# Contents

*Figures*  
ix  
*Preface*  
xiii  
*Abbreviations*  
xvii

## Part I An Overview of Executive Information Systems

1. An Introduction to Executive Information Systems  
3  
2. Executive Decision Making in an EIS Environment  
27  

BIBLIOGRAPHY: Part I  
61

## Part II Computer Hardware and Software Found in Executive Information Systems

3. Computer Hardware in an EIS Environment  
73  
4. Computer Software in an EIS Environment  
103  

BIBLIOGRAPHY: Part II  
147

## Part III Development of Executive Information Systems

5. Implementing a Successful Executive Information System  
155  

BIBLIOGRAPHY: Part III  
175
Part IV Applications Found in Typical Executive Information Systems

6. Strategic Planning in an EIS Environment 181
7. Marketing in an EIS Environment 213
8. Manufacturing in an EIS Environment 251
10. Personnel in an EIS Environment 317

BIBLIOGRAPHY: Part IV 343

Index 353
Figures

2.1 Information requirements for decision category 34
2.2 The relationship of top-, middle-, and lower-level executives to types of problems 37
2.3 A cause and effect diagram that focuses on diagramming symptoms and problems to determine the root or real problem 40
2.4 A comparison of steps in the problem-solving process: The quantitative-centered approach and the decision-centered approach 43
2.5 A comparison of steps in the problem-finding process: The problem-centered approach and the opportunity-centered approach 52
2.6 A comparison of the problem-solving and the problem-finding processes within an EIS environment 57
3.1 General hardware from IBM (PCs, 9370s, and 3090) useful in an EIS environment 79
3.2 Representative graphics software available for the IBM Personal Computer 83
3.3 A typical management workstation using multifunction components that is useful in an EIS environment 84
3.4 A typical personal computer visual system 86
3.5 A typical management control center helpful to executives and their staffs for supporting decisions 87
4.1 A summary of the important factors in evaluating EIS software packages 107
4.2 How the code generators (EIS/G) work 109
4.3 A typical application, or data screen, using Advantage/G—American Home Care Standard Financial Reports 111
<table>
<thead>
<tr>
<th>Figure Number</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.4</td>
<td>High-level variance report</td>
<td>117</td>
</tr>
<tr>
<td>4.5</td>
<td>Execu-View Calculator</td>
<td>119</td>
</tr>
<tr>
<td>4.6</td>
<td>“Explain” report</td>
<td>123</td>
</tr>
<tr>
<td>4.7</td>
<td>Variance report</td>
<td>125</td>
</tr>
<tr>
<td>4.8</td>
<td>Vendor listing of executive information system software products</td>
<td>127</td>
</tr>
<tr>
<td>4.9</td>
<td>Typical mainframe/minicomputer spreadsheets and microcomputer spreadsheets</td>
<td>132</td>
</tr>
<tr>
<td>4.10</td>
<td>A representative listing of micro-based financial planning packages</td>
<td>136</td>
</tr>
<tr>
<td>4.11</td>
<td>Statistical analysis packages currently available</td>
<td>138</td>
</tr>
<tr>
<td>4.12</td>
<td>Typical mainframe/minicomputer and microcomputer business graphics packages</td>
<td>140</td>
</tr>
<tr>
<td>4.13</td>
<td>Typical external on-line data bases available from vendors</td>
<td>144</td>
</tr>
<tr>
<td>5.1</td>
<td>Two approaches to prototyping a new executive information system: (a) the throwaway model for defining user requirements and (b) the evolutionary model for developing an operational system</td>
<td>167</td>
</tr>
<tr>
<td>6.1</td>
<td>How attainment of organizational goals is supported by critical success factors for the automobile and supermarket industries</td>
<td>190</td>
</tr>
<tr>
<td>6.2</td>
<td>The relationship of company goals to critical success factors and key performance indicators</td>
<td>191</td>
</tr>
<tr>
<td>6.3</td>
<td>Current MIS short-range to long-range strategic planning system for a typical manufacturing-oriented corporation (operating at the corporate level)</td>
<td>195</td>
</tr>
<tr>
<td>6.4</td>
<td>Use of EIS software for a typical manufacturing-oriented corporation to answer “what-if” questions and to undertake sensitivity analysis as related to short-range and medium-range strategic planning</td>
<td>203</td>
</tr>
<tr>
<td>6.5</td>
<td>Actual and projected quarterly income figures over a four-quarter period for a medium-growth situation</td>
<td>204</td>
</tr>
<tr>
<td>7.1</td>
<td>Application of the 20-80 rule—fast movers versus medium and slow movers of all products sold</td>
<td>224</td>
</tr>
<tr>
<td>7.2</td>
<td>Listing of services that can be performed by expert systems using information gathered at point of sale</td>
<td>228</td>
</tr>
<tr>
<td>7.3</td>
<td>A current MIS approach to marketing for a typical manufacturing-oriented corporation</td>
<td>230</td>
</tr>
<tr>
<td>7.4</td>
<td>A marketing planning and control system that starts with strategic planning and is then linked to manufacturing</td>
<td>233</td>
</tr>
<tr>
<td>7.5</td>
<td>A typical Commander Execu-View screen that details various line-item sales in five business units during a three-month period</td>
<td>240</td>
</tr>
<tr>
<td>8.1</td>
<td>A manufacturing planning and control system on a quarterly basis and a daily basis for a typical manufacturing-oriented corporation</td>
<td>257</td>
</tr>
<tr>
<td>8.2</td>
<td>Typical MRP-II software currently available from vendors</td>
<td>262</td>
</tr>
<tr>
<td>8.3</td>
<td>Current MIS approach to purchasing—buying of materials and services, maintenance of purchase orders, and follow-up of purchase orders—for a typical manufacturing-oriented corporation</td>
<td>265</td>
</tr>
</tbody>
</table>
8.4 Current MIS approach to production planning and control for a typical manufacturing-oriented corporation

8.5 Monthly vendor performance report (a) and monthly buyer performance report (b) for a typical manufacturing-oriented corporation

8.6 Monthly purchased materials and parts performance report for a typical manufacturing-oriented corporation

8.7 Production planning and control with accent on exception reporting in an EIS environment for a typical manufacturing-oriented corporation

8.8 A graph of indifference analysis for equipment alternatives 1, 2, and 3 for a typical manufacturing-oriented corporation

9.1 Typical financial statistics and ratios that are useful in an EIS environment

9.2 Integrated financial software systems by vendors

9.3 Current MIS approach to finance for a typical manufacturing-oriented corporation

9.4 Upcoming quarterly cash flow analysis—receipts and disbursements—to determine ending cash balance for a typical manufacturing-oriented corporation

9.5 Current source of capital data flow for an MIS finance system of a typical manufacturing-oriented corporation

9.6 Capital investment decision model

9.7 A financial planning and variance control system tied in with a financial ratios review by finance executives for a typical manufacturing-oriented corporation

9.8 An engineering department report produced with EIS software that provides drill-down capability enabling report details to be examined by finance executives

9.9 An example of drill-down capability for engineering labor that provides a detailed view of actual versus budget figures for finance executives

10.1 A representative listing of human resource management systems

10.2 Current MIS approach to personnel for a typical manufacturing-oriented corporation

10.3 Forecasting future personnel needs and answering typical personnel questions for a typical manufacturing-oriented corporation

10.4 Exception report on current month with major variances

10.5 Salary survey for engineering and manufacturing by job classifications for a typical manufacturing-oriented corporation

10.6 Annual salary survey for highly technical personnel—industry average versus three manufacturing plants (a) and a graph of the same data using EIS software (b)