

Online Lecture Class

AHE- 612

26.11.2020

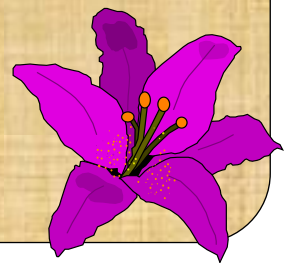
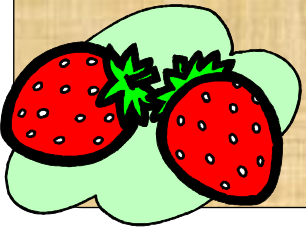
INFORMATION AND COMMUNICATION TECHNOLOGY
IN LIVESTOCK DEVELOPMENT

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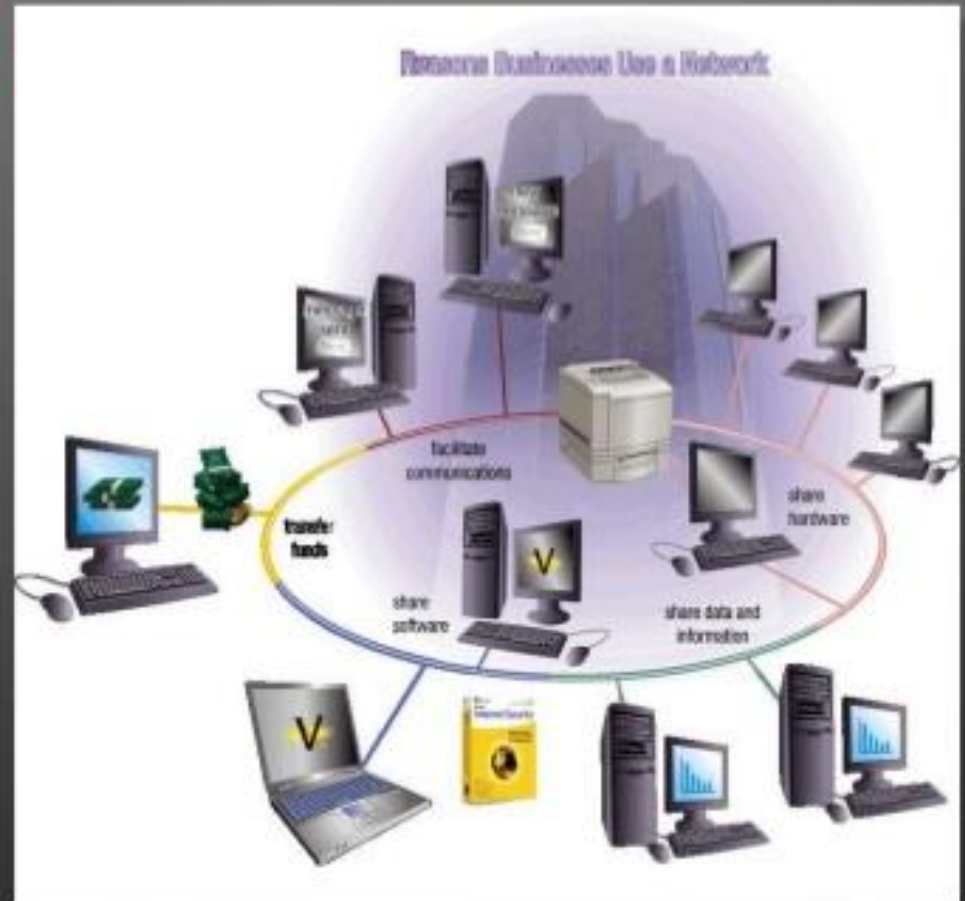


CONCEPT OF NETWORKING

NETWORKS

What is a Computer Network?

- Collection of **autonomous computers interconnected** by a **single technology** is called computer network.
- Two computers are set to be interconnected if **they are able to exchange information**.
- **Connection** can be through a **copper wire, fiber optics, microwaves, infrared or satellite**.



LAN

WAN

CATEGORIES
OF
NETWORKS

MAN



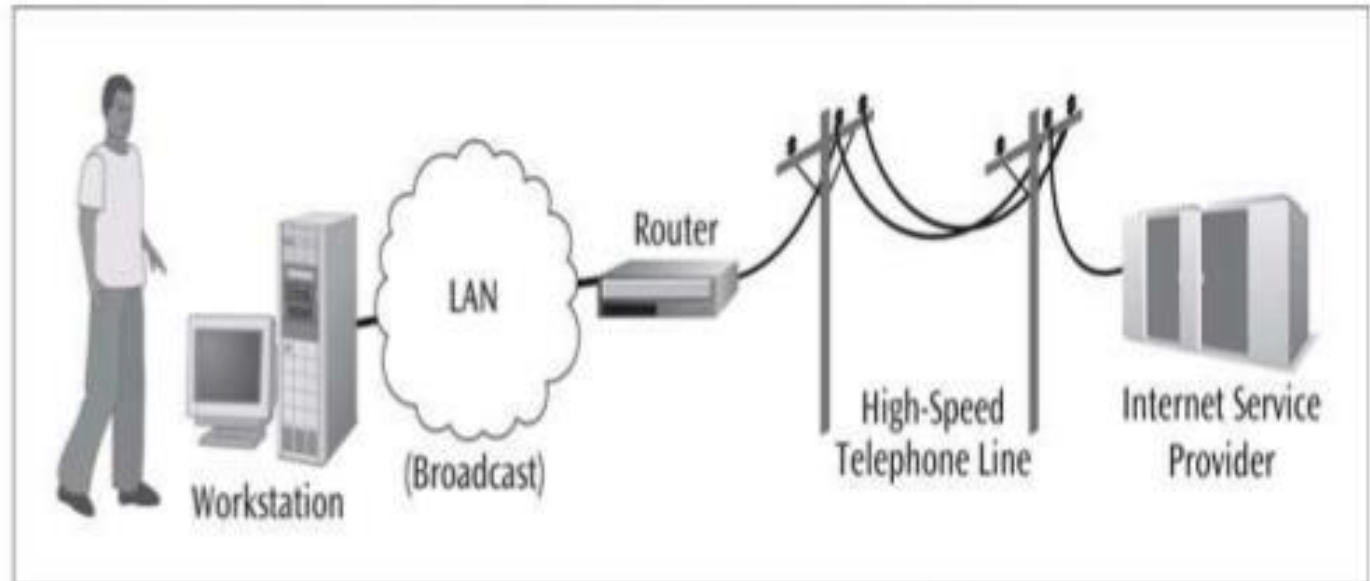
LAN: LOCAL AREA NETWORK

- A **Local Area Network (LAN)** is a **collection of networking equipment** located geographically **close together**.
E.g. Single room, campus etc.
- **Data transferred** in High speed which **ranges** from **100 Mbps to gigabit** for **system development** and have a **low implementation cost**.
- Upper limit: **10 km** ; Lower limit: **1 km**
- **Twisted pair cable or Co-axial cable** connects the **plug in cards** to form a network.
- Designed to **share resources** between **PCs and workstation** such as **hardware or data**.

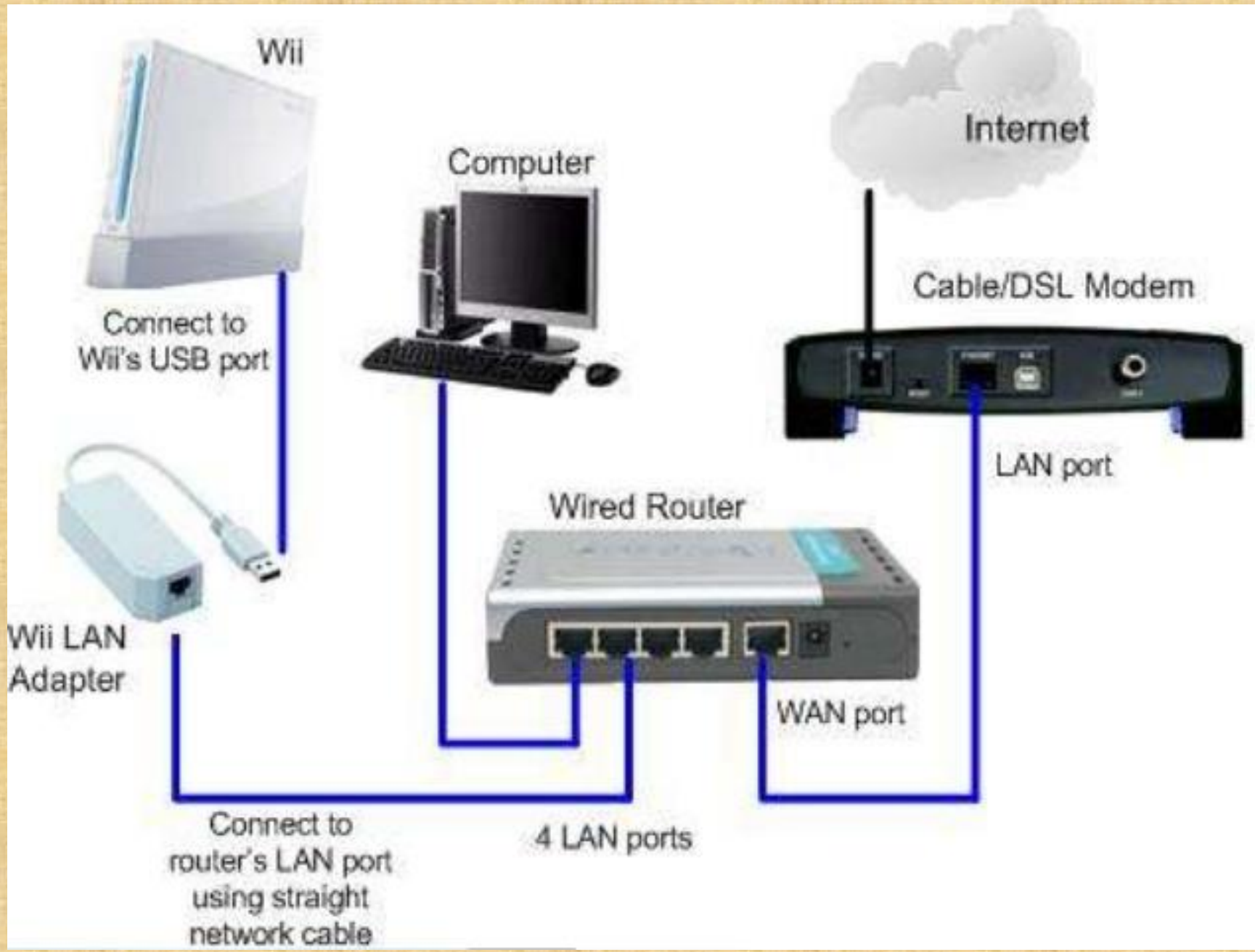
USAGE OF LAN

Figure 9-16

User at work using a local area network to access the Internet



A work to internet connections would most likely require broadcast network (LAN) with a connection to the internet (packet switched network)



Wii

Computer

Internet

Cable/DSL Modem

Connect to
Wii's USB port

LAN port

Wired Router

Wii LAN
Adapter

WAN port

Connect to
router's LAN port
using straight
network
cable

4 LAN ports

MERITS

- **Cost reductions** through **sharing** of **information and databases, resources and network services.**
- Increased **information exchange** between different **departments in an organization**, or between **individuals.**
- The trend to **automate communication and manufacturing process.**

DEMERITS

- **Special security measures** are needed **to stop** users from **using programs and data that they should not have access to;**
- **Networks** are **difficult to set up** and need to be **maintained** by **skilled technicians.**
- **If the file server develops a serious fault, all the users are affected,** rather than just one user in the case of a stand-alone machine.

