



Contents

Acknowledgments	xvii
Part I Background	1
1 Introduction	3
A Language for Talking About Gameplay	3
Words of Warning	4
A Quick Tour	4
A Language for All	5
2 An Activity-Based Framework for Describing Games	7
Parts of the Framework	8
Holistic Components	9
Boundary Components	14
Temporal Components	19
Structural Components	23
Using the Framework	27
Example Analysis: Pac-Man	27
Summary	31
Conclusion	31
References	31
3 Game Design Patterns	33
Characteristics of Game Design Patterns	34
Semiformal Descriptions	35
Interrelated Descriptions	35
Hierarchies of Patterns	37
Intentional or Emergent Presence	37

Game Design Pattern Template	38
Name	38
Core Definition	38
General Description	38
Using the Pattern	39
Consequences	39
Relations	39
References	39
Conclusion	40
References	41
4 Using Design Patterns	42
Analysis: Identifying Game Design Patterns	42
Structural Analysis	43
Play Testing	44
Design: Applying Game Design Patterns	45
Idea Generation	46
Development of Game Concepts	47
Problem Solving	47
Communication	48
Conclusion	48
References	48
Part II The Pattern Collection	51
Development of Our Pattern Collection	51
Theoretical Foundation	51
Transforming Game Mechanics into Game Design Patterns	51
Harvesting Patterns by Analyzing Games	52
Interviews	52
Creating the Pattern Collection	52
Comments on the Pattern Collection	53

5 Game Design Patterns for Game Elements

Game Worlds	55
Game World	55
Reconfigurable Game World	56
Levels	60
Inaccessible Areas	60
Consistent Reality Logic	60
Alternative Reality	60
Moveable Tiles	60

Objects

Enemies	60
Boss Monsters	60
Deadly Traps	60
Obstacles	60
Avatars	60
Units	60
Tools	60
Controllers	60
Alarms	60
Pick-Ups	60
Power-Ups	60
Clues	60
Extra-Game Information	60
Additional Patterns	60
Abstract Objects	60
Score	60
High Score Lists	60
Lives	60
Additional Patterns	60

Locations	100
Strategic Locations	100
Outstanding Features	102
Chargers	104
Additional Patterns	105
Game Design Patterns for Resource and Resource Management	107
Types of Resources	107
Resources	107
Additional Patterns	110
Resource Control	111
Producer-Consumer	111
Ownership	112
Resource Management	115
Additional Patterns	117
Progress	118
Investments	118
Diminishing Returns	121
Additional Patterns	122
Game Design Patterns for Information, Communication, and Presentation	123
Information Quality	123
Imperfect Information	124
Perfect Information	128
Uncertainty of Information	130
Additional Patterns	133
Information Distribution	133
Symmetric Information	133
Asymmetric Information	135
Public Information	137

Information Access	139
Communication Channels	139
Additional Patterns	141
Indicators	142
Additional Patterns	142
Information Presentation	142
Game State Overview	142
Additional Patterns	144
8 Actions and Events Patterns	145
Actions	145
Combat	145
Movement	147
Maneuvering	149
Aim & Shoot	150
Construction	153
Additional Patterns	154
Action Control	155
Privileged Abilities	155
Asymmetric Abilities	158
Limited Set of Actions	160
Downtime	162
Experimenting	164
Transfer of Control	166
Interruptible Actions	168
Focus Loci	169
New Abilities	172
Improved Abilities	174
Ability Losses	175
Decreased Abilities	177
Extended Actions	178

Irreversible Actions	180
Save-Load Cycles	182
Additional Patterns	184
Rewards and Penalties	184
Rewards	184
Penalties	188
Illusionary Rewards	191
Additional Pattern	193
Events	193
Ultra-Powerful Events	194
Additional Patterns	196

Game Design Patterns for Narrative Structures, Predictability, and Immersion Patterns

Evaluation	197
Delayed Effects	198
Hovering Closures	199
Illusion of Influence	201
Perceived Chance to Succeed	203
Additional Patterns	205
Immersion	205
Immersion	205
Anticipation	207
Additional Patterns	209
Creative Control	209
Freedom of Choice	209
Creative Control	211
Storytelling	213
Additional Patterns	216
Narrative Structures	216
Narrative Structures	216
Tension	219

Characters	222
Character Development	224
Planned Character Development	226
Identification	228
Higher-Level Closures as Gameplay Progresses	229
Surprises	231
Cut Scenes	233
Easter Eggs	234
Additional Pattern	236

10 Game Design Patterns for Social Interaction

Competition	237
Competition	238
Conflict	239
Player Killing	241
Betrayal	243
Additional Patterns	245
Collaboration	245
Cooperation	245
Additional Patterns	247
Group Activities	247
Team Play	247
Alliances	250
Roleplaying	252
Constructive Play	255
Player Decided Results	256
Additional Patterns	258
Stimulated Social Interaction	259
Social Interaction	259
Trading	262
Bidding	267

Contents

- Bluffing 269
- Negotiation 271
- Social Dilemmas 273
- Additional Pattern 276
- Game Design Patterns for Goals 277**
 - Goals of Ownership and Overcoming Opposition 277
 - Gain Ownership 278
 - Overcome 280
 - Stealth 283
 - Eliminate 284
 - Rescue 286
 - Capture 287
 - Evade 289
 - Conceal 290
 - Race 292
 - Goals of Arrangement 295
 - Collection 295
 - Additional Patterns 296
 - Goals of Persistence 297
 - Guard 297
 - Survive 298
 - Traverse 300
 - Additional Patterns 302
 - Goals of Information and Knowledge 302
 - Gain Information 302
 - Gain Competence 304
 - Exploration 306
 - Additional Pattern 308

- 12 Game Design Patterns for Goal Structures 309**
 - Goal Characteristics 310
 - Predefined Goals 310
 - Dynamic Goal Characteristics 312
 - Optional Goals 314
 - Interferable Goals 315
 - Player Defined Goals 317
 - Additional Patterns 319
 - Relations Between Goals 320
 - Preventing Goals 320
 - Hierarchy of Goals 321
 - Tournaments 324
 - Incompatible Goals 327
 - Selectable Sets of Goals 328
 - Supporting Goals 330
 - Additional Patterns 333
 - Relations Between Goals and Players 333
 - Symmetric Goals 333
 - Asymmetric Goals 334
 - Committed Goals 336
 - Additional Pattern 338
- 13 Game Design Patterns for Game Sessions 339**
 - Game and Play Sessions 339
 - Real-Time Games 339
 - Asynchronous Games 341
 - Synchronous Games 343
 - Single-Player Games 344
 - Multiplayer Games 345
 - Turn-Based Games 347
 - Closure Points 349
 - Additional Patterns 350

Player Activity	350
Player Elimination	350
Analysis Paralysis	352
The Show Must Go On	353
Agents	355
Additional Patterns	355
Game Design Patterns for Game Mastery and Balancing	357
Game Mastery	357
Game Mastery	357
Empowerment	360
Timing	362
Rhythm-Based Actions	363
Dexterity-Based Actions	364
Memorizing	366
Puzzle Solving	368
Luck	370
Additional Patterns	371
Planning	371
Tradeoffs	371
Randomness	373
Risk/Reward	375
Predictable Consequences	378
Limited Planning Ability	380
Strategic Knowledge	382
Stimulated Planning	384
Additional Patterns	386
Balancing	387
Balancing Effects	387
Symmetry	389
Team Balance	391

Right Level of Difficulty	392
Right Level of Complexity	394
Handicaps	396
Paper-Rock-Scissors	398
Additional Pattern	399
15 Game Design Patterns for Meta Games, Replayability, and Learning Curves	401
Meta Games	401
Meta Games	401
Additional Patterns	403
Replayability and Learning Curves	403
Replayability	403
Varied Gameplay	405
Smooth Learning Curves	408
Additional Pattern	410
Appendix A Further Reading	411
Appendix B About the CD-ROM	415
Index	417