## **CONTENTS**

List of Figures		vii
Preface		ix
Acl	Acknowledgments	
SE	CTION I: The Changing Marketing World	1
1	The Marketing Data Explosion: The Promise and the Reality	3
2	A Necessary Transition	15
SE	CTION II: Knowledge-Based Systems	31
3	An Introduction to Knowledge Systems	33
4	Expert Systems in Marketing: An Introduction	51
5	Textbook Promotion Advisor	75
SE	CCTION III: Applications	89
6	A Marketmetrics Knowledge System	91
7	The Coupled System	115
8	Model Animation	133
9	The Promotion Detective	145
10	Dealmaker	161
11	Dealmaker: A Model-Based Reasoning System	183
12	Related Research	203
13	Implementation Issues	213
Au	221	
Sul	Subject Index	

## LIST OF FIGURES

3.1 Sample Knowledge Base for Deciding Among Advertising	
Campaign Options	36
3.2 Sample Dialogs with the Knowledge Base in Figure 3.1	37
3.3 Sample Knowledge Base with Certainty Factors	43
4.1 Example of an ESE Screen	64
5.1 Information, Knowledge, Reasoning, Conclusion Model	84
5.2 Knowledge System Model	85
5.3 Information System Model	85
5.4 Information and Knowledge System Model	86
7.1 Flow of Control	117
7.2 The SAS Component	118
7.3 ESE-to-SAS Communication	119
7.4 Coupled System Components	119
7.5 The Five-Phase Modeling Process	128
8.1 Causal Factor Data	135
8.2 Typical Regression Package Output	136
8.3 Causal Factor Effects	137
8.4 Summation of Causal Factor Effects	138
8.5 Total Effects of Causal Factors for Year	138
8.6 Causal Factor Data for One Promotion	140
8.7 Summation of Causal Factor Effects for One Promotion	141
8.8 Total Effects of Causal Factors for One Promotion	141
9.1 Display Activity During Promotion	150
9.2 Asymmetry in Number of Stores Displaying the Item	150
10.1 A Model of a Market	164
10.2 The Market Model That Underlies DEALMAKER	167
10.3 Opening Screen and Menu Bar	170
10.4 Defined Deal	171
10.5 Market's Response and Selecting Los Angeles for Review	172

10.6 Los Angeles' s Response and Selecting Retailer R1-M	172
10.7 The System's General Description of Retailer R1-M	173
10.8 Specific Inquiry About R3's Acceptance	173
10.9 The Explanation of R3's Rejection of the Deal	174
10.10 The Explanation for Missing the Desired Price	174
10.11 Asking to Review the Chicago Response	175
10.12 Inquiring About Chicago Retailer R3-M	175
10.13 The System's Description of Retailer R3-M	176
10.14 Asking to Review Responses of Boston Retailers	176
10.15 Boston's Response and Inquiry Regarding R2-M	177
10.16 What the System Has to Say About R2-M	177
10.17 Asking to Restructure the Deal	178
10.18 A New Deal to Be Offered to All Markets	178
10.19 Market's Response and Another Request to Alter the Deal	<b>17</b> 9
10.20 A Final Correction to the Deal Structure	179
10.21 The Final Result: Improved Performance in Boston	179
11.1 Lattice Model of Consumable Commodities	184