Contents

Acknowledgments ix
Introduction xix

Chapter 1: Rewriting the Web 3

Web 2.0: Power to the People 3
Remixes and Mashups 4
What Makes a Mashable System? 4
Are You Allowed to Mash the Content? 4
How Easy Is It to Get the Content? 5
Mashup Architectures 5
Mashing on the Client 5
Mashing on the Server 6
Understanding Mashup Tools and Technologies 7
HTML, XHTML, and CSS 7
XML and XPath 9
JavaScript and DOM 11
AJAX 12
JSON 12
Web Servers and HTTP 14
Web Browsers 16
PHP and Perl 16
Regular Expressions 17
REST 19
SOAP 20
XML-RPC 20
Databases 21
Curl 22
Summary 22

Chapter 2: Flickr: A Short Tour 23

Creating an Account 23
Account Types 24
Setting a URL 24
Uploading Photographs 24
Photo Formats and Sizes 27
Photo IDs and URLs 27

Organizing Your Photographs **27**
The Photostream 28
Sets 29
Organizr 31
Tags 33
NIPSA **35**
The Social Network: Contacts, Friends and Family **35**
Groups **37**
Interestingness **38**
Copyright **39**
All Rights Reserved 39
Creative Commons 40
Linking Back to Flickr **40**
Summary **41**
Exercises **41**

Chapter 3: Getting Ready to Mash **43**

Getting an API Key **43**
Setting Up a Development Environment **45**
Setting Up Your Web Server **46**
Microsoft IIS 46
Finding Your Document Root 46
Installing PHP 47
Configuring IIS 49
Testing Your Setup 52
Apache 53
Installing Apache 53
Finding Your Document Root 54
Installing PHP 55
Configuring Apache 55
Testing Your Setup 55
Setting Up Other Systems 56
Setting Up Directories 56
Setting Up Perl **57**
Installing Perl Under Microsoft Windows 57
Installing Perl on Unix Systems 59
Summary **60**
Exercises **60**

Chapter 4: The Flickr API **61**

What Is an API? **61**
Talking to Flickr **61**
Character Encoding 62
Request Format 62
REST 62
SOAP 66
XML-RPC 68
Flickr Methods and Objects **71**
Methods and Responses 71
Building URLs **75**
The Photostream URL 75
The Profile URL 75
The Photo Page URL 76
The Image URL 77
Photoset URLs 78
The Buddy Icon URL 78
The Group Icon URL 79
Using the API Explorer **79**
Using an API Kit **82**
Be a Good Flickr Citizen **82**
Commercial Use 82
Minimizing API calls 83
Flickr Resources **83**
Flickr Services Page 83
Flickr Developer Support Group 84
Flickr API Group 84
Summary **84**
Exercises **84**

Chapter 5: Flickr Feeds **87**

What Is a Feed? **87**
Available Flickr Feeds **89**
Feed Formats **89**
RSS 91
Atom 92
PHP 94
Serialized PHP 94
JSON 95

CSV 96
YAML 96
SQL 97
CDF 98
Creating a Flickr Badge 99
Designing the Badge 99
A Server-Side Badge Using PHP 100
A Client-Side Badge Using JavaScript 110
Summary 112
Exercises 113

Chapter 6: Remixing Flickr Using the API 115

The Basics: A Simple Photo Gallery 115
Setting Things Up 116
Displaying the Photos 122
Styling the Results 125
The Photo Page 127
Using AJAX 131
The prototype.js library 131
Enhancing the Gallery 136
Smart Sets 139
Summary 146
Exercises 146

Chapter 7: Authenticating with Flickr 147

The Need for Secrecy 147
Authenticating with Flickr 148
Configuring Your API Key 148
A Typical Authentication Sequence 151
Authentication and API Kits 153
Building an Authenticator 154
Updating Your Photo's Details 161
Other Authentication Mechanisms 167
Desktop Application Authentication 167
Mobile Application Authentication 167
Summary 168
Exercises 168

Chapter 8: Uploading Photos 169

How Does Uploading Work? 169
Creating an Upload Page 171
Asynchronous Uploading 176
Replacing Photos 177
Summary 177
Exercise 177

Chapter 9: Remixing Flickr Using Greasemonkey 179

What is Greasemonkey? 179
Installing Greasemonkey 179
Creating Your First Script 181
Modifying Pages — A First Remix 183
Determining a User's NSID 183
Completing the Remix 185
Using XPath 188
Highlighting Comments: A Second Remix 190
Enhancing the Flickr Paginator 194
Learning More About Greasemonkey 199
Summary 199
Exercises 199

Chapter 10: Working with ImageMagick 201

What Is ImageMagick? 201
Building a Group Badge 205
Building Better Badges 213
More than Just Badges 215
Summary 216
Exercises 216

Chapter 11: Visualizing the News 219

The RSS Format 219
Magpie 221
Installing Magpie 221
Setting Up Magpie's Cache 221
Finding Images on Flickr 225
Putting Words and Images Together 227
Summary 239
Exercise 239

Chapter 12: Searching the Blogosphere 241

What Is Technorati? 241
Getting a Technorati API Key 242
Searching the Technorati Cosmos 242
Talking to Technorati with Greasemonkey 243
Understanding the Response 245
Putting It All Together 248
Summary 254
Exercise 254

Chapter 13: Displaying Your Photos with Google Maps 255

What Is Geodata? 255
Using Google Maps 256
Getting a Google Maps API Key 260
Adding Controls to Your Map 264
Building the Mashup 266
Adding Geodata to Flickr Photos 266
Retrieving Geodata from Flickr Photos 267
Processing the Geodata 269
Laying the Groundwork 271
Adding Markers to the Map 274
Populating the Info Window 278
Creating a Sidebar 282
Summary 288
Exercises 288

Chapter 14: Caching Your Data 289

To Cache or Not to Cache 289
Why Should You Cache? 289
What Should You Cache? 290
Where Should You Cache? 291
A Case Study 291
The Origins of Utata 291
Tagging Projects 292
Tracking Membership 292
Introducing a Database 295
Utata Today 296
Updating the Gallery 296
Installing MySQL 296
Microsoft Windows 296
Unix 298

Getting Started with MySQL 298
Checking Your Installation 299
Creating a Database 300
Creating a Table 300
Adding Data to Your Database 301
Viewing Your Data 302
Searching Your Data 303
Sorting Your Data 305
Modifying Your Data 305
Deleting Data 306
Talking to MySQL with PHP 306
Caching Photos 311
The Photo Table 311
Using the Cache 320
Navigating Through Your Photos 324
Making Smart Sets Smarter 328
Identifying Smart Sets 328
Viewing the Smart Set 331
Summary 335
Exercise 336

Appendix A: Answers to Exercises 337

Appendix B: Flickr API Methods 379

Appendix C: Response Data Structures 385

Appendix D: Useful Resources 399

Index 405