

---

# Table of Contents

<b>Foreword</b> .....	<b>xi</b>
<b>Preface</b> .....	<b>xxi</b>
<b>1. Introducing Flex</b> .....	<b>1</b>
Understanding Flex Application Technologies	1
Using Flex Elements	6
Working with Data Services (Loading Data at Runtime)	7
Understanding the Differences Between Traditional (HTML) and Flex Web Applications	9
Understanding How Flex Applications Work	10
Understanding Flex and Flash Authoring	11
Understanding Flex 1.5 and Flex 2	12
Summary	12
<b>2. Building Applications with the Flex Framework</b> .....	<b>13</b>
Using Flex Tool Sets	13
Creating Projects	15
Building Applications	19
Deploying Applications	31
Flash Player Security	31
Understanding HTML Wrappers	33
Using SWFObject	34
Using Runtime Shared Libraries	35
Summary	42

<b>3. MXML</b> .....	<b>43</b>
Understanding MXML Syntax and Structure	43
Making MXML Interactive	50
Summary	52
<b>4. ActionScript</b> .....	<b>53</b>
Using ActionScript	54
MXML and ActionScript Correlations	57
Understanding ActionScript Syntax	58
Variables and Properties	61
Inheritance	72
Interfaces	73
Handling Events	74
Error Handling	76
Using XML	78
Reflection	82
Summary	85
<b>5. Framework Fundamentals</b> .....	<b>86</b>
Understanding the Flex Application Life Cycle	86
Differentiating Between Flash Player and Framework	88
Bootstrapping Flex Applications	89
Understanding Application Domains	92
Understanding the Preloader	94
Summary	95
<b>6. Managing Layout</b> .....	<b>96</b>
Flex Layout Overview	96
Making Fluid Interfaces	116
Putting It All Together	117
Summary	120
<b>7. Working with UI Components</b> .....	<b>121</b>
Understanding UI Components	122
Buttons	128
Value Selectors	129
Text Components	130
List-Based Controls	131
Pop-Up Controls	140

Navigators	143
Control Bars	147
Summary	149
<b>8. Framework Utilities and Advanced Component Concepts</b>	<b>150</b>
Tool Tips	150
Pop-Ups	156
Cursor Management	162
Drag and Drop	164
Customizing List-Based Controls	172
Focus Management and Keyboard Control	183
Summary	188
<b>9. Working with Media</b>	<b>189</b>
Overview	189
Adding Media	191
Working with the Different Media Types	197
Summary	210
<b>10. Managing State</b>	<b>211</b>
Creating States	211
Applying States	212
Defining States Based on Existing States	213
Adding and Removing Components	214
Setting Properties	216
Setting Styles	217
Setting Event Handlers	218
Using ActionScript to Define States	218
Managing Object Creation Policies (Preloading Objects)	228
Handling State Events	230
When to Use States	231
Summary	231
<b>11. Using Effects and Transitions</b>	<b>232</b>
Using Effects	232
Creating Custom Effects	244
Using Transitions	251
Creating Custom Transitions	256
Summary	257

<b>12. Working with Data</b> .....	<b>258</b>
Using Data Models	258
Data Binding	268
Enabling Data Binding for Custom Classes	277
Data Binding Examples	280
Building Data Binding Proxies	284
Summary	287
<b>13. Validating and Formatting Data</b> .....	<b>288</b>
Validating User Input	288
Formatting Data	308
Summary	314
<b>14. Customizing Application Appearance</b> .....	<b>315</b>
Using Styles	316
Skinning Components	333
Customizing the Preloader	344
Themes	348
Runtime CSS	351
Summary	354
<b>15. Client Data Communication</b> .....	<b>355</b>
Local Connections	356
Persistent Data	360
Communicating with the Host Application	374
Summary	379
<b>16. Remote Data Communication</b> .....	<b>380</b>
Understanding Strategies for Data Communication	381
Working with Request/Response Data Communication	382
Web Services	395
Real-Time/Socket Connection	406
File Upload/Download	407
Summary	408
<b>17. Application Debugging</b> .....	<b>409</b>
The Flash Debug Player	409
Using FDB	413
Debugging with Flex Builder 2	414

Remote Debugging	418
Logging Using trace() Within an Application	419
The Logging Framework	421
Debugging Remote Data	425
Summary	426
<b>18. Application Components</b> .....	<b>427</b>
The Importance of Application Components	428
MXML Component Basics	429
Component Styles	440
Summary	443
<b>19. Building Custom Components</b> .....	<b>444</b>
Component Framework Overview	444
Component Life Cycle	446
Component Implementation	449
Adding Custom Properties and Events	457
Adding Styling Support	460
Summary	462
<b>Index</b> .....	<b>463</b>