Chapter 1: Exploring Visual Studio Extensions

In This Chapter

✔ **Getting the most out of Visual Studio**

✔ **Building the next generation of Web sites with AJAX**

✔ **Looking ahead to the future of Visual Studio**

*T*he name of this chapter should be "Getting Everything You Can from Visual Studio 2008, Now and in the Future." Since the release of Visual Studio in October 2007, Microsoft has released a ton of free add-ons that you can download from the Web.

Extending Visual Studio

You have many opportunities to extend Visual Studio. Some are add-ons from Microsoft; others are cool toys created by the community. This section lists a few of both — and share some additional resources with you, including how to get hold of trial versions of development tools.

Adding administration and troubleshooting tools

One of the best things about add-ons is that all you have to do to get them is download them. Some help you administer and troubleshoot development projects; others provide new tools for programming Vista and Office 2007.

Administrative and troubleshooting downloads available from Microsoft include the following:

✦ **Team Foundation Server (TFS) Admin Tool** — As an administrator, add users to TFS through a single user interface (UI). Download the tool from

```
http://msdn2.microsoft.com/tfs2008
```

✦ **Web Application Projects** — Create ASP.NET Web sites. Originally used for Visual Studio 2005 and .NET 2.0, these projects easily load into and are converted to Visual Studio 2008 for .NET 3.5. (As this book goes to press, there is no similar page for Visual Studio 2008.) Download from

```
http://msdn2.microsoft.com/asp.net/aa336618.aspx
```

✦ **Web Deployment Projects** — Create a project to deploy your ASP.NET Web sites. Originally used for Visual Studio 2005 and .NET 2.0, these projects easily load into and are converted to Visual Studio 2008 for .NET 3.5. Download from

> http://msdn2.microsoft.com/ asp.net/aa336619.aspx

✦ **CSS Control Adapter Toolkit** — Take control of the elements rendered by Web server controls, using Cascading Style Sheets (CSS). The toolkit makes it possible to use CSS to override many server controls' default behavior of using <table> tags to render themselves to the browser. Download the toolkit from

> www.asp.net/cssadapters

If you're not that familiar with using CSS for Web-page layout, pick up a copy of *CSS Web Design For Dummies,* by Richard Mansfield (Wiley). The book goes way beyond your basic CSS styling and shows you how to create multicolumn Web pages without using HTML tables.

✦ **Developer Highway Code** — Access and use an e-book that features guidance and security checklists for .NET 1.1, 2.0, and 3.5. This PDF file covers writing secure code, brought to you by the Microsoft Patterns & Practices group. Download the e-book from

> www.microsoft.com/uk/msdn/security/dev_highway.mspx

✦ **Spec# Programming System** — Use the Spec# programming language to extend design-by-contract features to C#. Get more information at

> http://research.microsoft.com/specsharp

The Team Foundation Server Admin Tool is part of the Visual Studio Power Toys, which are released under the Microsoft Shared Source initiative. You can read more about Shared Source and find additional downloads at

www.codeplex.com/PackInstaller

CodePlex is a Web site that Microsoft dubs a "new collaborative development portal." CodePlex was formally launched in June 2006 with 30 open source projects for developers using Microsoft platforms. Be sure to check out the CodePlex Web site at www.codeplex.com.

Downloading new programming tools for Vista and Office

With the release of Windows Vista and Office, Microsoft made available a number of tools that target these newer programming models. Here are a few resources you should check out:

✦ **Extensions for Windows Workflow Foundation (WWF)** — Provide support for building applications that use WWF

✦ **WinFX Development Tools** — Support building applications that target WinFX with Extensible Application Markup Language (XAML) support and project templates

✦ **.NET Framework version 3.5** — Provides the libraries you need to target all the features of Windows Vista

✦ **Windows Software Development Kit** — Includes documentation and samples that demonstrate the features of Windows Vista

You can find the latest version of these resources on the Vista Web site at

```
http://msdn.microsoft.com/windowsvista/downloads/
    products/getthebeta
```

See Chapter 3 in this mini-book for more details on Windows Vista and the .NET 3.0 Framework.

Many resources for programming Office 2007 are available at the Office Developer Center on MSDN. Some of these resources work with Visual Studio Professional 2008, and others require Visual Studio Tools for Office. Visit the Tools and Technologies page at

```
http://msdn2.microsoft.com/office/aa905362.aspx
```

Trying out development resources and new server products

Microsoft has a Web site where you can order several resources on DVD. The resources are free, although you do pay shipping and handling. The following resources are available for order at

```
http://msdn2.microsoft.com/evalcenter/bb655864.aspx
```

✦ **Visual Studio 2008 Team Suite 180-day trial** — Includes 180-day trial of SQL Server 2008 Enterprise Edition and Team Foundation Server.

✦ **Visual Studio 2008 Professional Edition 90-day trial**

✦ **SQL Server 2008 Enterprise Edition 180-day trial**

✦ **Microsoft Developer Security Resource Kit** — Includes articles, whitepapers, Webcasts, and code samples.

✦ **Visual Studio 2008 Training Kit** — Includes guidance for migrating to .NET 3.5, code samples, articles, and a free e-book called *Refactor!*

✦ **Microsoft Patterns & Practices (January 2006 release)** — Includes several patterns and practices guides, as well as the complete January 2006 release of the Enterprise Library.

✦ **Windows Mobile 5.0 Developer Resource Kit** — Includes resources to get started developing applications that target Microsoft's mobile platform.

The kits are guided tours of the resources available for a given topic, conveniently available on DVD. In the meantime, you can download Software Development Kits for Windows SharePoint Services version 3.0 at

```
www.microsoft.com/downloads/details.aspx?familyid=
     05E0DD12-8394-402B-8936-A07FE8AFAFFD&displaylang=en
```

The SharePoint Server 2007 SDK can be found at

```
www.microsoft.com/downloads/details.aspx?familyid=
     6D94E307-67D9-41AC-B2D6-0074D6286FA9&displaylang=en
```

Internet Information Services (IIS) 7 — the version of IIS — has integrated support for ASP.NET. IIS7 has its own dedicated Web site at `www.iis.net`, where you'll find technical resources, articles, blogs, and other community resources. Write your own modules — using the .NET Framework to target the IIS application programming interface — or become more knowledgeable about how to configure and tweak IIS. The Downloads section features an IIS7 Managed Module Starter Kit for C# or C++.

Other fun items you might want to download from the community include

✦ **Spell checker for ASP.NET** — Spell-checks the text you add to your ASP.NET Web pages. This was written by one of the developers on the Microsoft Web Development Tools Team in his spare time. In other words, the tool isn't supported by Microsoft. You can download the spell checker at

```
http://blogs.msdn.com/mikhailarkhipov
```

✦ **NDepend** — Code analyzer that visually displays your source code's architecture and allows you to apply many code metrics against your source code. Download for free at

```
www.ndepend.com
```

✦ **MSBuild Community Tasks Project** — An open source project that's building a library of common MSBuild tasks. You'll find just about everything you need to automate your nightly builds. Visit the project's Web site at

```
http://msbuildtasks.tigris.org
```

✦ **RSS Toolkit** — Created by a member of the ASP.NET development team for consuming and publishing RSS feeds. Download the toolkit from

```
http://blogs.msdn.com/dmitryr/archive/2006/03/26/561200.aspx
```

Keeping up with developer blogs and other news sources

Microsoft has embraced blogging. A *blog* (short for *Web log*) is a Web site where a blogger posts entries and visitors post comments on the blog entries. Here's a short list of blogs you might want to keep tabs on:

✦ **Web Development Tools Team Blog** — These are the folks that develop Visual Web Developer. Read their blog at

```
http://blogs.msdn.com/webdevtools
```

✦ **S. "Soma" Somasegar's blog** — Soma is the corporate vice president for the Microsoft Developer Division. His blog always features the latest news about Visual Studio 2008. Find his blog on MSDN at

```
http://blogs.msdn.com/somasegar
```

✦ **Developer Division Customer Product Lifecycle Experience Team (DDCPX) Team Blog** — These are the folks responsible for bringing aftermarket solutions — such as the Visual Studio Power Toys and software development kits (SDKs) — to you. You will need a login to access this blog. Sign in at

```
http://blogs.msdn.com
```

✦ **MSBuild Team Blog** — MSBuild is the build engine for Visual Studio. Read the team blog at

```
http://blogs.msdn.com/msbuild
```

You can find more Microsoft blogs at

```
http://www.microsoft.com/communities/blogs/
    PortalHome.mspx
```

MSDN has created a number of developer centers that provide links to blogs, downloads, articles, and other resources of interest to developers. Some centers you might want to visit include

✦ **Security Developer Center** — `http://msdn.microsoft.com/security`

✦ **Visual Studio Developer Center** — `http://msdn.microsoft.com/vstudio`

✦ **Smart Client Developer Center** — `http://msdn.microsoft.com/smartclient`

✦ **Office Developer Center** — `http://msdn.microsoft.com/office`

Find even more developer centers on MSDN at `http://msdn.microsoft.com/developercenters`.

Exploring AJAX and the Atlas Library

AJAX — Asynchronous JavaScript And XML — is a technology that allows developers to avoid traditional ASP.NET postbacks, in many cases, and provides a richer user experience with less delay. Developers use a combination of client-side JavaScript and server-side programming to create a Windows-like user experience. AJAX offers an important benefit: The browser and the server can communicate without a postback. From an end-user standpoint, that means no screen flash while the page refreshes. Popular Web sites using AJAX include

✦ Google Suggest

✦ Google Maps

✦ Flickr

✦ Gmail

✦ Outlook Web Access

✦ Yahoo! Mail Beta

TIP

To get a feel for some of the things you can do with AJAX, go to the demos page at `http://openrico.org`.

To get a feel for the underlying technologies of AJAX and what it takes to AJAX-ify your Web sites using technologies besides .NET, pick up a copy of *Ajax For Dummies,* by Steve Holzner (Wiley).

TECHNICAL STUFF

The technologies used in AJAX are nothing new. They've been around for a long time; only recently have folks applied the name AJAX to this style of programming. The technology that underlies AJAX is the object `XMLHttpRequest`. This one object makes it possible to send data back and forth between the client and server without a page refresh.

Atlas is Microsoft's version of AJAX. It consists of

✦ **Client-side library** — Atlas provides object-oriented access to the client-side features you would usually have to write in JavaScript. With Atlas, you can apply what you know about object-oriented programming in .NET without diving into JavaScript.

✦ **Server controls** — Server-based controls similar to existing Web server controls, such as buttons and text boxes.

Atlas makes extensive use of Web services to provide the server-side features of the client-server interaction of AJAX. It's quite common for developers to wire up the elements of their user interfaces to Web services that provide data (such as specific items for a drop-down list). Of course, you aren't limited to consuming only Web services that you create. You can also use an Atlas-enabled Web page to connect to third-party Web services.

Web sites that use content from other sources are called *mashups*. Mashups often utilize several technologies, including Web services, RSS, and AJAX. Mashups are a driving force in the *Web 2.0* movement (the term often used to refer to the next generation of Web applications).

Because the AJAX Toolkit is built into Visual Studio 2008, it no longer needs to be installed separately, like it did with Visual Studio 2005.

Looking Ahead to the Next Visual Studio

Microsoft has plans for one future version beyond Visual Studio 2008: namely, codename Hawaii. Hawaii is supposed to be a complete rebuild — from the ground up — of Visual Studio.

Keep up to date with the offerings for Visual Studio at `http://msdn. microsoft.com/vstudio/future`. You'll find previews for versions of Visual Studio, as well as extensions for the current version.

For obvious reasons, not much information is available about the next version of Visual Studio (Hawaii). It has been reported that Microsoft plans to completely redesign the product, which could be interpreted to mean a completely new approach to software development.

Rick's guess is that this next-generation approach to development will allow developers to immerse themselves in modeling their business problem — and in generating code from that model — rather than getting stuck in a "code zone." Three development resources for a closer look are

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✦ **The Microsoft Center for Software Excellence** (`www.microsoft.com/Windows/CSE`) — A group in Microsoft Research focused on developer productivity at Microsoft.

✦ **Intentional Software** (`www.intentionalsoftware.com`) — The company founded by Charles Simonyi to bring to market the next generation of software development. Simonyi is the man behind Microsoft Word and Excel. He also created the Hungarian notation-naming convention.

✦ **Software Factories** (`www.softwarefactories.com`) — The idea of being able to mass-produce code from a model is being used now in Visual Studio Team System. Expect to see this concept trickle down to the individual developer in the future.

You can see how Visual Studio Team System is already using models to generate code in the next chapter of this mini-book.