Chapter 13:
Computer Configurations
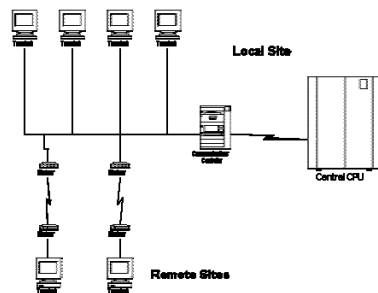
Computer Configurations

- A computer processing centre will be set up in a company to control and manage the computer servers.
- In a company with multiple sites, there are different possible hardware setups, depending on the number of computer servers and their location.
- The computer systems could be **Centralized** or **Decentralized**.

Centralised Environment

- Facilities, systems & resources installed in a central location
- Other business units gain access through telecommunications networks
- User interface through dumb terminals or PCs with terminal simulation software
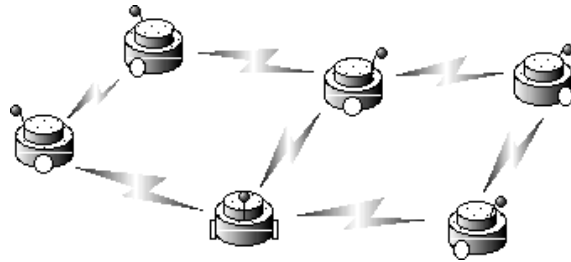
Benefits for Centralized Environment

- Provides Access to Large Systems
- Sharing of Resources
- Easier to Manage
- Monitor
- Lower Cost
- Faster Delivery of Output
- Elimination of Redundancy
- Increased Security
- Greater Responsiveness

Decentralized Processing

- With the availability of cheaper computers (e.g. minicomputers), it becomes possible for each department or branch of a company to have its own computer system.
- Each site can then carry out their processing independently.

Distributed Processing

- Distributed processing involves having computers systems at each site, but these systems work together to achieve the same business objectives.
- There could be sharing of corporate databases as well as local processing.
- Distributed processing has increased in popularity.
- It is seen as a viable alternative to centralized processing and decentralized processing.
- Both local and shared data processing are possible.
- Each site may need to process data unique to its own location.
- At the same time, transactions can span across sites.

Reasons for Implementing Distributed Systems

- Improved Response Time
- Reduced Costs
- Improve Accuracy
- Reduced Mainframe Costs
- Smoother Growth
- Increased Reliability
- Resource Sharing
- Increased User Satisfaction

Developing a Telecommunications System

- In any large organization, communications and information sharing depends on a good telecommunications system and facilities.
- The computer network depends on the telecommunications infrastructure for the transmission of data.
- In developing a telecommunications plan for your company, it is important to start with the requirements of your company rather than just looking at the desirable features.
- A telecommunications system must advance the business objectives of the organization.

Reason for Implementing Telecommuting

- Reduced travel time which can be more productively used for work.
- Flexible work schedule which can motivate staff.
- Conducive work environment which reduces stress.
- Reduced overheads.
- Greater workplace efficiency.

Effectively Work as Telecommuters

- Video conferencing
- Teleconferencing
- E-mail
- Net meetings/Online chat facilities
- Groupware
- Blackberry for instant access anytime, anywhere

Factor to Consider in Developing a Telecommunications System

- There are several factors that should be consider when developing a telecommunications plan and in choosing telecommunications equipment.
  - **Distance** – If the communications are mainly local and internal to the organization, then there is little need to consider long-distance telecommunications features.
  - **Type of Service** – The type of service to be supported must also be considered.

Globalization

- **Globalization** refers to the worldwide phenomenon of technological, economic, political and cultural exchanges, brought about by modern communication, transportation and legal infrastructure as well as the political choice to consciously open cross-border links in international trade and finance.
- The term **Global Culture** is used to describe how human beings are becoming more intertwined with each other around the world economically, politically, and culturally.

Global Systems Infrastructure

- The basic requirements for data communications and a global information system is in place.
- There are several factors that must be considered to ensure a successful global data communications capability.
- These include factors like establishing standards and human resource policies.
- Imagine the scenario of each site having its own computers, software and procedures for developing systems and processing data.
- There would be tremendous problems trying to make these sites communicate effectively.