

Contents

About the Authors.....	xv
About the Technical Reviewer	xvii
Acknowledgments.....	xix
 Chapter 1 The .NET Compact Framework.....	1
Understanding the .NET Compact Framework	2
What's Missing from NETCF?	14
Differences Between eVB and VB .NET	19
Working Between .NET and .NETCF	28
Using Compiler Directives	29
Summary.....	31
 Chapter 2 Smart Device Extensions.....	33
Languages Supported by SDE	34
SDE Within the VS .NET IDE.....	34
Step-by-Step Tutorial: Hello World.NET	61
Summary.....	74
 Chapter 3 Designing an Effective Interface.....	75
Pocket PC Design Standards	75
Larry Roof's Design Rules	82
Step-by-Step Tutorial: Panel-Based Interface	96
Windows Forms.....	103
The Code Behind a Form	106
Working with Forms	113
Working with Dialog Boxes	118
Step-by-Step Tutorial: Building a Custom Dialog Box	129
Summary.....	134

Chapter 4	NETCF Controls	137
The Button Control		137
The CheckBox Control		139
The ComboBox Control		141
The ContextMenu Control		144
The DataGridView Control		146
The DomainUpDown Control		149
The HScrollBar Control		152
The ImageList Control		154
The InputPanel Control		155
The Label Control		157
The ListBox Control		158
The ListView Control		161
The MainMenu Control		166
The NumericUpDown Control		167
The OpenFileDialog Control		168
The Panel Control		170
The PictureBox Control		172
The ProgressBar Control		174
The RadioButton Control		176
The SaveFileDialog Control		178
The StatusBar Control		181
The TabControl Control		182
The TextBox Control		183
The Timer Control		185
The ToolBar Control		186
The TrackBar Control		186
The TreeView Control		188
The VScrollBar Control		191
Summary		193
Chapter 5	Creating Controls	195
Types of Custom Controls		195
Creating an Inherited Control		199
Step-by-Step Tutorial: Creating a Hybrid TextBox		222
Creating an Owner-Drawn Control		235
Step-by-Step Tutorial: Creating an Owner-Drawn Control		238
Creating a Component		245
Starting a Component		245
Adding Design-Time Support		247
Summary		247

Chapter 6 Menus, Toolbars, and Status Bars	249
Building Menus	250
Building Context-Sensitive Menus	265
Building ToolBars	272
Building Status Bars	281
Step-by-Step Tutorial: Menus and Toolbars	283
Summary	296
 Chapter 7 Graphics	 297
Some Basic Knowledge	297
Okay, Let's Draw Something	300
Step-by-Step Tutorial: Creating a New Button	306
Working with Images	315
Step-by-Step Tutorial: Displaying a Simple Image	320
Step-by-Step Tutorial: Scrolling an Image	323
Summary	328
 Chapter 8 Files and Directories	 329
System.IO Namespace	330
Managing Directories	332
Managing Files	348
Working with Files	352
Step-by-Step Tutorial: Building a Text File Demo	360
Step-by-Step Tutorial: Building a Binary File Demo	366
Summary	371
 Chapter 9 Introduction to ADO.NET	 373
System.Data Namespace	374
Data Providers	376
The Connection Classes	380
The Command Classes	383
The DataReader Classes	387
The DataAdapter Classes	389
The DataSet Class	392
The DataTable Class	398
The DataRow Class	404
The DataColumn Class	405
The DataView Class	407
Step-by-Step Tutorial: Working with ADO.NET	409
Summary	421

Chapter 10 Data Binding	423
Binding to Controls	423
Moving Between Items	432
Adding an Item	434
Deleting an Item	434
Canceling an Edit in Progress	434
Validating Input	435
Creating a Master-Detail Form	436
Permanently Saving Data	440
Working with the BindingContext Object	441
Step-by-Step Tutorial: Working with Bound Controls	443
Summary.....	450
 Chapter 11 Introduction to SQL Server CE	 453
What Can You Do with SQL CE?	453
SQL CE Architecture	455
Installing SQL Server CE 2.0	456
Getting Started	476
Licensing SQL Server CE	480
Summary.....	481
 Chapter 12 Working with Server-Based Data	 483
My Data, Get My Data	483
Summary.....	508
 Chapter 13 Working with Device-Based Data	 511
Covering the Database Basics	511
Remote Data Access	522
Step-by-Step Tutorial: Beyond Anonymous	528
Merge Replication	538
RDA or Replication, That Is the Question.....	544
Summary.....	545
 Chapter 14 Working with XML	 547
Basic XML	547
Step-by-Step Tutorial: Creating a Configuration Reader	563
DOM Navigation of Your Documents	568
Working with XML Data Using a DataSet	571

Looking at Data Schemas	573
Using XML Serialization	575
Summary.....	576
 Chapter 15 Mobile Networking.....	 577
Working with the HTTP Protocol	578
Working with the TCP Objects	592
Step-by-Step Tutorial: Working with TCP	606
Working with the IrDA Objects	619
Step-by-Step Tutorial: Working with IrDA.....	624
Summary.....	630
 Chapter 16 XML Web Services.....	 633
Understanding XML Web Services	634
Web Service Limitations with NETCF	644
Creating an XML Web Service	644
Creating a Web Service Client	653
Passing Data from XML Web Services	656
Asynchronous Calls to Web Services.....	670
Step-by-Step Tutorial: Building a Web Service Client	674
Summary.....	687
 Chapter 17 Working with Unmanaged Code.....	 689
Examining DllImport	690
Reasons to Use Unmanaged Code	691
Applied Examples	692
Step-by-Step Tutorial: Creating an Unmanaged DLL	717
Summary.....	734
 Chapter 18 Working with POOM.....	 735
The Pocket Outlook Object Model	735
Accessing POOM from NETCF	736
Working with Tasks	740
Step-by-Step Tutorial: Working with Tasks.....	747
Working with Contacts	754
Step-by-Step Tutorial: Working with Contacts	761
Working with Appointments	769
Step-by-Step Tutorial: Working with Appointments	776
Summary.....	784

Chapter 19 Building Help Systems	785
A Pocket PC Help System	785
Constructing Help Systems	789
Step-By-Step Tutorial: Building a Help File	796
Implementing Help Files	802
Summary.....	808
 Chapter 20 Application Settings.....	 809
Developing the Foundation	809
Working with Settings in an INI File	812
Working with Settings in an XML File	818
Working with Settings in the Registry	824
Summary.....	826
 Chapter 21 Creating Setups for Your Applications.....	 827
Setup Fundamentals	827
Building Cab Files	836
Step-by-Step Tutorial: Examining a Basic Cab Build	855
Step-by-Step Tutorial: Building a Custom Installation	859
A Note on Testing Setups	867
Summary.....	868
 Chapter 22 Producing Reports.....	 869
Producing HTML Reports	870
Examining the HTML Reporting Sample	870
The HTMLViewer Alternative Approach.....	876
Summary of Producing HTML Reports	879
Producing Printed Reports	879
Producing Printed Reports with PrinterCE.NetCF	880
Working with the PrinterCE Object.....	884
Summary of Printing with PrinterCE.NetCF	891
Printing Reports with the Mobile Printing Toolkit	891
Summary of Printing with the Mobile Printing Toolkit	900
Pocket PC Report Generation with Report CE	900
Summary of Printing with Report CE	906
Summary.....	906

Appendix A Setting Up Your Development Environment: A Quick Step-Through	907
Install a Decent Operating System	907
Install Visual Studio .NET 2003	908
Install ActiveSync	908
Install SQL Server and SQL Server CE	908
Install the eMbedded Tools	909
Summary	910
 Appendix B Working with the Emulator.....	 911
Launching the Emulator	911
Running the Emulator Without a Network Connection	913
Configuring the Emulator	914
Moving Files to the Emulator	920
 Appendix C Resources.....	 925
Newsgroups	925
Web Sites	926
Developer Tools	930
Training	935
 Appendix D Sample Applications.....	 937
Unpacking the Sample Applications	937
Obtaining Sample Updates	937
Loading a Sample Application	937
Running a Sample Application	938
Removing an Application	938
Problems with a Sample Application	939
 Appendix E Error Handling.....	 941
Handling Errors Visual Basic Style	941
The Try, Catch, Finally Statements	946
Catching Exceptions	947
Handling Exceptions	948
Creating an Exception “Safety Net”	949

Obtaining Detailed Error Information	951
Tracking Exceptions	951
Causing Exceptions to Occur.....	954
Summary.....	956
 Appendix F Custom Controls in C#.....	 957
Step-by-Step Tutorial: Creating a New Button	957
Summary.....	972
 Index.....	 973