Information Systems
ISM 3011
Fall 2004
Unit 9C (Chapter 10)

Reading assignment for
Monday
• Read and prepare case studies for
chapter 10 (pages 456 – 459)

Information and Decision Support
Systems
Chapter 10

Decision Making and Problem
Solving

Decision Making as a Component of
Problem Solving

Programmed versus Non-programmed
Decisions
• Programmed decisions
  – Structured situations with well defined relationships
  – Quantifiable
  – Management information system
  – Easy to computerize

• Non-programmed decisions
  – Rules and relationships not defined
  – Problem is not routine
  – Not easily quantifiable
Problem Solving Approaches

• **Optimization**: find the best solution
• **Satisficing**: find a good solution
• **Heuristics**: rules of thumb

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An Overview of Management Information Systems

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Inputs to an MIS

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Output of an MIS: Five types of reports

• Scheduled reports
• Key-indicator reports
• Demand reports,
• Exception reports,
• and drill-down reports.

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Scheduled Reports

• Repeatedly generated at a predefined time, e.g. at the end of each week.
• Examples:
  – Weekly payroll summary
  – Monthly sales

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Key-Indicator Reports

• Summarize important numbers, which reflect the overall situation.
• Examples:
  – Sales volume
  – Average margin
  – Percentage of returns, etc.
Demand Reports

- Generated once the specific information is needed.
- Example: List of past sales to a key customer prior to visiting him

Output of an MIS

- Exception reports list exceptional events.
- Hybrid report types are possible, e.g. a scheduled key-indicator report.

Outputs of an MIS

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales Reports</td>
<td>Generated on demand, list past sales</td>
</tr>
<tr>
<td>Demand Reports</td>
<td>Generated once specific info needed, e.g., key customer</td>
</tr>
<tr>
<td>Exception Reports</td>
<td>List exceptional events</td>
</tr>
<tr>
<td>Hybrid Reports</td>
<td>Scheduled Key-Indicator report</td>
</tr>
</tbody>
</table>

ERP, TPS, MIS: Fuzzy Borders

- TPS / Order Processing
- MIS / Sales Reports
- Core ERP
- Comprehensive ERP Suite: mySAP ERP etc.

“Reports”

- Bad, but common: Printout
- Better: Machine-readable message, which can be used as input for another computer system

Bill of Materials

- 5 pcs ABC
- 2 pcs XYZ

Some content with kind permission of Thomson Course Technology
Overview of a Manufacturing MIS

Master Production Scheduling and Inventory Control

When and how much to order?
• Economic Order Quantity (EOQ)
• Reorder Point (ROP)
• Material Requirements Planning (MRP)

MRP – Material Requirements Planning
• Determines the amount of parts needed.
• Demand between products can be interrelated.

MRP – Input
• Master Production Schedule (MPS)
• Bill of Material (BOM): lists the component part numbers for each part
• Inventory status data

MRPII – Manufacturing Resource Planning
• Includes requires workstation time, employees, and other resources.
• Capacity restrictions are included in the planning process.

Characteristics of a DSS
Thank you!

The slides will be available on the internet at
http://ruby.fgcu.edu/courses/mhepp/
(-> CRN80097)