Index

Note: Pattern names are in bold; use case names are in italic.

A
Abstraction
and goals of steps, 153
use cases written as different levels of, 103
Abstract use cases, 198, 199
Access ATM description, with technology-specific steps, 161
Access ATM use case, improved Technology-Neutral, 161
Access e-mail use case, 131–132
Accuracy
of requirements, 139
verifying, 65
Active verbs, 159
ActorIntentAccomplished, xiv, 5, 23, 103, 127, 147, 154, 158–161, 163, 210
examples, 159–161
improving Withdraw Cash description with, 160
and purpose, 171
Withdraw Cash description without, 159–160
Actor-less ATM example, 159–161
Actor lists
and briefs, 56
for Pharmacy System, 93
for revised Pharmacy System, 94
for Wings Over the World (sample), 55
Actors, 1, 23, 24, 51, 54, 78, 79, 89, 114, 117
and accomplishments of value, 118–119
and context diagrams, 88
duration of goals for, 119
identifying, 90
naming, 92
naming use cases and goals of, 123
in pharmacy example, 92–94
stakeholder’s competing visions about, 81
Adolph, Steve, xix
Adornments, 4, 22, 42, 117, 121, 127, 133–137, 142, 146, 147, 155, 163, 169, 178, 206, 207, 214, 215, 216
examples, 135–137
and use cases, 22
Wings Over the World with, 135–137
Agile Software Development, xix
Agile Software Development Ecologies, xix
Agile Software Development Series, xviii
Alexander, Christopher, xvi, 6, 7, 8, 9, 10
Alexandrian form, 10, 16
Alternative courses of actions
coping with, 183
handling, 191
Ambiguity, 68–69, 70, 141, 174
and imprecision, 141
reducing, 159
removing, 81
in scenario, 171
Analysis, 202
Anchor points, 12, 17, 96
Apollo Saturn V spacecraft, 38
ARJIS. See Automated Regional Justice Information System
Armstrong, Neil, 80
ATM JAD system example, 150–152
Audience. See also Customers; Users  
amount of information needed by, 61  
knowing, 175  
and names of use cases, 122  
and readability of use cases, 138  
Auto insurance claim handling, 128  
Automated railway signaling, 84  
Automated Railway Signaling System, vision statement for, 84  
Automated Regional Justice Information System, 33

B  
BalancedTeam, 20, 30, 32, 39–42, 43, 92  
Balanced use cases, 69  
Batch job distribution, example, 60  
Best practices, and pattern form, xiv  
Blob, The (film), 86  
Book Flight for Frequent Flier, 187  
Book Flight for Frequent Flier extension use case, 186  
resembling extension points, 189  
Book Flight use case  
after Upgrade Seat alternative promoted via extends, 194  
after Upgrade Seat alternative promoted via includes, 192  
brief for, 56  
with business rules, 135  
confusing frequent flier alternatives for, 184  
with extension points, 188  
with incorrectly applied includes relationship, 178  
more detailed version of, 107  
revised, 179–180  
shortening with EverUnfoldingStory, 106  
30-page use case horror, 105  
Boundaries, different points of view about, 86–87  
Boundary conditions, 191  
Brainstorming, 33  
Bramble, Paul, xix  
Branch-and-join process, 33  
BreadthBeforeDepth, 20, 47, 48–51, 52, 53, 55, 68, 71, 98, 140, 200  
and alternative conditions, 131  
examples, 51  
and order for use case writing process, 51  
QuittingTime facilitated by, 72  
SpiralDevelopment interacts with, 54, 76  
and stopping points in use case, 127  
and UML, 51  
and use case diagrams, 89
Bridges of Madison County, The (film), 90  
Briefs, 55  
for Reserve Flight and Book Flight, 56  
“Brittle” requirements set, 4  
Brooks, Frederick, 1, 51, 84  
Builders, and expansion of system scope, 81  
Business purchasing, 61–63  
Business rules, 127, 134, 136, 147, 149  
Book Flight with, 135  
Change Seat adorned with, 135–136  
specifiers, 2  
Business-value check, 66  
Buy something (casual version) use case, 61
C  
Call processing examples, 206–208, 211–212  
Canadian Pacific Ltd, 204  
Candidate use cases, identifying, 50  
CapturedAbstraction, 51, 175, 198–200  
and UML, 198  
Change Seat use case  
adorned with business rules, 135–136  
business rules in, 152  
informal version of, 140  
review of, 121  
“Chaos” reports, xiii  
ChiliPLoP conferences, xix  
“Choose your own adventure” story  
differences between use case and, 126  
and writing use cases, 125  
Claim Insurance use case  
not making sufficient forward progress, 165  
revised to make forward progress, 166  
CleanHouse, 21, 50, 54, 202, 203, 213–215  
examples, 215  
ClearCastOfCharacters, 11, 13, 15, 48, 79, 90–94, 118  
and EverUnfoldingStory, 113
examples, 92–94
and services identification, 97
and use case sets, 22
and VisibleBoundary, 87
and vision, 82
Clear vision, lack of, 80
Cockburn, Alistair, xiv, xv, xix, 7, 27, 104
Code bloat, 149
Common steps, rewriting, 176
CommonSubBehavior, 23, 51, 121, 174, 176–181, 196, 206
examples, 178–181
and includes relationship, 174, 180
and UML, 180–181
Communication
common forms and facilitation of, 59
strengthening channels of, 81
Complete group, defining, 66
CompleteSingleGoal, xiv, 8, 15, 97, 117, 118–121, 122, 125, 127, 138, 139, 142, 143, 154, 159, 184, 191, 199, 203, 205, 206, 207, 209, 210
and addressing more than one goal, 120
examples, 121
factors to consider with, 142
and goals associated with use cases, 5, 14, 103, 117
helper patterns for, 215
and individual use cases, 22
for Process Normal Call use case, 207–208
and scope of use case, 178
and structuring of use cases, 4
use cases as representative of, 209
Complexity
controlling, 119
incremental, 126
reducing, 196
Complex use cases, 178, 190
Computer-Aided Software Engineering (CASE) tools, for generating use case diagrams, xviii
Concrete details, 167
Conditions, 148
Connery, Sean, 90
Consensus, 57
Constantine, Larry, 43
Content, reviews of, 64
Context
and patterns, 15
in UserValuedTransactions pattern sample, 11
Context diagrams, for Wings Over the World, 88–89
Control break processing, 191
Core competencies, 69, 71
Corporate vision, and technology vision, 83
Create, Read, Update, and Delete, 12, 78, 80, 96
Create Customer use case, and mortgage origination system, 100
CRUD. See Create, Read, Update, and Delete
Cruddy mortgage origination system, 100
Crystal Clear, xix
Customers. See also Audience; Users
final authority on product and, 36
movie-making and consultation with, 38
soliciting input from, 37
and use case development process, 36, 37, 43
D
Data
formats, 136
specifiers, 2
validation rules, 134
Davis, Wade, 73
Day at the Races, A (film), 38
Deadlines, 53
Delays, expense of, 53
Delete Customer use case, and mortgage origination system, 100
Dependency, 183
Deployment diagram, 87
Design Patterns: Elements of Reusable Object Oriented Software (Gamma), 6–7, 8, 9
Details
addition of, by developers, 138
handling, 49
DetectableConditions, 23, 127, 136, 148–152, 171
examples, 150–152
and scenarios, 147
and variations, 131
Developers
  and detectable conditions, 149
  errors handled by, 130
  and use case readability, 138
Development organizations, and end user representation, 35
Development patterns, 19
Development team, 66
Diagrams, and SpiralDevelopment, 57
Dictionaries, iterative writing and, 57
Diminishing returns, avoiding law of, 54
Director-style Book Flight use case, with incorrectly applied includes relationship, 178
Diversions
  creating, 162
  with insufficient forward progress, 165
  multiple, 182
  repeated, 183
  in scenarios, 163
Diversity
  and BalancedTeams, 32
  lack of, 41–42
Documentation group, and use cases, 37
Domain experts, 37, 40
Dr. Strangelove (film), 90
Droplets, repairing, 180
Droplet use cases, merging into new use cases, 212
E
  Eastwood, Clint, 90
Editing, 19, 21
Editing existing use cases, 201–216
  CleanHouse, 213–215
  MergeDroplets, 209–212
  RedistributeTheWealth, 204–208
  trade-offs and collaborations, 215–216
EDSAC, 176
  e-mail access example, 131–132
Encyclopedias, iterative writing and, 57
Engage Art use case, 109–110
Engage Diversity use case, 110–111
ENIAC, 176
Errors
  developers and handling of, 130
  in requirements models, 177
  and reviews, 64, 65
Estimates, 2
EverUnfoldingStory, xvi, 14, 15, 79, 97, 100, 102–113, 118, 154, 159, 179, 191, 199, 200, 206, 207, 210
  and Book Flight use case, 112
  and Centre A: The Museum for Contemporary Asian Art, 109–111
  examples, 104–110
  and goals, 120
  good use cases in context of, 113
  and includes relationship, 180
  and LeveledSteps, 171
  shortening Book Flight with, 106
  systems described as, 113
  and UML models, 111
  and use case sets, 22
Examples
  actor-less ATM, 159–161
  ATM JAD system, 152–154
  auto insurance claim handling, 128
  automated railway signaling, 84
  batch job distribution, 60
  call processing, 206–208, 211–212
  Cruddy mortgage origination system, 100
  e-mail access, 131–132
  File Accident Claim: tied to technology, 169–171
  hospital claim, 215
  insurance claims, 123–124, 165–166
  mobile dispatching, 85
  Museum for Contemporary Asian Art, 92, 109–110
  for patterns, 18
  pharmacy receptionist, 92–94
  purchasing for a business, 61–63
  vision statement for Wings Over the World, 82–83
Wings Over the World, 54–57, 104–109, 199
Wings Over the World: diversionary scenario, 163–164
Wings Over the World: precise but unreadable, 140–141
Wings Over the World: readable but imprecise, 139–140
Wings Over the World and avoiding form-focus, 98–99
Wings Over the World and extensions, 184–186
Wings Over the World and includes, 178–180
Wings Over the World and User-Valued Transactions, 98–99
Wings Over the World (continued), 66, 71–72, 75
Wings Over the World goals, 121
Wings Over the World seat upgrade alternative, 191–193
Wings Over the World with Adornments, 135–136
Exception processing, 130
ExhaustiveAlternatives, 5, 8, 50, 59, 117, 127, 129–132, 142, 148, 150
examples, 131–132
and use cases, 22
Expandability, and high-quality system, 83
Expert users, 40
Extends relationship, 23, 108, 173, 175, 180, 186, 196
and alternatives, 194
formal definitions in UML for, 178
includes relationship versus, 174
interpretations for, 109
misunderstanding, 183
PromotedAlternative and UML, 195
Extends use cases, 183, 184, 185, 195, 199
Book Flight after Upgrade Seat alternative promoted via, 194
Book Flight for Frequent Flier, 186
and UML extension points, 187–189
Upgrade Seat as, 195
Extension points, Book Flight use case with, 188
Extensions, 24
Wings Over the World and, 182–184
External interface protocols, 134
Exxon, 202

Forces affecting problem, and patterns, 16–17
Formality, 59, 175, 177, 183
Formal specifications, 141
Formats, choosing for use cases, 59
Form-focus, Wings Over the World and avoidance of, 99–100
Forms-based use case set, 99
ForwardProgress, 23, 127, 147, 154, 159, 161, 162–166
examples, 163–164
and steps in scenario, 171
Fowler, Martin, 202
Fragmented use cases, 121
Fragments, 24, 127
combining of, into cohesive units, 215
merging into existing use cases, 210
relocating to other use cases, 205
Frequent flier alternatives, confusing for Book Flight, 184–185
Functional requirements, nonbehavioral information and, 134

G
Gabriel, Richard, 9
Generalization relationships, 174, 200
formal definitions in UML for, 178
Generalizations, 173, 181, 196
Generalizes relationship, 23
Get Paid for Car Accident use case, 128
Goal fragments, use cases written around, 121
Goal level, and actor list, 55
Goals
actor, 119
good characteristics of, 120
improper, 118
project, 80–81
and SharedClearVision, 96
and subgoals, 25
of use cases, 117
use cases written around, 97
Gold plating, preventing, 84
Gold Rush (Cockburn), 7
Graham, Ian, 13, 95
Grammatical errors, 65
Granularity, 142

F
Feature creep, 65
File Accident Claim use case
technology-dependent, 169–170
technology-neutral, 170
Find Flight, lower level use case for, 105–106
Graphical user interface, 169
Group dynamics, 20
GUI. See Graphical user interface

H
“Happy day” scenario, 24
High-level use cases, 55, 108. See also Briefs
Hospital claim example, 215

I
If statements, 126
Implementation details, 91, 167
Improving Software Organizations, xix
Included use case, 195
and alternatives, 192
Book Flight after Upgrade Seat alternative promoted via, 192
extends relationship versus, 174
formal definitions in UML for, 178
interpretations for, 109
misunderstanding, 177
restriction on, 180
Wings Over the World and, 178–180
Incremental complexity, 126
Inheritance relationships, 183
Internal stakeholders, and use case development process, 36, 37
InterruptsAsExtensions, 23, 51, 175, 182–189, 196, 199, 206
examples, 184–186
and extension use cases, 175
and UML, 186–187
Invalid actors, identifying, 88
Iterative approach, 76
Iterative development, and SpiralDevelopment, 54
Iterative life cycle, xiii

J
Jacobson, Ivar, xiii, 1, 2, 23, 110
JAD. See Joint Application Development
Jargon, 39
Java, 167
Job flow engine, 37–38
Joint Application Development, 150
Joy of Cooking, The, 177

K
Kennedy, John F., 80
“Know your audience” rule, 175
Kraus, Andy, 33
Kubrick, Stanley, 90

L
Large groups
facilitating: no design without representation, 33
and frequent checkpoints, 33
Large steps, 153
Large teams, problems with, 32
Large use cases, 119, 153
breaking up, 216
Larman, Craig, 2
20,000 Leagues Under the Sea (Disney film), 158
equivalent use cases, 154–157
revised Purchase Goods use case with, 155
scenarios with, 147
steps of scenario written as, 158
Log Billing Information sub-use case,
RedistributeTheWealth by creating, 207
Lower level included use cases, shared courses of action expressed with, 178
Lower level use cases
creating, 206
referencing from higher level use cases, 110

M
Main success scenario, 203
Make a Phone Call use case, 212
Manifesto for Agile Software Development, xix
Marx Brothers, 38
McQueen, Steve, 86
MergeDroplets, 21, 50, 54, 175, 179, 198, 202, 203, 205, 209–212, 216
examples, 211–212
Metaphoric story and patterns, 16
  in UserValuedTransactions pattern sample, 11–13
MGM, 38
Miscommunication, cost of, 159
Mission of organization, 81
Mistakes, 70
Mobile Dispatching System, vision statement for, 85
Model formality, 69
Movie-making, and customer consultation, 38
MultipleForms, 20, 47, 50, 58–63, 75
  batch job distribution, 60
  examples, 60–63
  purchasing for a business, 61–63
Museum for Contemporary Asian Art (Centre A)
  and EverUnfoldingStory, 109–111
  use case model for, 111
Museum for Contemporary Asian Art (Vancouver, Canada), 92

N
Names and naming
  goal-based, 123
  of patterns, 14–15
  of primary actor goal, 120
  in UserValuedTransactions pattern sample, 11
  value of, 122
NASA, 38, 80
National Software Quality Experiment (2000), xiii
Network Administrator
  Provision a Cross-Connect (Engineering-Centric Version), 41
  Provision a Cross-Connect (User-Friendly Version), 42
Network Element
  Provision a Cross-Connect (Engineering-Centric Version), 41
  Provision a Cross-Connect (User-Friendly Version), 42
Night at the Opera, A (film), 38

Normal Call use case, processing with multiple goals, 206
Nouns/noun phrases, for actors, 92

O
Object Constraint Language, 141
Object-oriented software, refactoring, 202
Object-oriented software development, use cases as element of, 2
OCL. See Object Constraint Language
“One-stop-shopping” rule, 177, 183, 199
On-line store
  long and tedious use case for, 154–155
  use case mixing large and small steps for, 156
  use case with excessively large steps for, 155
OOPSLA 98 (Vancouver, Canada), xix
“Outer” reviews, purpose of, 66
Outlines, 49–50
Outsourcing, 72
Overlapping responsibilities, discovering, 91
Overspecification, 68, 69
Overstaffing, 32
Overviews, early, 49

P
Parallelism, 49
Partial use cases, 209
ParticipatingAudience, 20, 30, 32, 35–38, 40, 43, 65, 76, 82, 139
  examples, 37–38
Passive voice, 160
  Withdraw Cash Description written in, 160–161
Pattern Almanac, The (Rising), xix
Pattern Handbook, The (Rising), xix
Pattern Language, A (Alexander), 10
Pattern language heritage, xix
Pattern language organization, 19–23
  development patterns, 19
  editing, 21
  process, 20
  relationships, 23
  scenarios and steps, 22–23
  structural patterns, 21
  team, 20
Pattern language organization, (cont.)
use cases, 22
use case sets, 21–22
Pattern languages
Alexander’s work on, 6–7
use of, 9–10
Patterns, xiv
description of, 6–8
development, 19
for evaluating use cases, xiv
structural, 19, 21
use case set, 78
Patterns of Software (Gabriel), 9
Pay Tax use case, 177
Performance information, 127
Pharmacy receptionist example, 92–94
Pictures, in patterns, 15
Placeholders, 50
Pols, Andy, xix
Porting a system, 167
Post-conditions, 56
PreciseAndReadable, 20, 22, 59, 117, 120, 127,
134, 138–141, 142, 158, 159, 167, 175
examples, 140–141
Precision, 65, 139. See also Accuracy
Preconditions, 56
Preconditions sections, of use cases, 75
Problem statement
and patterns, 16
in UserValuedTransactions pattern sample,
11
Process, 19, 45–76
BreadthBeforeDepth, 48–51
MultipleForms, 58–63
and quality use cases, 20
QuittingTime, 68–72
SpiralDevelopment, 52–57
trade-offs and collaborations, 75–76
TwoTierReview, 64–67
WritersLicense, 73–75
Process Normal Call use case, Redistribute-
TheWealth in, to give use case a
CompleteSingleGoal, 207
Process patterns, xvi
Productivity, improving, 49
Programmers, and reviews, 66
Project priorities, incremental approach based
on, 50
Projects
differing needs of, 58
slippage in, 74
PromotedAlternative, 23, 51, 127, 174,
190–196, 199, 206
examples, 191–196
and extensions, 175
and UML, 195–196
Engineering-Centric Version, 41
User-Friendly Version, 42
Proxy (pseudo actor), 106
Purchase Goods use case
with excessively large steps, 155
revised, 155–157
revised, with leveled steps, 155
with unleveled steps, 154
Purchase Property use case, 177
Purchasing for a business, 61–63
Q
Quality assurance group, and use cases, 37
Queues, 44
QuittingTime, 20, 47, 50, 54, 66, 68–72, 73–74,
76, 140, 202
examples, 71–72
use cases passing test for, 74
R
Railway signaling, automated, 84
RAPIER
failure codes, 152
reservation system, 145–146
Ratliff, Rick, xix, 48, 167
Rawsthorne, Dan, xx, 51, 57, 89, 111–113, 175,
Readability, verifying, 65
Reading, and consistent writing style, 73
Receive Customer use case, 93
with actor’s role defined as Receptionist, 94
RedistributeTheWealth, 21, 50, 175, 191, 202,
203, 204–208, 210, 216
by creating Log Billing Information sub-use
case, 207
examples, 206–208
Index

in *Process Normal Call*, to give a use case a **CompleteSingleGoal**, 207
and scope of use case, 178
Redundancy
   eliminating, 180, 196
   and inconsistencies in model, 177
Redundant behavior, 90
Refactoring (Fowler), 202
Register for Courses (Use Case with Extensions), 24–25
Relationships, and use cases, 23. See also
   Extends relationship; Includes relationship
Release schedules, 2
Reliability, and high-quality system, 83
Representative democracy, 64
Request Upgrade use case
   with forward progress, 164
   with steps diverting forward, 164
Requirements
   high cost of mistakes, 53
   improving definition of, xiii
   source of errors in models, 177
   specifications, 68, 202
   volatility of, 53
Requirements gathering, 53
   as process of discovery, 49
   prolonging, 69
Reserve Flight, brief for, 56
Reserve Flight Segments use case, 112–113, 145–146, 152
Reuse, and large use cases, 119
Reviewers, 33
Reviewing, 149
Reviews, 37, 64–66
   effective, 64
   two types of, 65
Rising, Linda, xix, 9
Risk factors, delaying discovery of, 52
Robust design, and variations, 130
S
Scalability, and high-quality system, 83
ScenarioPlusFragments, 50, 117, 120, 125–128, 133, 142, 153, 163, 171, 176, 182, 183, 190, 191, 196, 198
and goals in use cases, 22
examples, 128
use cases written as, 129
and variations, 131
Scenarios, 19, 22–23, 117, 147
   balanced, 171
   clear steps in, 162
   mixing levels of detail in, 153
   number of steps in, 154
   organizing steps in, 171
Scope creep, and poorly defined boundaries, 87
Screen designs, 127
Sellers, Peter, 90
Sentence fragments, 5
Sequential life cycle, xiii
Serpent and the Rainbow, The (film), 73
Services, sets of, 92
SharedClearVision, xv, 11, 12, 15, 17, 31, 48, 80–85, 90, 95
and EverUnfoldingStory, 113
   examples, 82–85
   lack of, 82
and services identification, 97
and system goals, 96
and use case sets, 21
of use case writers, 78
and user identification, 92
VisibleBoundary and limits/support of, 86
Slippage, 74
Small steps, 153
Small use cases, 119, 153, 210
SmallWritingTeam, 20, 30, 31–34, 35, 38, 39, 40, 43, 65
   and audience participation, 38
   examples, 33–34
   vision created by, 82
Software for Use (Constantine and Lockwood), 37, 43
Software patterns, benefits of, 123
Solution
   of pattern, 18
   in UserValuedTransactions pattern sample, 13–14
Specialization relationships, 186
Spelling errors, 65
SpiralDevelopment, 20, 47, 50, 52–57, 64, 96
  BreadthBeforeDepth coupled with, 76 examples, 54–57
  and regular assessments of use cases, 66
  and roles of actors, 92
  and system boundary, 87
  and UML models, 57
  and use case diagrams, 89
Stacks, 44
Stakeholders, 119
  competing visions of, 81
  and good specifications, 141
  input of, 119
  and overspecification, 69
  and system boundaries, 86
  and use case goals, 204
  and use case readability, 138
  use cases understood by, 173
  and useful systems, 90
  vested interest in use cases by, 65
Standish Group, xiii
Star Trek (television series), 162
Statement of purpose, 81
Step patterns, 147
Steps, 22–23
  behavior put into, 162
  clear and succinct, 162
  conditions met by, 171
  excessively small and large, 153
  organizing in scenarios, 171
Purchase Goods use case with excessively large, 155
  and repeated diversions, 182
  writing, 158
Stockholder meetings, 35
Stories
  good, 145–147
  quality, 147
  variations, 126
Structural patterns, 2–3, 19, 21
Style guides, 74
Subfunction goals, 25
Subfunction Level, of use case, 104
Subgoals, 25
Subject matter experts
  narrow focus of, 91
  and small use cases, 120
Subsets, of briefs, 56, 57
Sub-use cases, 207
Success scenarios
  alternatives to, 125
  identifying, 127
SuD. See System under discussion
Summary goals, 25
Summary Level, of use case, 104
Supplementary specifications, superfluous
  fragments relocated to, 206
Surface and Dive technique, 56
Surviving Object-Oriented Projects, xix
System-focused use cases, 121
Systems
  deficient, 95
  and detectable conditions, 148
  useful, 90–91
System’s scope, documenting interactions
  outside of, 89
System under discussion, 24, 25
T
Tablature (guitar), 138
TBDs. See To Be Determined issues
Teams, 20, 29–44
  and BalancedTeam, 39–42
  composition of, 30
  developers and end users on, 40
  and differing amounts of formality, 58–59
  organization of, 19, 30
  and ParticipatingAudience, 35–38
  size of, and use case quality, 30
SmallWritingTeams, 31–34
  trade-offs and collaborations, 43–44
  and well-written use cases, 26–27
Technical errors, 65
Technological details, and increased costs in reading/writing use cases, 168
Technology, volatility of, 168
Technology details, in use cases, 152
  and Access ATM use case, 161
examples, 169–171
and scenarios/steps, 147
and steps, 154
Technology vision, and corporate vision, 83
Telephone calls, set of small use cases for placing, 211
Templates, 50, 58, 59, 74, 127
Terminators, in context diagrams, 88
Testers, 2
Time pressures, 80, 91
Titles, for use cases, 117
TLL code, 42
To Be Determined issues, 134
Traceability, 198
Trace relationship, 111–112
Trainers, 37
Trust, 72
TwoTierReview, 8, 20, 32, 37, 47, 54, 64–67, 73, 76
examples, 66–67

U
UML. See Unified Modeling Language
UML extension points, and extension use cases, 187–189
UML models
and EverUnfoldingStory, 111
and SpiralDevelopment, 57
and VisibleBoundary, 89
Unbalanced teams, 30
Unified Modeling Language, xvii–xviii, 173, 174, 175, 178
and BreadthBeforeDepth, 51
and CaptureTheAlternative, 197
and CommonSubBehavior, 180–181
deployment diagram in, 88
and InterruptsAsExtensions, 186–187
and PromotedAlternative, 195–196
Unleveled steps, Upgrade Seat use case with, 154
Upgrade Seat use case, and mortgage origination system, 100
Upgrade Seat, as extending use case, 195
Upgrade Seat alternative
Book Flight use case after promotion of, via includes, 192
dominates Book Flight use case, 191–192
as separate use case, 193
U.S. Department of Defense, xiii
Usability, formality favored over, 174
"Use Case Blue" (Kraus), 33
Use case development process, 53
customers and internal stakeholders involved with, 36
customers involved in, 43
Use case diagrams, styles for, xviii
Use case forms, standard, 59
Use case horrors
Access ATM description with technology-specific steps, 161
Book Flight with business rules, 135
Claim Insurance not making sufficient forward progress, 165
confusing frequent flier alternatives for Book Flight, 184–185
Director-style Book Flight use case with incorrectly applied includes relationship, 178–179
Get Paid for Car Accident, 128
mixing large and small steps in use case, 156
naming horrors, 123–124
Process Normal Call use case with multiple goals, 206–207
Provision a Cross-Connect (Engineering-Centric Version), 40
Purchase Goods use case with excessively large steps, 155
Purchase Goods use case with unlevelled steps, 154
Register for Course, 3
Request Upgrade with steps diverting ForwardProgress, 164
set of small use cases for placing telephone call, 211
supplementary requirements anchored by, 136–137
technology-dependent File Accident Claim use case, 169
thirty-page Book Flight use case, 105
Use case horrors (cont.)
Withdraw Cash description without ActorIntentAccomplished, 159
Withdraw Cash description written in passive voice, 160
Use case models, 142
formalism in, 183
UML and formalism in, 178
Use case names, good, 124
Use case pattern form
context, 11, 15
description of, 10–18
examples, 11, 18
forces affecting the problem, 11, 16–17
metaphoric story, 11, 16
names, 10, 14–15
pictures, 10, 15
problem statement, 11, 16
solution, 11, 18
stepping through sample pattern, 11–14
Use case pattern languages, reasons for, 5–6
Use case relationships, 19, 173–200
CapturedAbstraction, 198–200
CommonSubBehavior, 176–181
InterruptsAsExtensions, 182–189
PromotedAlternative, 190–196
trade-offs and collaborations, 196–197
Use cases, xiii, xvi, 19, 22, 115–143. See also Editing existing use cases; Examples adorning, 117
Adornments, 133–137
alternatives and cluttering of, 190
alternatives for, 129
balanced, 68, 171
brief tutorial on writing, 23–27
Buy something (Casual Version), 61
Buy something (Fully Dressed Version), 61–63
capturing alternatives/failures handled in, 131
and changes, 96
cleaning up and removing, 213–215
clear, succinct steps in, 162
complete, 70
CompleteSingleGoal, 118–121
complex, 190
complex alternatives and cluttering of, 198
complicated and imprecise, 138
correct, precise and readable, 26–27
creating lower level, 206
creating new, 205
crisscrossing structure revealed with, 126
developing in iterative, breadth-first manner, 53
different detail levels in, 102
effective, 149
example of poorly written, 3
excessive detail in, 205
ExhaustiveAlternatives, 129–132
expense of adding, 205
extension-handling behavior for, 54
fragmented, 121
goal levels, 104
groups with vested interest in set of, 35–36
high-level, 55
high-quality, 75–76
large, 119, 153
levels of, 102–103
localizing closely related behavior into, 216
localizing information about features in, 209
long, 204
main scenario for well-written, 5–6
merging, 210
minimizing number of, 210
necessary information in, 95
nonfunctional requirements in, 133, 134
organizing, 113
outlines for, 50
overviews of, 49, 50
partial, 209
partitioning, 177, 190
patterns for evaluation of, xv
PreciseAndReadable, 138–141
preconditions sections of, 75
purpose of, 74, 133–134
quality, 158, 215
readability of, 138, 139
readable and comprehensible, 117
reasons for using, 1–2
relocating fragments to, 205
reviewing, 64–66
ScenarioPlusFragments, 125–128
selecting format for, 59
signs of quality in, 78
small, 119, 153, 210
stability of, 96
stopping development of, 70
story lines in, 117
and style issues, 73
technology details in, 152
and telling of good stories, 2–5
trade-offs and collaborations, 142–143
unnecessary, 51
and value-added services, 96
value to business shown by, 103
VerbPhraseName, 122–124
for workstation monitor server, 60–61
and “writer’s license,” 74
writing in technology-neutral manner, 168
Use case sets, 19, 21–22, 77–114
ClearCastOfCharacters, 90–94
and context diagrams, 88
EverUnfoldingStory, 102–113
forms-based, 99
organization in, 103
SharedClearVision, 80–85
trade-offs and collaborations, 113–114
UserValuedTransactions, 95–101
VisibleBoundary, 86–89
Use case structure, levels of, 21
Use case template, additional fields in, 134
Useful services, identifying, 96
User Goal Level, of use case, 104
User interface designers, 2
User-interface details, 3, 134
User-interface navigation, 136
User-interface sketches, 134
Users. See also Audience; Customers
services tied to, 91
and useful systems, 90
UserValuedTransactions, 8, 15, 16, 17, 25, 50,
79, 95–101, 102, 116, 131, 142, 168, 203,
209, 213, 214
and Book Flight use case, 108
and EverUnfoldingStory, 114
examples, 98–101
stepping through, 11–14
and system analysis, 92
and use case sets, 22
and vision, 82
for Wings Over the World, 98–99
V
Value-added services, 12, 96
Variations
 capturing, 131
having information about, 130–131
identifying, 130
Vehicle Control Center (VCC), 84
VerbPhraseName, 7, 22, 51, 122–124, 186, 196,
206
for each use case, 50
examples, 123–124
for primary actor goal, 120
for use cases, 117, 142
Verbs, 159
Verne, Jules, 158
Vietnam War, 118
VisibleBoundary, 86–89
and EverUnfoldingStory, 113
examples, 88–89
and project’s vision and scope, 79, 82
and system scope, 92
and UML models, 89
and use case sets, 21
Vision
 changes to, 82
consistency in, 82
of stakeholders, 81
Vision statements
 for Automated Railway Signaling System, 84
items included in, 81–82
for Mobile Dispatching System, 85
for Wings Over the World, 83, 98
W
Walters, Rusty, 3
“Waterfall” life cycle, xiii, 53
Web site, use cases discussion at, 27
Whiteboard drawings, 51
Wilkes, Maurice, 176
Wings Over the World, xvi, xvii, 18, 152
actor list (sample) for, 55
with Adornments, 133–137
Wings Over the World (cont.)
  and avoiding form-focus, 99–100
  briefs for Reserve Flight and Book Flight, 56
  context diagrams for, 88–89
  discussion with chief architect at, 115–116
  and editing existing use cases, 201–202
  examples, 54–57, 66–67, 71–72, 75,
    191–195, 199–200
  and extensions, 184–187
  and goals, 121
  initial conversation with CIO of, 45–46
  precise but unreadable example, 141
  readable but imprecise example, 140
  red-eye flight to, 77–78
  and Reserve Flight Segment use case,
    145–146
  and UserValuedTransactions, 98–99
  vision statement for, 83, 98
  winning contract for, 29
Withdraw Cash
  description without ActorIntent-Accomplished, 159–160
  description written in passive voice, 160
  improving description with ActorIntent-Accomplished, 160
  use case, 151
Workstation monitor server, use case for, 60
WritersLicense, 20, 47, 70, 73–75, 76
  examples, 75
Writing, 149
  consistent style of, 73
  at different levels, 103
  and “know your audience” rule, 139
  quality use cases, 158
  reviews of, 64
  steps, 159
  in technology-neutral manner, 168
Writing Effective Use Cases (Cockburn), xiv, xv,
  xix, 3, 25–26, 27, 61, 104
X
XML, 44
XP, 71