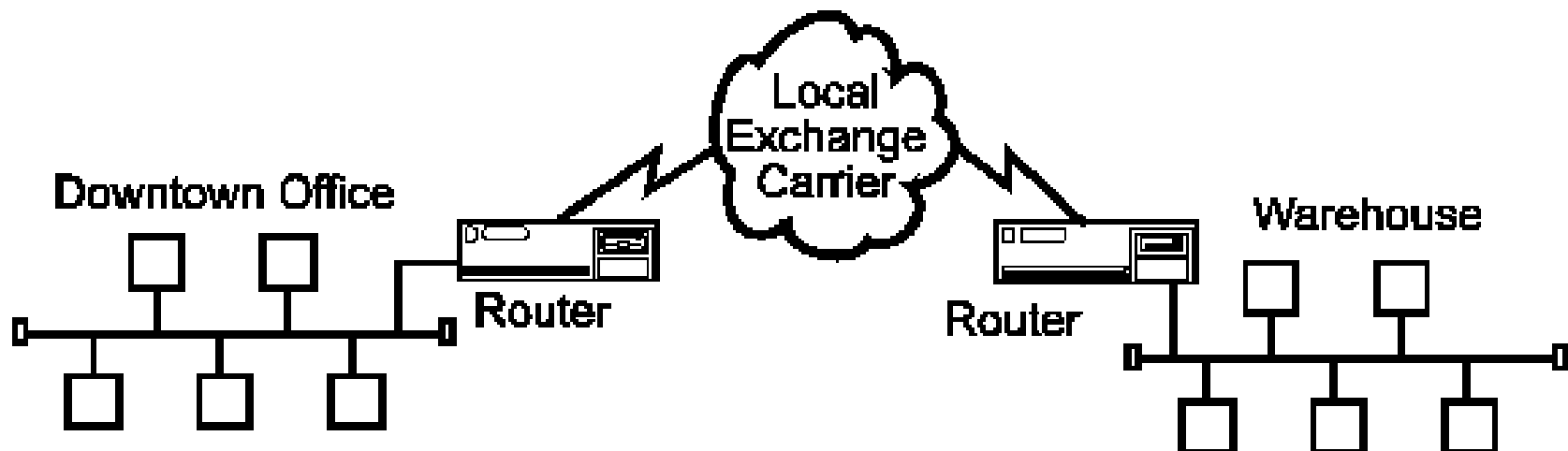
- A *Metropolitan Area Network* (MAN) is a network that is utilized across multiple buildings
- Commonly used in school campuses or large companies with multiple buildings
- Is larger than a LAN, but smaller than a WAN
- Is also used to mean the interconnection of several LANs by bridging them together. This sort of network is also referred to as a *campus network*

Metropolitan Area Networks (MAN)

- A Metropolitan Area Network is a system of LANs connected throughout a city or metropolitan area. MANs have the requirement of using telecommunication media such as voice channels or data channels.
- Branch offices are connected to head offices through MANs. Examples of organizations that use MANs are universities and colleges, grocery chains, and banks.



Metropolitan Area Networks (MAN)



MANs use Local Exchange Carriers



WAN

Wide Area Networks

Wide Area Networks **(WAN)**

The main difference between a MAN and a WAN is that the WAN uses Long Distance Carriers. Otherwise the same protocols and equipment are used as a MAN.

Wide Area Networks

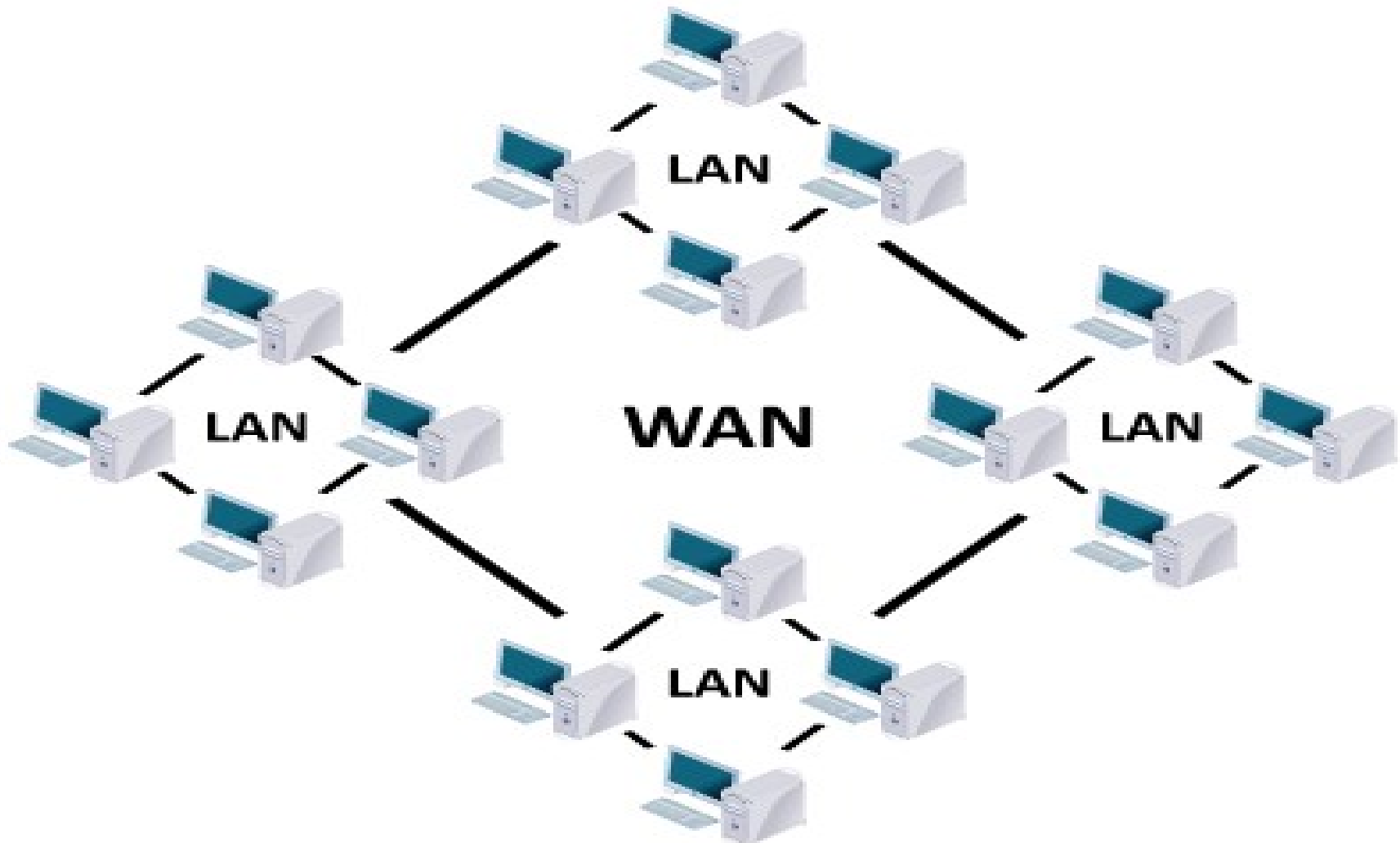


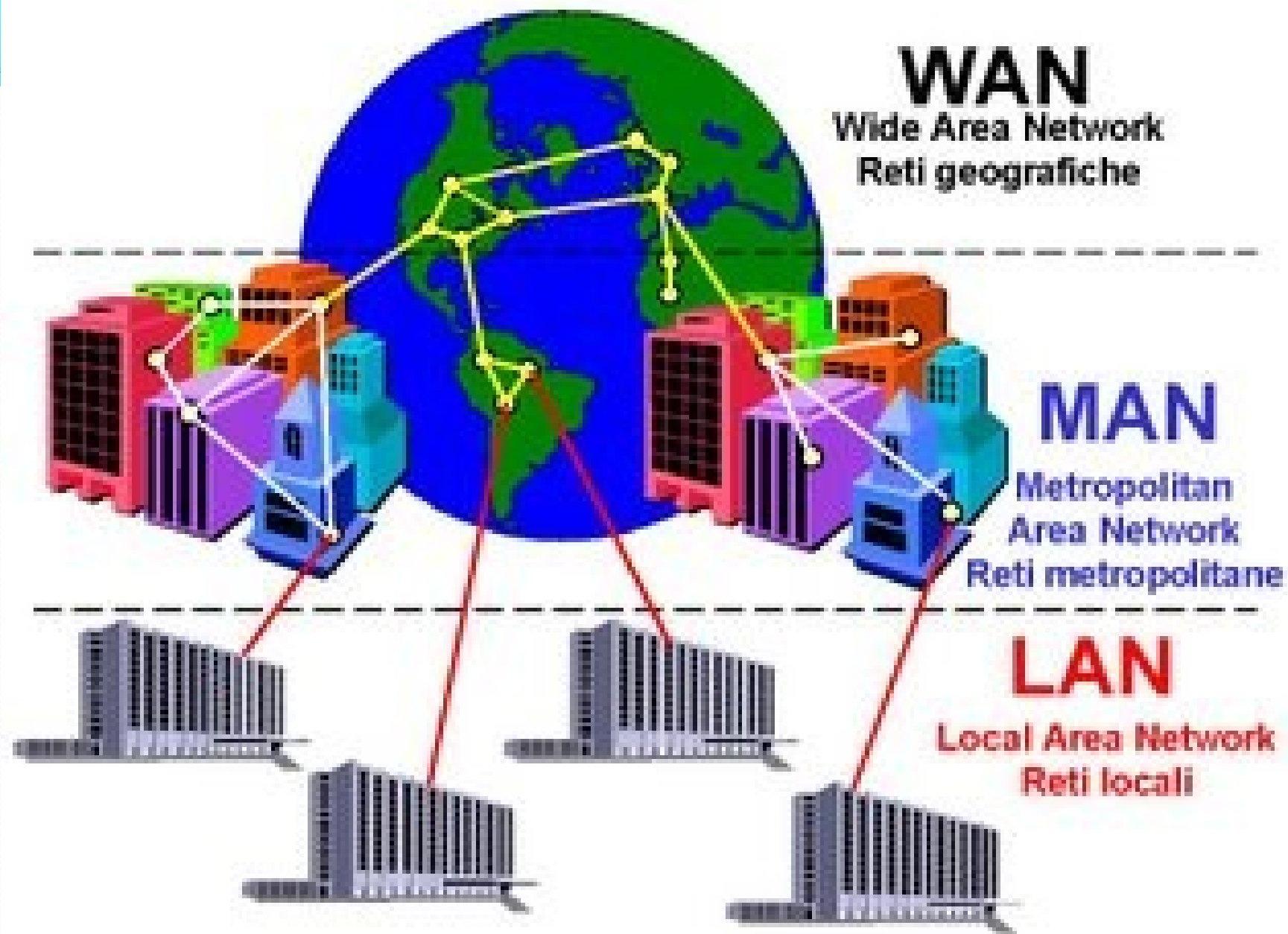
Internautes : Mondial 1 milliard – France 25 millions – UK 40 millions.

Wide Area Network

- *A Wide Area Network* is a network spanning a large geographical area of around several hundred miles to across the globe
- May be privately owned or leased
- Also called “enterprise networks” if they are privately owned by a large company
- Can be connected through cable, fiber or satellite
- Is typically slower and less reliable than a LAN
- Services include internet, Intranet ,etc.

LAN & WAN Connection :





WAN

Wide Area Network
Reti geografiche

MAN

Metropolitan
Area Network
Reti metropolitane

LAN

Local Area Network
Reti locali



Thank you