Some Types of Systems

- Transaction Processing System (TPS)
- Management Information System (MIS)
- Office Automation System (OAS)
- Decision Support System (DSS)
- Executive Information System (EIS)
- Group Support System (GSS)
- Intelligent Support System
Transaction Processing System

- Processes data about routine operations
- Records, classifies, sorts, calculates, summarizes, stores and displays data
- Supports the monitoring, collection, storage, processing, and dissemination of the organization’s basic business transactions
- Example: Banking and financial systems
Management Information System

- Input from TPS; Output to EIS
- Systems for support of a functional area.
- Planning, monitoring & control of routine work
- Statistical summaries, exception reports, some analysis and projections, routine decisions, communication with others
MIS (con’t)

- Provides information for decision support where the information requirement can be identified in advance
- MIS-supported decisions frequently recur
- TPS data is organized and summarized
- Examples - sales and marketing summaries, personnel skills information systems
Office Automation System

- Combine data processing, word processing, and telecommunication to automate the handling of office information
- Includes handling of correspondence, reports, and documents
- Users are mainly clerical staff
- Example: Integrated office systems
Decision Support System (DSS)

- Unique and nonrecurring, generally unstructured decisions
- Part of the decision process is determining what factors to consider and info needed
- Multiple decisions, what-if analysis
- Example - production scheduling, inventory control
Executive Information System

- Input from TPS, MIS and other systems
- Environmental scanning, commercial databases and information services
- Integrated customized analysis and presentation of key indicators, status, trends, exceptions
- Very high level, graphical, easy to use
EIS (con’t)

- Special one-time enquiries - “Shall we open a plant or move the business to Rochester?”
- Company performance data - sales, production, forecasts
- Internal communications: meetings, e-mail
- External scanning - government rules, the competition, legal issues
Group Support System (GSS)

- Support people with common goal or task
- Includes e-mail, workflow, networks
- Workflow - business process automation
- Teleconferencing
- Group DSS (GDSS)
- Integrated technology; Lotus Notes
Intelligent Support System

- Expert systems - help doctor diagnosis, help managers choose among new products (more cup-holders or 4 doors?)
- Neural networks
- Knowledge work systems - create new information - CAD/CAM systems, legal or technical professional staff systems - often modeling or graphical simulation
Managing Information Resources

- Which resources are managed by whom?
- What is the role of the Information Systems Department (ISD)?
- Managing relationships with end users
- Managerial issues
Role of the IS Department

Table 2.3 The Changing Role of the Information Systems Department

Traditional major IS functions:
- Managing systems development and systems project management
- Managing computer operations, including the computer center
- Staffing, training, and developing IS skills
- Providing technical services

New (additional) major IS functions:
- Initiating and designing specific strategic information systems
- Infrastructure planning, development, and control
- Incorporating the Internet and electronic commerce into the business
- Managing system integration including the Internet, intranets, and extranets
- Educating the non-IS managers about IT
- Educating the IS staffs about the business
- Supporting end-user computing
- Partnering with the executive level that runs the business
- Actively participating in business processes reengineering
- Proactively using business and technical knowledge to “seed” the line with innovative ideas about IT
- Creating business alliances with vendors and IS departments in other organizations
Managing Relationships with End Users

- Steering committee
- Joint ISD/end users project teams
- ISD representation on top corporate executive committee
- Service agreements
- Technical and administrative support
- Conflict resolution unit
Managerial Issues

- Transition to networked computing
- From legacy systems to client/server systems
- How much infrastructure?
- The role of ISD