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# Expert SharePoint 2010 Practices

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Steve Wright, Razi bin Rais, Darrin Bishop, Matt Eddinger, Brian Farnhill, Ed Hild, Joerg Krause, Cory Lorient, Sahil Malik, Matthew McDermott, Dan Bakmand-Mikalski, Dave Milner, Ed Musters, Tahir Naveed, Mark Orange, Doug Ortiz, Barry Ralston, Ed Richard, and Karthick Sethunaryanan

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## Expert SharePoint 2010 Practices

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ISBN-13 (pbk): 978-1-4302-3870-6

ISBN-13 (electronic): 978-1-4302-3871-3

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Distributed to the book trade worldwide by Springer Science+Business Media, LLC., 233 Spring Street, 6th Floor, New York, NY 10013. Phone 1-800-SPRINGER, fax (201) 348-4505, e-mail [orders-ny@springer-sbm.com](mailto:orders-ny@springer-sbm.com), or visit [www.springeronline.com](http://www.springeronline.com).

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*I would like to dedicate this book to my mother Zahida Rais and sister Khaizran Siddiqui for both standing beside me throughout my career and while I was writing this book.*

*Razi bin Rais*

*I dedicate my chapter to Dan and June Eddinger for raising a son they can be proud of, Marcy Eddinger for supporting me when I needed it most, and my nephews, Daniel and William, who inspire me to teach future generations every day.*

*Matt Eddinger*

*For my daughter Vanessa, who always makes me smile, and for the whole SharePoint community—especially the Australian guys and girls, whose motivation and talent are a constant inspiration for me.*

*Brian Farnhill*

*I want to dedicate this book to my father (Abdul Sattar Nadeem) and my mother (Zahida Sattar), without them I wouldn't be where I am today.*

*Tahir*

*Naveed*

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Search Austin, a volunteer K9 search team serving the FBI and Austin and San Antonio police departments. An accomplished cook and bartender, in his spare time Matt spends as much time with his wife as his dogs will allow. (Photo credit: Carlos Austin, Austin Photography)



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Jeff has years of professional experience in the field of IT and strategic business consulting, leading both sales and delivery efforts. He regularly contributes to certification and product-roadmap development with Microsoft, and he speaks publicly on Microsoft enterprise technologies. With his roots in software development, Jeff's areas of expertise include collaboration and content management solutions, operational intelligence, digital marketing, distributed component-based application architectures, object-oriented analysis and design, and enterprise integration patterns and designs.

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Jeff enjoys non-work-related travel and spending time with his wife and daughter, and he wishes he had more time for both. He can be reached at [jeff.sanders@dynamicshift.com](mailto:jeff.sanders@dynamicshift.com).

# Acknowledgments

Many thanks to Bob Wallace and Beau Bertke, my teammates at Microsoft, for helping me figure some of this stuff out.

Matt Eddinger

I would like to give thanks to my wife of nearly ten years, Mandy, whose love, inspiration and no-nonsense attitude have kept me grounded. You truly are the complement to my life; I love you. To my parents, Cliff and Becky, who through careful instruction and loving discipline guided me, gave me wisdom, and encouraged me to honor God in all I do. To my family, for your love. To my Gulf Coast friends, you gave me your unguarded friendship for many years, and I miss you all. To Apress publishing for giving me a chance and patiently bearing with me in my first publication endeavor. To you, the reader, without whom this book would be needless; I hope you enjoy it. Finally, to the Eternal Living God that has granted me life to live, a mind to learn, a heart to listen, and a mouth to speak the words “Thank you.”

Cory Lorient

Any acknowledgment for my success has to begin with my wonderful wife, Mary Jane. Through my many different occupations, you have never wavered in your support. For that I am blessed. You never complain when I have to push through a weekend to complete a chapter and add that one last thing to make it perfect. Thank you for raising two amazing dogs! I became an MVP through the help and guidance of many friends and colleagues who guided my technical education through the years. To my friends in the MVP community, I want to say thank you for your patience with my many questions. My friends at Microsoft, who are my sounding board when the path to success is unclear, I appreciate you listening and helping to make the product better so that everyone can benefit from what great software you have produced.

Matthew McDermott

I would like to thank Ted and Andrew of Critical Path Training for starting me on my SharePoint journey, the folks at Telerik for their fantastic support of my community work, and finally my loving wife Gala for her unwavering support for this project.

Ed Musters

I want to thank Pradeep Thekkethodi at Orion who encouraged and supported me to become a part of this book.

Tahir Naveed

I would like to dedicate this book and thank my family for all their help and support, alongside Apress, which made the publishing of the chapter a reality.

Doug Ortiz

First and foremost, I would like to thank my parents, sister, and family for providing me all the support, motivation, and encouragement required for me to attain success in entrepreneurship. I also thank my friends Sudarshan and Anand for always being there to advise, guide, and help me throughout my career. I would also like to thank my team for working with me (and tolerating my quest for speedy perfection) and helping us win customer confidence and trust all these years. Last and most important, I would like to express my gratitude to all my clients. They have been partners who have provided a wonderful opportunity for me to work with them, learn their problems and objectives, and collaboratively provide suitable and acceptable solutions. Without those learning experiences, being a part of this book would not have been possible.

Karthick Sethunarayanan

# Workflows

These days organizations have two possible ways to get ahead of each other. One is by working harder and the other is by working smarter. Now we all know how much working hard gets you ahead, not much! So it all boils down to working smarter. Working smarter simply means achieving more by doing less. This means finding someone else to do your work, so you don't have to do it, conventionally referred to as outsourcing. Interestingly, we know that doesn't go too far either! Therefore, the only long term and viable alternative that organizations have discovered to better productivity is to automate. Automate more and more processes. Automation in an office environment means creating software that supports business processes that involve numerous roles, people, and perhaps, even external systems.

As a result of following those automated processes, there is never a confusion on whose turn it is next to approve a certain project proposal so it can be efficiently routed to a customer. In contrast, when a serious exception occurs based on predefined rules, appropriate people can be emailed so human intervention can be involved where necessary. By following these processes in a system setup, you can be assured that no particular step was missed. There is no need to double check, because the computers are doing that double-checking for you. Finally, by working through the process defined in a computer system, you are also collecting historical information that can be looked at later or archived using one of the many ways to manage SharePoint data as you have already seen in this book.

To support this endeavor, a new player was introduced in .NET 3.0 called as the Workflow Foundation! SharePoint 2007 and SharePoint 2010 leverage Workflow foundation to provide the capability of authoring and running workflows in SharePoint as well. In other words, SharePoint can act as a workflow host.

Now you might argue that everything I described so far about creating automated business processes in software can be hand-coded from scratch. You'd find me agreeing with you—not everything needs workflow foundation. In fact, using workflow foundation introduces some additional complexity and also ties you down to a certain way of doing things. But, it gives you so much other stuff on top, that maybe in some instances it makes sense to represent complex long-running business processes using workflow foundation. In terms of SharePoint 2010, the following interesting facilities become available to you should you choose to author your business processes in SharePoint Workflows.

- Everything that workflow foundation gives you, such as the reliability of long-running processes to last across machine reboots, is made available to you, if you represent your business processes as workflows in SharePoint.
- Ability to visualize the workflow graphically, so the end users can view the current flow. The running progress of a workflow is made available using Workflow Visualization using Visio if you use Workflow in SharePoint 2010.

- Business users can craft up workflows in tools such as Visio or SharePoint Designer in a very easy-to-use graphical way. These graphical views of the workflow can then show running workflows in SharePoint; reporting analysis tools can be written on the log history of the running workflow instances which can allow you to perform improvements on the running workflow.
- The same workflows that have been written by business users can then be exported to Visual Studio, where developers can extend the workflows and integrate them with custom logic, third party products, and make them interact with proprietary algorithms or systems. Of course, you do have the capability of writing a workflow from scratch in Visual Studio as well.

Given an enterprise processes problem, when should you choose to implement it as a workflow and when should you just write custom code representing that business process? I hope once you have examined all of the preceding scenarios in this chapter, you will be able to answer this question very well.

In this chapter, I will start by demonstrating out of the box workflows that come with SharePoint, so you get an idea of what workflow foundation in SharePoint gives us. Once you have a solid understanding of the basics, then I will enhance it further by involving tools such as Visio and SharePoint Designer. Finally, I will wrap up by involving Visual Studio in authoring complex logic that SharePoint Designer and Visio are unable to express. Let's get started with using out of the box workflows in SharePoint 2010.

## Out of the Box Workflows

SharePoint 2010 comes with several workflow templates out of the box. These are generally installed as features, and are available for you to associate with lists or at the site level. In SharePoint 2007, you could only associate workflows with lists. Therefore, step one of having a workflow available for use is for it to be installed as a feature. Once it is available for use, you can then create "Associations" of the workflow with existing lists or sites. At this point, you can optionally ask the user associating the workflow some questions, usually presented as an "Association Form". An association form is what allows the workflow to interact with the user when the workflow is first associated with a list.

Once you have created an association of a workflow template, you can then choose to run the workflow on individual list items (or run it on the site if you had chosen to associate it). When you start a workflow, it can ask more questions by showing yet another form called as the initiation form. Thus, the "initiation form" is what allows the system to ask questions when a workflow is first initiated/instantiated.

As the workflow is running, it can ask further questions of the users. In asking those questions, the workflow can create tasks for users, and those tasks can then be performed by the end users. Those tasks go in a list, and can be represented as yet another kind of form, called as the "Task Form". Note that a workflow can have zero or one association forms, it can have zero or one initiation forms, but it can have many task forms.

Similar to task forms, the workflow can also be altered midcourse by end-users by using yet another kind of form called a "Modification form". Just like the task form, there can be zero or many modification forms on a workflow.

Let's pick an out of the box workflow and understand the usage of all these forms and the workflow lifecycle in general. The workflow I intend to use here is the "Approval" Workflow, which comes out of the box in paid versions of SharePoint.

In your SharePoint site, go ahead and create a new list based on the Custom List Template and name it "Items to be Approved". Then visit the list settings page of this list and view the versioning settings. Under versioning settings, choose to "require content approval for submitted items". By