

Silverlight 2 Recipes

A Problem-Solution Approach



Jit Ghosh, Rob Cameron

Silverlight 2 Recipes: A Problem-Solution Approach

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For Sumona, my wife, the love of my life and the source of all my inspiration; and Pixie, the greatest kid on this planet, and the best daughter one could ever have. You are the lights of my life.

—Jit

To my beautiful and loving wife, Ally, and daughters Amanda and Anna, who bring so much happiness to my life.

—Rob

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Foreword

Being asked to write a foreword for a book is like being asked to be the best man or maid of honor in a wedding. You participate with the intention to support and to represent the curators of a new entity (in this case, a book) with pride and integrity. You also have to be genuine or the “crowd” will see right through you.

For the past 10 years I have worked at Microsoft, helping build products, marketing new initiatives, and most important, evangelizing. During my tenure in Microsoft’s Developer and Platform Evangelism team, I have had the great pleasure to work with some of the brightest, connected, realistic, and passionate technologists. Jit Ghosh and Rob Cameron are from this camp and they are what make this book unique.

Purchasing decisions are made for lots of reasons, but most of the time it comes down to true value and trust. In other words, do you trust the brand? Do you trust the builder? Do you trust the author? Can you find something else of greater value? How do you quantify the value? The last question is tricky when you are selecting a book on emerging technologies, in this case Silverlight. A book can be useless even before the ink dries, yet other books become classics, impervious to time. This is where authors play the most important role; they can bring immeasurable value to a subject because of their experience and perspective. Sure, Jit and Rob know Silverlight—they have it down cold—but what they really bring to the table is years of experience and perspective working directly with customers and helping them adopt Microsoft technologies.

The authors have peppered this text with links to Microsoft Knowledge Base articles, they bridge the chasm of Windows Presentation Foundation (WPF) to Silverlight, and they highlight the subtleties—after all, nine times out of ten, it’s the edge case that catches us when tackling something new. Most important, they use a classic problem-solution pattern to educate the reader. For me, this is the best way to learn. The .NET Framework, WPF, and Silverlight each contain hundreds of APIs. The task of connecting the dots can be daunting—especially when you are pressed for time. The problem-solution pattern helps make learning more digestible. Jit and Rob use a “recipe” metaphor to tie the problem-solution concept together. The real value here is that they know exactly what to “serve.” Another interesting aspect of this book is the style and tone of the writing. The book has an easy-to-read, cause-and-effect style that helps you move through content in an efficient manner.

I’ve had the opportunity to work with the authors on numerous occasions. They work “in the field”—they are the first contact points with our customers. Jit and Rob shoulder the responsibility every day to guide our customers in the right direction, to drive our product groups to make informed decisions, and to evangelize with pragmatism.

This book represents an extension of Jit and Rob’s passion to spread the word, to share their experiences from the field, to pass along the lessons they have learned. At Microsoft we have many opportunities to connect with communities of developers and designers; blogs, events, whitepapers, partner conventions—communicating is part of our DNA, especially on the Evangelism team. A book, however, has a unique gravity that is hard to explain. Many people want to write books, but few follow through on their desires. A blog entry is one thing, but a book has a whole different dimension of responsibility. Those who are successful are motivated by seeing the value in a broader collection of ideas brought together in an actionable, valuable set of guidance.

Jit and Rob picked a terrific time to write a book on Silverlight. We are now at the forefront of a new era on interactivity on the Web. Silverlight is a galvanizer designed to bring together Microsoft’s

client platform technologies, services initiative, and web technologies to drive the next wave of media experiences and rich Internet applications. Silverlight 2 is ready for prime time, and this book represents the roadmap to help you build the right application. I hope you find this book helpful in your endeavors to reach your goals in the next web space. Go shape the future.

Sincerely,

Eric Schmidt

*Director of Media and Monetization Evangelism
Microsoft Corporation*

About the Authors



JIT GHOSH is an Industry Architect with the Developer Platform Evangelism team at Microsoft, working on digital media solutions. Jit has over 16 years of solutions architecture and software engineering experience. In the last few years he has focused on broadcast, digital content publishing, and advertising space. You can read more about Jit's current work at <http://blogs.msdn.com/jitghosh>.



Employed by Microsoft since 2001, **ROB CAMERON** is an Evangelist with Microsoft Corporation and is based out of Atlanta, Georgia. As part of Microsoft's Communication Sector Developer & Platform Evangelism team, Rob focuses on development tools and technologies, from the server to the mobile device for telecommunications, cable, media and entertainment, and hosting companies. Rob coauthored (along with Dale Michalk) *Building ASP.NET Server Controls* (Apress, 2003), wrote the operations chapter for *Pro BizTalk 2006*, (Apress, 2006) and recently completed another book with Dale Michalk titled *Pro ASP.NET 3.5 Server Controls and AJAX Components* (Apress, 2008). He has a master's degree in information technology management and a bachelor's degree in computer science. Visit Rob's blog at <http://blogs.msdn.com/RobCamer>.

About the Technical Reviewer



TODD HERMAN works for Berico Technologies as a senior developer as part of the intelligence community. He has been programming since he received his first computer, a Commodore 64, on his eleventh birthday. His experience ranges from developing data-entry software in FoxPro for a water research laboratory to writing biometric applications in Visual Basic for NEC. He currently lives in Virginia with his wife and children, spending his free time programming, playing computer games, and watching the Sci-Fi Channel.

He has recently set up a blog, which can be found at <http://blogs.bericotechnologies.com/todd>. He tries to keep things updated, but his family and other hobbies occasionally get in the way.

Todd is also the coauthor of *Visual Basic 2005 Recipes: A Problem-Solution Approach* and *Visual Basic 2008 Recipes: A Problem-Solution Approach*, both from Apress.

Acknowledgments

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From Jit: I would also like to thank my family, especially my wonderful wife Sumona for being the force behind everything I have ever achieved and for making me believe in myself; and my beautiful daughter Pixie for being patient when Daddy could not make time and for never forgetting the daily dose of hugs and kisses. And lastly, a huge thanks to Rob Cameron for agreeing to work with me on this book, for sharing his insight on authoring, and for his technical acumen—without Rob, this book would have remained a dream.

From Rob: I would like to thank my family—especially my lovely wife Ally for her dedication to our family and for encouraging me to reach for new heights. I would also like to thank my mom and grandparents. Without their love and assistance, I may never have found my passion for computers and programming. I would also like to thank Jit Ghosh for inviting me to join him on this journey, and for being a fantastic coauthor on this gigantic effort.

Introduction

Silverlight Tools for Visual Studio 2008, Visual Studio 2008, and Microsoft Expression Blend 2 Service Pack 1 (SP1) give you the power to design innovative and powerful Silverlight 2 user interfaces. They give you access to cutting-edge graphics, animation, rich controls, and data binding in the powerful XML Application Markup Language (XAML) declarative language. For application logic, you can continue to use all the usual Visual Studio 2008 features such as debugging and access to your favorite development language, like C# or VB, and dynamic languages such as IronPython, IronRuby, and Managed JScript. What is truly amazing is that the breadth of the .NET Framework 3.5, including functionality such as multithreading, generics, LINQ, and extension methods, is included in such a diminutively sized browser plug-in.

While rich Internet application (RIA) development tools have been around for a while, Silverlight 2 makes RIA development real for traditional developers letting them use their favorite tools and programming languages to create fabulous user experiences.

Who This Book Is For

If you are a web application developer looking for ways to create rich, interactive, and immersive browser-hosted applications using Microsoft Silverlight and .NET, then this book will give you the information you need on the core concepts and techniques fundamental to Silverlight-based development. Even if you did not have Silverlight in mind, the book will help you see the possibilities and understand what you can (and in some cases can't) achieve with the technology.

Having an understanding of the .NET Framework will help, but if you are an experienced developer new to the .NET Framework, you will still be able to learn Silverlight 2 using this book because much of the development is in the XAML markup language as well as in code.

Note You still may want to grab a programming in C# text such as Christian Gross's *Beginning C# 2008: From Novice to Professional, Second Edition* (Apress, 2008) if you are not confident with C#.

If you are a Windows Presentation Foundation (WPF) developer, this book will help you understand how to work with Silverlight 2, which uses the same markup language but is a subset of WPF functionality packaged in a cross-browser and cross-platform plug-in.

The example code in this book is written in C#. However, much of the development is in the XAML, not in C#, so if you are a VB.NET developer, the markup is almost exactly the same. For the examples that do include C# code in the code-behind, the code translates pretty easily, as the .NET Framework 3.5 for Silverlight is language agnostic.

If you are a developer in need of learning a particular technique, this book is for you as it is task driven in Apress's recipe format. Each major facet of Silverlight 2 development is presented with a description of the topic in the form of a problem statement, a "How It Works" section, and a section that walks through the recipe sample code.

How This Book Is Structured

This book consists of chapters that focus on individual topic areas of Silverlight. Each chapter attempts to address core concepts and techniques as individual recipes in that topic area. Chapters 1, 2, and 3 are primarily intended to help you grasp the fundamental concepts of Silverlight, including a quick tour of the developer tools, the Silverlight programming model, and XAML-based UI development. Many of these concepts are critical to understanding the later chapters, so we advise you to start the book by reading these chapters first. Chapters 4 through 8 address the topics of data binding, control customization, and development; browser integration; networking and web services; and rich media integration.

Prerequisites

You will need a version of Visual Studio 2008, with Service Pack 1 of Visual Studio 2008 applied. You will also need to install Silverlight 2 Tools for Visual Studio 2008 Service Pack 1. You can use any version of Visual Studio 2008, and you can download the free version of Visual Studio 2008 Express edition here:

<http://www.microsoft.com/express/vcsharp/Default.aspx>

You can get the Silverlight tools from <http://silverlight.net/GetStarted/>, and you can download a trial version of Expression Blend 2 from <http://www.microsoft.com/Expression>. If you are an MSDN Subscriber, you can also download it from subscriber downloads. You will also need to apply Service Pack 1 to Expression Blend 2.

Some of the recipes in this book use a SQL Server Express 2008 database. You can download SQL Server Express 2008 for free from <http://www.microsoft.com/express/sql/>. For some of the recipes in Chapter 8, you may need a video encoder. You can download a trial version of Microsoft Expression Encoder from <http://www.microsoft.com/Expression>.

Downloading the Code

The code is available in zip file format in the Source Code/Download section of the Apress web site. Please review the `readme.txt` for setup instructions.

Contacting the Authors

To reach the authors, please go to their blogs and click the Email link to send them an email.

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