

Chapter 12

The Management Information System

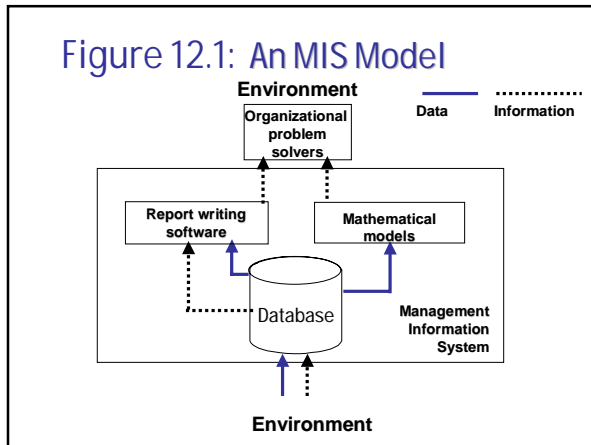
- Understand MIS Organization
- MIS Subsystems
- Improving information content of reports
- Human Factor Considerations
- Role of MIS in Problem Solving

1

Management Information Systems

- **Definition: Computer based system that makes information available to users with similar needs.**
- **Primary users management**
- **Figure 12.1: MIS model**
 - **Database contains data from AIS**

2



MIS Efforts

- **Software outputs used by persons within the firm who have responsibility of solving firm's problems**
- **Management must be computer literate**
- **Information Specialists must understand management needs**

4

MIS is an Organizational Resource

- **Information**
 - Past, present, future
 - Periodic reports, special reports, simulations
- **Similar needs**
 - Functional area = OIS is logical grouping
 - Management level = strategic planning EIS, management control, operational control
 - Managers and nonmanagers

5

An MIS Model

- **Database**
 - AIS data and information
 - Environmental data and information
- **Interorganizational information systems**
 - Suppliers and Distributors

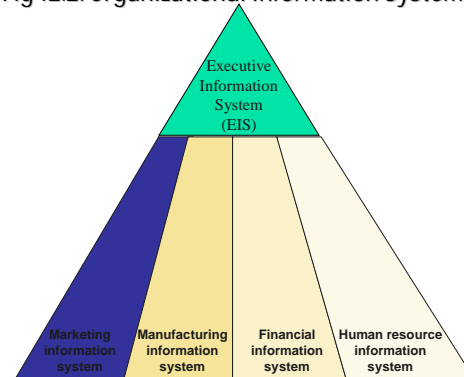
6

Organizational Information Systems

- Marketing Information Systems
- Manufacturing Information Systems
- Financial Information Systems
- Human Resource Information Systems

7

Fig 12.2: Organizational Information Systems



Report Writing Software

- Periodic and special reports may look the same
- Difference is in what *triggers* the report
 - periodic report - produced on a schedule
 - special report
 - produced when something out of the ordinary occurs
 - Management by exception

9

Incorporating Management by Exception

- Prepare the report only when exceptions occur
- Use the report sequence to highlight exceptions
- Group exceptions together
- Show the variance from the norm

10

SALES BY SALESPERSON REPORT FOR THE MONTH ENDING MARCH 31

SALESPERSON		CURRENT-MONTH			YEAR-TO-DATE		
NO.	NAME	QUOTA	ACTUAL	VARIANCE	QUOTA	ACTUAL	VARIANCE
0120	JOHN NELSON	1200	1083	-117	3600	3505	-95
10469	LYNN SHERRY	1000	1162	+162	3000	3320	+320
19261	DARVIN UPSHAW	800	1090	+290	2400	2510	+110
20234	JANIE EVANS	1500	1305	-195	4500	4110	-390
61604	TRAVIS BURKE	2000	2333	+333	6000	6712	+712
62083	CATHY HAGER	1000	990	-10	3000	2319	-681
63049	STEVE JENNER	1100	1250	+150	3300	2416	-884
64040	SAM MOSELY	1050	985	-65	3150	3020	-130
TOTALS		9650	10198	548	28950	27912	-1028

AGED ACCOUNTS RECEIVABLE REPORT AS OF MAY 31

---CUSTOMER---		CURRENT	30-60	60-90	OVER 90	TOTAL
NUMBER	NAME	AMOUNT	DAYS	DAYS	DAYS	AMOUNT
51212	KELLY & MARLEY INC	1,003.10	20.26			1023.26
51221	KENNEDY ELECTRIC	181.34				181.34
52472	KENYON MACHINERY	443.10				443.10
53204	KEPNER DANA CO		153.26	114.14	11.12	278.52
54233	KERITE CO	367.94	101.74			469.68
54574	KEYMAN ASSOCIATES				432.71	431.71
55081	KIMBULIANS	24.12	122.81			146.93
55430	KIRSCH CO	26.30				26.30
60245	LEBEN DRILLING	1.10	476.93	174.96		652.39
60772	LEEMONT INC	35.87	35.95			71.82

Mathematical Modeling

- Models are abstractions
- Models may be:
 - static or dynamic (time dependent)
 - deterministic or probabilistic
 - optimizing or suboptimizing (Recommends a solution vs. Not)

13

Simulation

- Use of a model for prediction is called simulation
- 'Scenario' - conditions that influence the model
- Decision variables are input values
- Output format varies

14

More on Modeling

- Advantages
 - Can be a learning experience
 - Speed allows consideration of more options
 - Provides predictive power
 - Less expensive than trial-and-error method
- Disadvantages
 - Difficult to model a business system
 - High degree of mathematical skills required

15

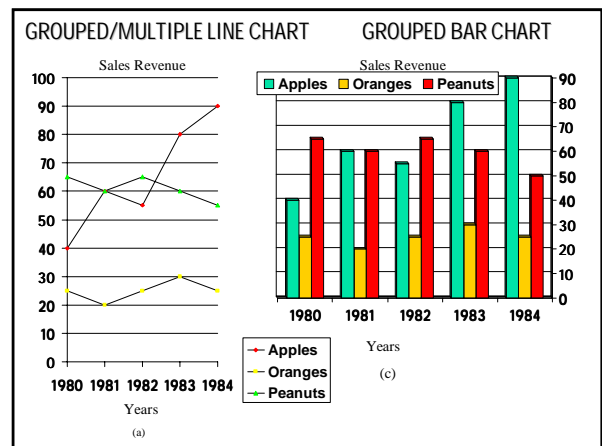
Graphic Output

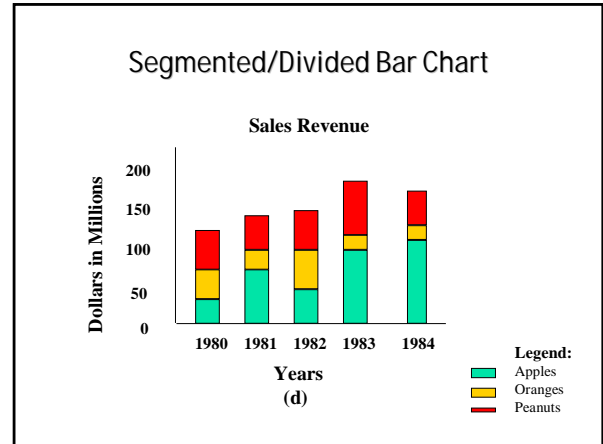
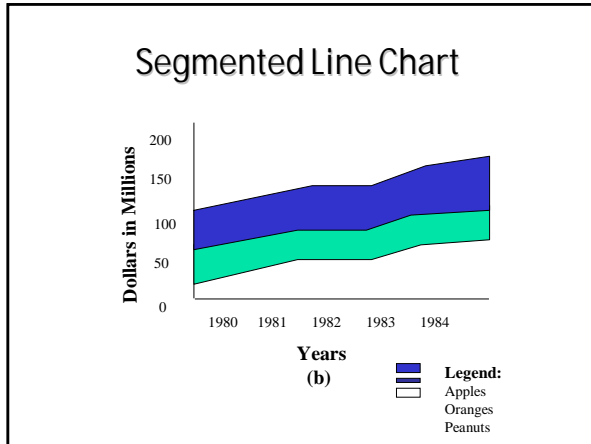
- Use graphics to
 - present a quick summary
 - detect trends over time
 - forecast activities
 - seek relatively simple impressions from a large volume of data

16

Graphic Output (continued)

- Types of graphs to use
 - Line or Bar = Best for summary reports
 - Grouped line = Best for Trends
 - Grouped bar = Parts of whole
 - Pie charts not recommended.





Putting the MIS in Perspective

- The first attempt to make information available to *management*
- Enjoyed its greatest prominence in the 1960s when it first originated
- Now integrated throughout the firm

21

The MIS and Problem Solving

- **Contributes** because MIS is an organization-wide resource
- **Contributes** because it keeps a continuous supply of information to the manager for problem identification and understanding

22