CONTENTS

INTRODUCTION

PART I: GETTING STARTED	
CHAPTER 1: INTRODUCING FLASH DEVELOPMENT FOR MOBILE DEVICES	3
Expanding to the Mobile World Discovering Adobe AIR Building for Android Building for iOS What You Can and Cannot Do Device Support Unsupported AS3 API Objects Understanding the AIR for Android Security Model Getting to Know the Android SDK Getting to Know the iOS SDK Summary	3 5 6 7 7 8 9 10 11
CHAPTER 2: SETTING UP YOUR DEVELOPMENT ENVIRONMENT	13
Preparing for Android Development Installing the AIR SDK Creating a Code-Signing Certificate Installing the Flash CS5 Extension for AIR 2.5 Installing the Android SDK Adding the Android SDK to Your System Path Creating an Android Virtual Device Installing the AIR Runtime onto Your Device Comparing the Development Environment Options Using MXML in Android Apps Preparing for iOS Development	13 13 15 17 17 19 21 22 22 23
Joining the iPhone Development Joining the iPhone Developer Program	23 23
Getting an iPhone Developer Certificate Retrieving the Developer Certificate Adding a Device	24 28 30
Creating an App ID	31

ΧV

Creating a Provisioning Profile	32
Installing the Provisioning Profile	35
Summary	37
CHAPTER 3: BUILDING AND INSTALLING VANILLAAPP	39
VanillaApp for Android	39
Creating a Project	40
Creating a Flash Document for AIR for Android	40
Creating an ActionScript Document Class	41
Coding the Document Class	43
Adding Icons	49
Defining Android Settings	49
Previewing the App inside Flash	52
Publishing and Installing the Application	53
Running the App on an Android Device	53
VanillaApp for iOS	54
Creating a Project	56
Creating an iPhone-Based Flash Document	57
Creating an ActionScript Document Class	57
Coding the Document Class	58
Creating a Splash Screen	65
Adding Icons	66
Defining iPhone Settings	66
Previewing the App inside Flash	70
Publishing the Application	70
Installing the App on an iPhone	71
Summary	73
PART II: TOUCH AND USER INTERACTION	
CHAPTER 4: RETHINKING ACTIONSCRIPT PROGRAMMING	77
Comment of CDU Decomposition	
Conserving Memory and CPU Resources	77
ActionScript Practices	78
Reuse Objects	78
General Tips for Working with AS3	79
Event Handling	81
UI Practices	81
Graphics Practices	82
Caching	82
Miscellaneous Tips	83

General Application Practices	83
Frame Rate	83
GPU Rendering	84
Garbage Collection	84
Kitchen Sink Tips	85
Summary	85
CHAPTER 5: MULTITOUCH API	87
Understanding the Multitouch Jargon	87
Mouse Emulation Events	87
Touch Events	88
Gesture Events	88
Listening for Touch Events	89
Event Bubbling	89
Working with Touch Events	89
Coding the Document Class	90
Running the App	92
Working with the Swipe Gesture	96
Setting Up the Timeline	96
Adding a Sound Asset	96
Coding the Document Class	97
Running the App	101
Working with Rotate and Zoom Gestures	101
Coding the Document Class	102
Running the App	106
Summary	107
CHAPTER 6: DETECTING MOTION WITH ACCELEROMETER	109
Introducing Accelerometer and AccelerometerEvent	110
Listening for Accelerometer Events	111
Coding the Document Class	111
Running the App	114
Responding to Accelerometer Events	114
Creating the Sphere Class	115
Coding the Document Class	116
Running the App	121
Detecting Shaking	122
Coding the Document Class	122
Running the App	127
Summary	127

CHAPTER 7: IMPLEMENTING AUTO ORIENTATION	129
Enabling Your App to Rotate	129
StageOrientationEvent	130
Two Essentials for UI Reorientation	131
Detecting an Orientation Change	132
Changing Positioning Based on Orientation Changes	138
Summary	144
CHAPTER 8: GEOLOCATION API	145
Getting Geolocation Data	145
Enabling GPS Support for Android	147
Creating a Basic Geolocation Application	148
Coding the Document Class	148
Testing and Running the App	152
Creating a Compass App	153
Coding the Document Class	153
Running the App	159
Creating a Speedometer and Altimeter	160
Embedding a Font in Your App	160
Coding the Document Class	161
Configuring Landscape Orientation	167
Running the App	169
Sending Geolocation to a Web Service	169
Coding the Document Class	170
Running the App	178
Summary	178
CHAPTER 9: SERVICE INTEGRATION USING URL PROTOCOLS	179
Abstracting URL Protocols	180
Making Phone Calls from Your Application	181
Creating PhoneDialer.as	181
Using PhoneDialer in an App	182
Sending SMS Messages	187
Creating SMS.as	188
Adding SMS Support to PhoneServices App	189
Running the App	189
Sending E-mails	191
Creating Mail.as	191
Sending Mail from an App	194
Android: Adding Permissions	196
Running the App	197

Pointing on Google Maps Creating GoogleMaps.as Using GoogleMaps in an App	198 199 200
Android: Setting Permissions	200
Running the App	206
Summary	207
CHAPTER 10: ANDROID CAMERA, CAMERA ROLL, AND MICROPHONE	209
CameraUI: Launch and Return	210
Camera: Creating a Live Video Feed	216
Tapping into the Camera Roll	221
Capturing Sounds with the Microphone	228
Summary	234
PART III: DATA	
CHAPTER 11: FILE MANAGEMENT	237
Understanding the Android File and Directory Structure	237
Working with Directories, Files, and File Streams	238
Working with Directories	238
File System Operations	241
Reading and Writing Files	244
Reading a File	245
Writing to a File	246
Android Case Study: Jots	246
Coding the Document Class	248
Running Jots	253
Summary	253
CHAPTER 12: LOCAL DATABASES	255
Working with a SQLite Database	255
Open a Database Connection	256
Creating a Synchronous Connection	256
Creating an Asynchronous Connection	256
Creating Tables	257
Making a SQL Query	262
Inserting and Updating Records	263
Summary	269

PART IV: TESTING AND DEBUGGING	
CHAPTER 13: REMOTE DEBUGGING	273
Establishing a WIFI Connection	273
Using the AIR Debug Launcher	274
Android Debugging	274
Remote Debugging inside the Flash IDE	274
Remote Debugging from the Command Line	276
Debugging with Android SDK's Logcat	277
iOS Debugging	277
Remote Debugging inside the Flash IDE	277
Viewing GPU Rendering Diagnostics	278
Summary	278
CHAPTER 14: SUBMITTING YOUR APP TO THE APP STORE	279
Preparing Your Android App	279
Getting a Screenshot	280
Submitting Your App to the Android Market	281
Registering Your Developer Profile	281
Submitting Your App	282
Preparing Your iOS App	285
Getting a Distribution Certificate	285
Creating a Distribution Provisioning Profile	287
Publishing a Distribution Release of Your App	288
Submitting Your App to the Apple App Store	288
Summary	289
APPENDIX A: APPLICATION DESCRIPTOR SETTINGS	291
APPENDIX B: COMPILING APPLICATIONS	
FROM THE COMMAND LINE	305
INDEX	309
II ADEA	503