

Contents

Foreword	ix
Preface	xi
Acknowledgments	xiii
About the Authors	xv
How to Customize This Book	xvii
Chapter 1 • Introduction	1
Software – Yet Another Knowledge Industry	1
Classifying the Knowledge Industry	2
Consequences of the Knowledge Industry	3
Sharing the Knowledge	5
Sharing the Responsibility for Getting It Right	6
Methods and Processes	8
Summary	11
Chapter 2 • Aligning to the Business	13
Using UML Activity Diagrams	15
Using Business Use-Case Diagrams	23
But What About the Data?	25
Summary	26

Chapter 3 • Adding Rigor to the Requirements	27
Use Cases	27
Use-Case Example	29
Meeting the Devil	34
Use-Case Analysis at Two Levels, At Least	36
How to Avoid Messing Up Use Cases	39
Summary	46
Chapter 4 • Sketching the Inside Structure	47
Class Diagrams	48
The Class Diagram	50
Understanding Class Relationships	52
Summary	59
Chapter 5 • Sketching the Inside Dynamics	61
State Diagrams	61
Tying It All Together	67
UML Collaboration Diagrams	70
Other UML Diagrams	70
Summary	71
Chapter 6 • Moving Toward Components	73
Components Communicate with Everyone	76
Impact of the Component-Based Approach	79
Reusing Components	81
Building a Component Library	83
Sharing Components in Your Organization	84
Avoiding the Traps	85
Automating the Bid Process	87
Summary	88
Chapter 7 • Mapping from Classes to Data Models	89
Use Appropriate Diagrams and Standards	90
Mapping Relationships	91
Summary	95
Chapter 8 • Concluding Remarks	97
Think Big, Start Small, and Sustain the Effort	97
UML Under Time Constraints	98
Some Suggested Readings	101
Index	103