

Table of Contents

Acknowledgments	xxi
We'd Like to Hear from You	xxiii
About the CD	xxv
What's on the CD	xxv
Using the CD	xxv
System Requirements	xxvi
Support Information	xxvi
Conventions and Features Used in This Book	xxvii
Text Conventions	xxvii
Design Conventions	xxvii

Part 1

Project Fundamentals

Chapter 1

Introducing Microsoft Project 2003 3

Using This Book	4
Using Microsoft Project—An Overview	6
Microsoft Project 2003 Editions	7
Microsoft Project Server and Microsoft Project Web Access	10
What's New in Microsoft Project 2003	10
What's New in Project Standard 2003	11
What's New in Project Professional 2003	15
What's New in Project Server and Project Web Access 2003	16
Learning as You Go	17
Getting Started with Office Online	22
Working with the Project Guide	24
Getting Help	27
Reporting Crashes	36
Working with Project Smart Tags	36
Working with the Sample Database	37

Chapter 2

Understanding Projects and Project Management 39

Understanding Project Management Basics	39
What Is a Project?	39
What Is Project Management?	40
Understanding Project Management Processes	42
Planning the Project	43
Executing the Project	44
Controlling the Project	44
Closing the Project	45

Table of Contents

Facilitating Your Project with Microsoft Project	45
Creating a Model of Your Project	47
Working with Your Team through Microsoft Project	50
Using Microsoft Project in Your Enterprise	52
Understanding Project Stakeholders	52
Keys to Successful Project Management	54

Part 2

Developing the Project Plan

Chapter 3

Starting a New Project 59

Focusing the Project Vision	59
Defining Scope	60
Understanding Product Scope and Project Scope	60
Developing the Scope Statement	61
Creating a New Project Plan	62
Creating a Project File	62
Saving Your New Project	67
Scheduling from a Start or Finish Date	68
Setting Your Project Calendar	70
Attaching Project Documentation	73
Entering Tasks	77
Adding Tasks to Your Project Plan	78
Importing Tasks from an Excel Worksheet	80
Entering Recurring Tasks	82
Sequencing and Organizing Tasks	83
Moving Tasks	83
Inserting Additional Tasks	83
Copying Tasks	84
Deleting Tasks	85
Organizing Tasks into an Outline	86
Setting Up Your Work Breakdown Structure	88
Understanding Work Breakdown Structure Codes	88
Setting Up Work Breakdown Structure Codes	89
Charting Your WBS in Visio	90
Adding Supplementary Information to Tasks	92

Chapter 4

Viewing Project Information 93

Understanding Project Information Categories	94
Accessing Your Project Information	95
Using Views	95
Using Tables	112
Using Fields	120

Table of Contents

Rearranging Your Project Information	123
Sorting Project Information	124
Grouping Project Information	125
Filtering Project Information	127
Arranging Your Microsoft Project Workspace	132
Setting Your Default View	132
Showing and Hiding Workspace Elements	133
Splitting a Window	133
Switching among Open Projects	135
Navigating to a Specific Location in a View	136

Chapter 5

Scheduling Tasks 137

Setting Task Durations	138
Developing Reliable Task Durations	138
Understanding Estimated vs. Confirmed Durations	140
Entering Durations	140
Understanding How Durations Affect Scheduling	142
Reviewing Durations	145
Calculating Your Most Probable Duration	145
Establishing Task Dependencies	149
Creating the Finish-to-Start Task Dependency	150
Understanding the Dependency Types	151
Overlapping Linked Tasks by Adding Lead Time	153
Delaying Linked Tasks by Adding Lag Time	154
Changing or Removing Links	155
Reviewing Task Dependencies	156
Scheduling Tasks to Achieve Specific Dates	157
Understanding Constraint Types	158
Changing Constraints	160
Working with Flexible and Inflexible Constraints	162
Reviewing Constraints	163
Setting Deadline Reminders	165
Creating Milestones in Your Schedule	167
Working with Task Calendars	169
Creating a Base Calendar	169
Assigning a Base Calendar to a Task	171

Chapter 6

Setting Up Resources in the Project 173

Understanding the Impact of Resources in the Project Plan	174
Adding Work Resources to the Project	175
Adding Resource Names Manually	176
Proposing Tentative Resources	178
Adding Resources from Your E-Mail Address Book	179

Table of Contents

Using Resource Information from Microsoft Excel	180
Specifying Resource Availability	184
Adding Material Resources to the Project	186
Removing a Resource from the Project	187
Setting Resource Working Time Calendars	187
Viewing a Resource Calendar	188
Modifying a Resource Calendar	189
Creating a New Base Calendar for Resources	189
Adding Detailed Resource Information	192
Working with Supplemental Resource Fields	192
Specifying Workgroup Information	196
Adding a Note Regarding a Resource	196
Hyperlinking to Resource Information	197
 Chapter 7	
Assigning Resources to Tasks	199
Assigning Work Resources to Tasks	199
Creating Work Resource Assignments	200
Adding and Assigning Resources at the Same Time	203
Finding the Right Resources for the Job	205
Understanding Assignment Calculations	211
Assigning Material Resources to Tasks	214
Reviewing Assignment Information	216
Showing Assignments by Task or Resource	216
Showing Assignment Information Under a Task View	218
Changing Resource Assignments	220
Controlling Changes with Effort-Driven Scheduling	223
Controlling Schedule Changes with Task Types	224
Contouring Resource Assignments	227
 Chapter 8	
Planning Resource and Task Costs	231
Working with Costs and Budgeting	231
Planning Resource Costs	232
Setting Costs for Work Resources	232
Setting Costs for Material Resources	234
Setting Multiple Costs for a Resource	235
Setting Cost Accrual	238
Planning Fixed Task Costs	238
Reviewing Planned Costs	240
Reviewing Assignment Costs	240
Reviewing Resource Costs	241
Reviewing Task Costs	241
Reviewing the Total Planned Cost for the Project	243

Table of Contents

Working with Multiple Currencies	244
Setting Up a Different Currency	244
Setting Up Multiple Currencies in One Project.	244

Chapter 9

Checking and Adjusting the Project Plan 249

Working with the Critical Path and Critical Tasks	251
Understanding Slack Time and Critical Tasks	252
Viewing the Critical Path	254
Bringing In the Project Finish Date	258
Viewing Finish Dates and the Critical Path	258
Checking Your Schedule Assumptions	260
Adjusting Resource Settings to Bring in the Finish Date.	264
Reducing Project Costs	267
Viewing Project Costs	267
Checking Your Cost Assumptions.	269
Adjusting the Schedule to Reduce Costs	270
Adjusting Assignments to Reduce Costs	270
Balancing Resource Workloads	271
Viewing Resource Workloads.	272
Adjusting Resource Availability	278
Adjusting Assignments	278
Splitting Tasks	284
Leveling Assignments.	285
Changing Project Scope	293
Reviewing the Impact of Changes	294
Obtaining Buyoff on the Project Plan	294

Part 3

Tracking Progress

Chapter 10

Saving a Baseline and Updating Progress 297

Saving Original Plan Information Using a Baseline.	298
Saving a Baseline.	299
Reviewing Baseline Information.	301
Saving Additional Baselines	304
Saving Additional Scheduled Start and Finish Dates	306
Clearing a Baseline	307
Updating Task Progress	308
Choosing the Best Method for Entering Actuals	309
Updating Progress Using Task Scheduling Controls	312
Updating Progress Using Resource Work	316
Rescheduling the Project	321
Manually Updating Project Costs	323

Table of Contents

Chapter 11

Responding to Changes in Your Project 325

Monitoring and Adjusting the Schedule	327
Monitoring Schedule Progress	327
Correcting the Schedule	337
Monitoring and Adjusting Costs	338
Monitoring Project Costs	339
Realigning the Project with the Budget	344
Monitoring and Adjusting Resource Workload	345
Monitoring Resource Workload	345
Balancing the Resource Workload	351

Part 4

Reporting and Analysis

Chapter 12

Reporting Project Information 355

Establishing Your Communications Plan	356
Setting Up and Printing Views	358
Getting Assistance from the Report Project Guide	360
Copying a Picture of a View	361
Generating Reports	363
Summarizing with Overview Reports	366
Focusing on Tasks with Current Activity Reports	371
Analyzing Budget Status with Cost Reports	375
Evaluating Resource Allocation with Assignment Reports	382
Reviewing Resource Usage with Workload Reports	388
Revising a Built-in Report	389
Copying an Existing Report	390
Modifying an Existing Report	392
Adjusting the Page Setup of a Report	393
Building a Custom Report	393
Generating Reports from Project XML Data	395
Publishing Project Information to the Web	397

Chapter 13

Analyzing Project Information 401

Analyzing Progress and Costs Using Earned Value	401
Generating Earned Value Data	402
Reviewing Earned Value Data	404
Calculating Project Information in Microsoft Excel	410
Analyzing Numeric Project Data in Excel	410
Analyzing Timephased Project Data in Excel	417
Analyzing Project Data with Crosstab Tables	420
Charting Project Data Using S-Curves	422

Part 5

Managing Multiple Projects

Chapter 14

Managing Master Projects and Resource Pools **427**

Structuring Master Projects with Subprojects	427
Setting Up a Master Project	428
Working with Subproject Information	432
Unlinking a Subproject from Its Source File	436
Removing a Subproject from the Master Project	437
Consolidating Project Information	437
Sharing Resources Using a Resource Pool	441
Setting Up a Resource Pool	441
Linking a Project to Your Resource Pool	443
Checking Availability of Resource Pool Resources	447
Updating Resource Pool Information	449
Disconnecting a Resource Pool from a Project Plan	450

Chapter 15

Exchanging Information Between Project Plans **451**

Linking Information Between Project Plans	451
Linking Tasks Between Different Projects	451
Reviewing Cross-Project Links	456
Updating Cross-Project Links	458
Removing Cross-Project Links	459
Copying and Moving Information Between Projects	459
Copying and Moving Task and Resource Information	459
Copying Fields Between Projects	461
Copying Project Elements Using the Organizer	462
Copying an Element from a Project to the Global Template	463
Copying an Element Between Two Projects	464

Part 6

Integrating Microsoft Project with Other Programs

Chapter 16

Exchanging Information with Other Applications **469**

Copying Information	471
Copying from Microsoft Project to Another Application	471
Copying from Another Application to Microsoft Project	474
Copying a Picture of a View	476
Embedding Information	479
Embedding from Microsoft Project to Another Application	479
Embedding from Another Application to Microsoft Project	483

Table of Contents

Linking Information	489
Linking from Microsoft Project to Another Application	489
Linking from Another Application to Microsoft Project	490
Hyperlinking to Documents in Other Applications	492
Publishing Project Information to the Web	493
Creating Project XML Data	496
Importing and Exporting Information	497
Importing Information into Microsoft Project	498
Exporting Information from Microsoft Project	500
Chapter 17	
Integrating Microsoft Project with Microsoft Excel	503
Copying Between Microsoft Project and Excel	504
Copying Information from Excel	504
Copying Information to Excel	508
Embedding Between Microsoft Project and Excel	510
Embedding an Excel Object in Project	510
Embedding a Project File in Excel	513
Linking Between Microsoft Project and Excel	516
Linking from Excel to Project	517
Linking from Project to Excel	518
Working with a Linked Object	519
Importing and Exporting with Excel	521
Importing from Excel to Microsoft Project	521
Exporting from Project to Excel	529
Chapter 18	
Integrating Microsoft Project with Microsoft Outlook	535
Exchanging Task Information with Outlook	535
Adding Outlook Tasks to Microsoft Project	536
Adding Microsoft Project Tasks to Outlook Tasks	537
Integrating Tasks Between Project Web Access and the Outlook Calendar	538
Building Your Resource List with Outlook	542
Exchanging Workgroup Messages	542
Sending Project File Information	543
Sending an Entire Project File	543
Sending Selected Tasks or Resources	544
Routing a Project File	547
Publishing the Project File to an Exchange Folder	549
Chapter 19	
Collaborating Using E-Mail	551
Setting Up E-Mail Workgroup Messaging	552
Understanding System Requirements	552
Downloading and Installing the Workgroup Message Handler	552
Preparing Your Project Plan for E-Mail Collaboration	553

Table of Contents

Sending Assignments and Updates to Team Members	555
Sending Assignments to Team Members	555
Receiving Workgroup Messages from Team Members	557
Sending Task Updates to Team Members	558
Requesting Progress Information	559
Resending Task Assignments	560
Receiving Assignments from the Project Manager	560
Receiving and Responding to Assignments	560
Providing Assignment Status Updates	562

Part 7

Managing Projects Across Your Enterprise

Chapter 20

Understanding the Project Workgroup and Enterprise Model 567

Who's Who in Enterprise Project Management	568
Understanding Project Server Components	569
Understanding Project Workgroup Collaboration	571
Understanding Enterprise Project Management	574
Standardizing and Customizing Enterprise Projects	575
Managing Enterprise Resources	575
Analyzing Your Enterprise Project Activities	576
Modeling Enterprise Implementations	576
Implementing a Pyramid Hierarchy	577
Implementing a Tapered Block Hierarchy	577
Implementing a Straight Block Hierarchy	578

Chapter 21

Administering Project Server and Project Web Access for Your Enterprise 579

Configuring Your Enterprise and Workgroup	580
Managing Users and System Security	583
Establishing User Accounts and Permissions	583
Managing Security	593
Administering the Enterprise Resource Pool	598
Creating the Enterprise Resource Pool	599
Updating Resource Information	606
Deactivating Users	608
Customizing Enterprise Resource Fields	609
Establishing the Enterprise Portfolio	617
Publishing Projects to the Server	617
Configuring Portfolio Analyzer and Portfolio Modeler	618
Setting the Enterprise Project Version	620

Table of Contents

Standardizing Enterprise Project Elements	621
Working with the Enterprise Global Template	622
Customizing Enterprise Project Fields	625
Setting Up Team Member Timesheets	629
Establishing the Update Method and Restrictions	630
Establishing the Default Timesheet Fields	633
 Chapter 22	
Managing Enterprise Projects and Resources	637
Connecting to Your Project Server	638
Setting Up Project Professional for Your Server	638
Logging On via Project Professional	640
Logging On via Project Web Access	642
Working with Enterprise Projects	644
Creating a New Enterprise Project	645
Maintaining Your Enterprise Projects	649
Working Offline with Enterprise Projects	654
Building Your Enterprise Project Team	655
Creating Generic Resources as Placeholders	656
Working with Enterprise Resource Outline Codes	658
Assembling Your Project Team	660
Assigning Tasks to Enterprise Resources	666
Collaborating with Your Project Team	672
Designing the Team Member Timesheet	672
Configuring Update Options	675
Exchanging Information with Team Members	681
Managing Documents, Risks, and Issues	691
Tracking Non-Project Tasks and Time	695
 Chapter 23	
Participating On a Team Using Project Web Access	699
Getting Started with Project Web Access	700
Logging On	700
Finding Your Way Around	702
Working with Assignments	703
Accepting New and Changed Assignments	703
Creating New Tasks	705
Assigning Yourself to Existing Tasks	706
Tracking Progress on Your Assignments	707
Submitting Progress Information	708
Writing Text-Based Status Reports	710
Tracking Nonproject Tasks and Time	711
Reviewing Task and Project Information	712
Working with the Timesheet and Gantt Chart	712
Glimpsing the Big Project Picture	717

Table of Contents

Setting Up E-Mail Reminders and Calendars	718
Configuring E-Mail Notifications	718
Working with Project Tasks in Your Outlook Calendar	719
Managing Risks, Issues, and Documents	722
Mitigating Project Risks	723
Monitoring Project Issues	724
Controlling Project Documents	725
Managing Resources in Project Web Access	726
Finding the Right Resources	726
Reviewing Resource Allocation and Availability	730
Delegating Tasks to Resources	731
Updating the Enterprise Resource Pool	732
Creating an Administrative Project	734
Setting Up E-Mail Notifications	734
Reviewing Resource Timesheets	735

Chapter 24

Making Executive Decisions Using Project Web Access

737

Getting Started with Project Web Access	737
Logging On	738
Getting Oriented	739
Working with Views and Fields	740
Rearranging View Information	741
Printing or Exporting a Table	743
Analyzing Your Project Portfolio	744
Reviewing Summary and Detail Project Information	744
Opening Multiple Projects in Project Professional	745
Analyzing Resource Information	746
Reviewing Resource Assignments	746
Reviewing Resource Availability	747
Examining Projects Using Portfolio Analyzer	749
Running Scenarios Using Portfolio Modeler	750
Setting Up E-Mail Reminders and To- Do Lists	752
Configuring E-Mail Notifications	752
Creating To-Do Lists	753
Managing Risks, Issues, and Documents	754
Mitigating Project Risks	755
Monitoring Project Issues	756
Controlling Project Documents	756

Part 8

Customizing and Managing Project Files

Chapter 25

Customizing Your View of Project Information 761

Customizing Views	761
Changing the Content of a View.	762
Creating a New View.	764
Changing the Font for a View.	765
Formatting a Gantt Chart View.	766
Modifying a Network Diagram	772
Modifying the Resource Graph.	775
Modifying the Calendar View	778
Modifying a Sheet View.	780
Modifying a Usage View	781
Modifying the Timescale	783
Customizing Tables.	785
Customizing Fields	788
Customizing a Field	789
Customizing Groups	795
Modifying a Group	795
Creating a New Group.	797
Customizing Filters.	799
Modifying a Filter	799
Creating Filters	801
Customizing AutoFilter Criteria.	805
Working with Outline Codes.	806
Setting Up Outline Codes	807
Assigning Outline Codes	810
Reviewing Your Tasks or Resources by Outline Code	811
Sharing Customized Elements Among Projects	812
Working with the Organizer	812
Copying Customized Elements.	813
Removing Customized Elements	815
Renaming Customized Elements	815
Restoring Customized Elements to their Default State	815

Chapter 26

Customizing the Microsoft Project Interface 817

Creating and Customizing Toolbars	817
Customizing Toolbars	818
Creating Toolbars	821
Deleting Toolbars	823
Modifying Button Images	824
Creating and Customizing Menus	825

Table of Contents

Creating and Customizing Forms	827
Creating Forms	827
Editing Forms	831
Renaming Forms	831
Displaying Custom Forms	831
 Chapter 27	
Automating Your Work with Macros	833
Understanding Macros	833
What Is a Macro?	833
Why Use Macros?	834
Creating Macros	834
Understanding the Record Macro Dialog Box	835
Knowing When to Say “When”	837
Recording a Macro	838
Looking at Macro Code	840
Running Macros	842
Creating Keyboard Shortcuts	843
Creating Toolbar Buttons	843
 Chapter 28	
Standardizing Projects Using Templates	847
Understanding the Template Types	848
Working with the Project Global Template	848
Working with Project Templates	851
Starting a New Project Using a Template	851
Downloading a Project Template	855
Creating Your Own Project Template	857
Updating an Existing Template	859
Closing a Project	860
Analyzing Project Performance	860
Recording Lessons Learned	861
Saving Acquired Project Knowledge	862
 Chapter 29	
Managing Project Files	863
Opening Project Files	863
Opening a Saved Project	863
Opening Projects Created in Previous Versions of Microsoft Project	865
Searching for Files	866
Saving Files	869
Saving a New Project to Your Local Computer or Network Drive	869
Saving a Project to Project Server	870
Specifying the Default Save Location	872

Table of Contents

Saving and Opening with Different File Formats	872
Safeguarding Your Project Files	875
Saving Project Files Automatically	875
Backing Up Your Project Files	875
Protecting Your Project Files with a Password	877
Responding to a Microsoft Project Problem	877

Part 9

Programming Custom Solutions

Chapter 30

Understanding the Visual Basic Language 881

Understanding Objects, Properties, Methods, and Events	882
Objects	883
Properties	884
Methods	884
Events	885
Understanding Data Types	885
Understanding Variables	887
Understanding Procedures	888
Understanding Scope	889
Understanding Decision Structures	890
Understanding Loop Structures	891
Writing Code that Is Easily Understood	894
Naming Conventions	894
Declarations	897
Named Arguments	897
Modularized Code	898
Formatted Code	899
Writing Efficient Code	900
Trapping Errors	902

Chapter 31

Writing Microsoft Project Code with Visual Basic for Applications 905

Using the Visual Basic Editor	906
Windows	906
Tools Menu	908
Understanding the Microsoft Project Object Model	912
What Is an Object Model?	913
Useful Tools When Learning the Object Model	913
Creating Macros	916
Writing a Macro in the Editor	917
Deciding Where to Create and Store Procedures	918
Working with Events	919

Table of Contents

Debugging Macros	921
Using Breakpoints	922
Tracing Execution	922
Using Watches	923
Using the Locals Window	924
Using the Immediate Window	925
Debugging with Navigation Tools	925
Creating UserForms	926
Creating a Simple Form	926
Adding Code to Your Form	929
Integrating Your Form into Microsoft Project	929
Extending and Automating Microsoft Project	932
Working with External References	932
Automating Microsoft Project	934

Chapter 32

Working with Microsoft Project Data 937

Introducing Common Database Elements	938
Storing Data in a Database	939
Understanding Data in the Database	944
Understanding Project OLE DB Provider Data	947
Understanding the Microsoft Project Database	949
Understanding the Project Server Database	950
Partitioning Your Database on Separate Servers	950
Experimenting with Project Server Using the Sample Database	951

Part 10

Appendixes

Appendix A

Installing Microsoft Office Project 2003 955

Installing Project Standard and Project Professional 2003	955
Project Standard and Project Professional System Requirements	955
Setting Up Project 2003 for the First Time	956
Upgrading from a Previous Version of Project	958
Activating Project 2003	959
Running Maintenance Mode	959
Working with an Administrative Installation Point	961
Microsoft Office Project Server 2003 Setup Issues	962
Making Decisions about Your Project Server Setup	963
Enterprise Project Management System Requirements	965

Table of Contents

Appendix B

Field Reference 967

Field Types	969
Currency Fields	969
Date Fields	974
Duration Fields	978
Enumerated Fields	985
Indicator Fields	987
Integer Fields	987
Outline Code Fields	988
Percentage and Number Fields	989
Text Fields	991
Yes/No Fields	993
Special Field Categories	997
Custom Fields and Custom Outline Codes	997
Earned Value Fields	998
PERT Analysis Fields	1001

Appendix C

Online Resources for Microsoft Project 1003

Microsoft-Sponsored Resources	1003
Independent Resources	1005

Appendix D

Keyboard Shortcuts 1007

Index of Troubleshooting Topics 1009

Index 1013