Office and SharePoint 2007 User's Guide: Integrating SharePoint with Excel, Outlook, Access, and Word

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CHAPTER 1

An Introduction to SharePoint

SharePoint is Microsoft's enterprise-level application solution for organizations wanting to deploy any combination of an internet, intranet, or extranet with a consistent user experience. By heavily leveraging other Microsoft Office family products, SharePoint allows teams to work together and collaborate when separated across the country or even the globe. SharePoint is currently one of Microsoft's fastest growing products with over 75 million licenses sold. Perhaps most important to business planners is that Forrester lists SharePoint as the number one portal product on the market and Gartner places SharePoint 2007 as a leader in their "Magic Quadrant for Horizontal Portal Products in August 2007."

Microsoft envisions SharePoint as the single portal that an organization needs to deploy for its internet, intranet, and extranets. Tight integration with other Microsoft Office family products enables SharePoint to boost the productivity of employees by reducing the time and effort needed to create and maintain sites. It allows more people to participate in the creation of site content. It provides a framework from which everyone within an organization can share information, conduct meetings, and track tasks. It enables you to work remotely while storing files centrally, yet work on them anywhere you have access to the Internet; and even when you don't have access to the Internet, you can check out documents ahead of time, work on them while disconnected, and then synchronize your changes when you connect to the Internet again.

While no single book can cover everything there is to know about SharePoint, this book focuses on helping you to work with SharePoint using many of the common Microsoft Office tools such as Outlook, Word, Excel, PowerPoint, and Access. You will even get a look at some of the newer Office tools such as InfoPath and Groove. This book concentrates more on collaboration-type activities as opposed to Internet site development. However, many of the same techniques for working with web pages, web parts, libraries, and lists apply to both areas.

In this chapter, you will look at how to create a SharePoint site and come to understand the flexibility of building a hierarchy of sites within a site collection. You will also see how to define permissions for users, allowing some users to create new content and edit existing content while restricting other users to viewing the published content. Next, you will build a document library and learn how to use Microsoft Word to add and edit documents stored in that library. Then I will show you how to preserve the integrity of your editing through the use of the check-out and check-in facility for documents. Finally, you will explore the use of versioning to control the publishing of information that others can view.

In subsequent chapters, you will explore SharePoint's other features, from lists through web pages, from the point of view of how to integrate your current knowledge of Microsoft Office tools. My goal is not to make you a SharePoint administrator. Rather my goal is make you a power user when it comes to working with SharePoint through Microsoft Office.

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Site Collections, Sites, and Subsites

Think of a *site* within SharePoint as a group of related pages, libraries, and lists that you can view using a web browser such as Internet Explorer, Firefox, or several others. A department within an organization may want to have a site on the Internet to publish information about what services or products that department provides. Similarly, a *site collection* is a collection of sites. For example, the company internet might be a site collection consisting of individual department sites. At the site collection level, you can store common objects that all sites within it can use. For example, you might store the organization's logo at the site collection level so that all department sites can reference that logo from one place.

A site typically focuses on specific topics, groups of people, or activities. Just like a web site, a SharePoint site has a home page, sometimes called its *default page*, which links to other pages in the site. This page can provide navigation to the other pages in the site either through menus or links. Each page supports content of various types ranging from lists to libraries to simple text and images, all organized in what could look like a regular web page found on the Internet.

As a content creator within SharePoint, you have the freedom to control the appearance and content of pages within a site. No longer must you submit content changes to a web design person and then wait for him to incorporate the changes into your organization's web pages. You can collaborate with any number of people in your organization, from one to many thousands who have direct access to updatable lists, documents, and even content pages on your intranet or internet sites.

A site can also have one or more *subsites*. While a subsite inherits many of its properties from its parent site, it also can have its own identity, properties, and objects. Subsites further subdivide the focus of the higher-level site. If a site represents a department, a subsite might represent a project or a team.

For example, suppose you create a SharePoint site for your entire organization. In this top-level site, you create content pages that pertain to your organization as a whole. However, since each group within your organization wants to create its own set of pages and content, you create subsites for each division, department, or workgroup beneath this top-level site. Each subsite may have additional subsites beneath it representing individual projects, groups, or activities. You may even build subsites that represent projects that cross department or division boundaries.

Each subsite in the preceding scenario represents a unique and distinct area or portion of the entire organization. This group of sites and subsites forms a hierarchy referred to as a site collection. By dividing your information into multiple sites and subsites, you control the features, access rights, and settings appropriate for each one. But by placing all of them under a single umbrella, you can provide a single entry point or portal for all content as well as inheritance of selected features from the top site. No longer will each department, project, or group need to store its information in a separate database, file structure, or server completely separate from all others. This type of data silo inhibits the cross-flow of information and makes searching for specific information difficult or impossible. A single portal approach for all of an organization's information facilitates features like document searching, provides a common look and feel, simplifies navigation and support, and encourages collaboration and agility to respond quickly between members of ad hoc groups.

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SharePoint also stores the information for all the sites within a site collection within a single SQL Server database. The site collection lets you share objects among the sites it contains. For example, you can share images, templates, site columns, content types, and permissions defined at the site collection level with any site within the site collection. Since each site collection represents a separate SQL Server database, you can provide separate backup and restore operations for the collection.

■ **Tip** If you are using SQL Server Express as your back-end database engine, you might also consider using separate site collections due to the current limit of 4GB on the size of individual databases.

Creating a site from scratch may sound a little intimidating at first. Indeed, before SharePoint, the prospect of creating sites across an entire organization would probably require a team of developers and months of time. However, SharePoint simplifies the process by providing a collection of *templates* for various object types to get you started. Of course, as you progress in your SharePoint knowledge, you can add to these templates with your own or those from third-party developers. While the book will explore some of these in more detail later, here I'll give you a quick overview of the types of sites you can create out of the box with SharePoint, starting with collaboration sites, which exist in both Windows SharePoint Services (WSS) 3.0 and Microsoft Office SharePoint Server (MOSS) 2007.

Collaboration Site Templates

WSS 3.0 and MOSS 2007 supply five major collaboration site templates as shown in Figure 1-1. Each template provides a unique starting point for creating a new site. However, just because site templates initially define specific unique features and web parts does not limit what you can do to customize a site. SharePoint allows you to customize a site based on one template with features that may be found in another. In fact, you can create your own custom templates starting from one of the supplied templates. So let's take a brief look at what each collaboration site template provides.

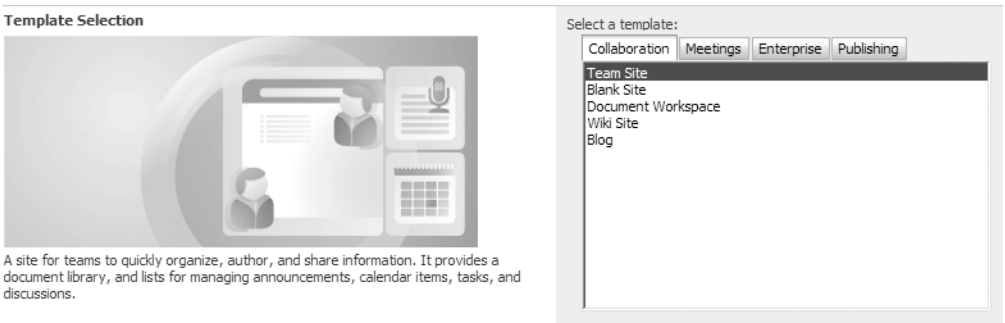

Figure 1-1. *Collaboration site templates*

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Team Site

The Team Site template serves as a fast, out-of-the-box starting point for work teams that center around projects. It provides for creating and sharing of information through document libraries, establishing project calendars, tracking of individual and project tasks, and facilitating of discussions among the site members.

Figure 1-2 shows a WSS 3.0 team site that I will use as the basis to illustrate many of the examples in the next few chapters. This figure identifies several key areas that you need to become familiar with, as I will refer to them often in the following text.

■ **Note** A team site created within MOSS 2007 may also include a **My Site** link and a **My Links** link in the upper-right corner of the screen if those features are enabled. Also in both MOSS 2007 and WSS 3.0, the **Site Actions** button appears only for those users who have permission to edit site content. Users who can only view the site will not see this button. The examples will assume that you have the necessary permissions to edit site content.

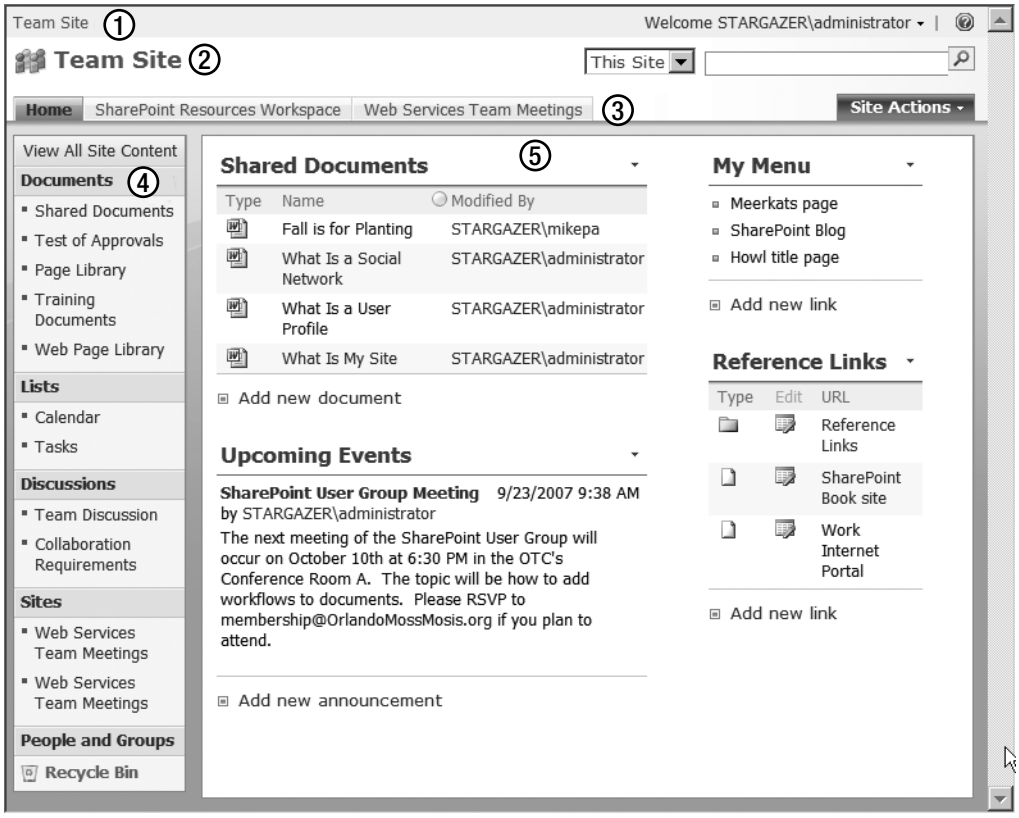

Figure 1-2. *The major sections of a SharePoint page*

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1. The **Global Links Bar** contains a reference to the home page of the top-level site on the left. On the right, a **Welcome** menu displays the name of the current user. The arrow to the right of the user's name displays a menu with options to personalize the current page, change user settings, send the site administrator a request for more permissions, and log on with a different account if you have more than one or allow a different user to log in. The last item on the far right is the **Help** link icon. Click this icon at any time to find help topics via a **Contents** list or by typing in keywords in a search engine.

■ **Tip** The site developers in some organizations have multiple accounts representing different permission sets so that they can log in and view pages as other users would see them.

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2. The **Title** area displays the name of the site along with a site logo (image). On the right side, the **Search** feature allows you to search for content by keywords either in the current site and subsites or when using MOSS 2007 across all sites in your enterprise.
3. The **Navigation Bar** normally lists the sites available to the user. On the right side, the **Site Actions** button displays a menu of site management options available to the user.
4. The **Quick Launch** area located on the left side of the page provides one-click access navigation to selected sites, documents, and lists. Depending on your permissions, you can customize what appears in this area and the **Navigation Bar**.
5. The **Main Content** area takes up the rest of the page. SharePoint divides this area into one or more sections called *web part zones* depending on the site template. You can add content in each zone consisting of libraries, lists, and other web parts to customize your page.

Blank Site

The Blank Site template is like a blank piece of paper. The person creating the site has total control over what appears on the site and where it appears. Until you have developed some familiarity with the other site templates and have customized them, you may not want to begin with a blank site. On the other hand, experienced site developers often prefer the Blank Site template because they do not have to waste time deleting or moving web parts and features that they do not want to use or that they want to appear elsewhere. Instead, they can focus on adding what they do want.

Document Workspace

SharePoint provides a Document Workspace template designed around creating a place where groups of people can work collaboratively on documents. It facilitates this through a document library and adds task lists for to-do items and link lists to track resources consisting of people and things.

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Wiki Site

Wiki means *quick* or *fast* in Hawaiian, and therefore the Wiki Site template provides a quick way for teams to share and discuss information. The users of these sites can easily edit the content and link new pages using keywords in the topic text. Wiki sites generally consist of a set of collaborative web pages that users can easily contribute content to. Links between the pages of a wiki site allow readers to branch from the main topic to related topics as they appear in the text as hyperlinks. For example, you might use a wiki to publish tricks and tips for various applications within your organization. Links might refer to similar tricks described on other pages. You can also use pages to present definitions for technical terms your organization uses, organizational information, project definitions, and many more useful pieces of information.

Blog

While SharePoint administrators design wiki sites so anyone who can access them can contribute, edit, and add to them, blog sites, which you can create through the Blog template, generally exist for an individual or team to post major ideas or observations. Blog sites do not allow users to edit prior postings by others, but you can always post comments to any blog entry. Also unlike wiki sites, blog sites cannot easily be linked together based on topic words. Blog entries typically appear in reverse chronological order, making it easier for readers to see the most recent entries, whereas most newsgroups use a chronological hierarchy beginning with the initial entry and flowing down to more recent entries.

Bloggers (as some people refer to blog site contributors) use blog sites to discuss their projects or favorite subjects, or to provide additional information or viewpoints. In some ways, you might consider blogging as an alternative to using newsgroups based on a news server. Some organizations use internal blog sites to document the work effort on projects by creating daily or weekly entries detailing the progress made since the last entry. For those *Star Trek* fans out there, a blog site corresponds to a kind of Captain's Log.

Meeting Templates

Meeting templates provide predefined configurations that include different web parts in the default site template. SharePoint refers to these sites as *workspaces* rather than sites because they provide tools, web parts, and resources specifically oriented toward facilitating the activities of workgroups. Meeting workspaces include lists and documents, links, and team member information. While each template has a unique combination of web parts that defines its character, always remember that you can customize the appearance of your meeting workspace to include web parts contained in other templates. So let's take a look at the provided templates as listed in Figure 1-3.

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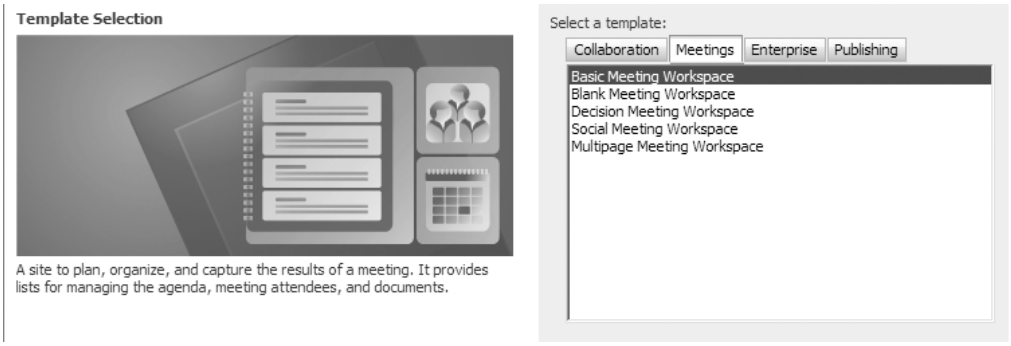

Figure 1-3. *Meeting templates*

Basic Meeting Workspace

Most meetings have common requirements to help members plan, conduct, and document them, and the Basic Meeting Workspace template takes these into account. Things like agendas, attendee lists, and libraries for documents reviewed in preparation for the meeting, during the meeting, or as follow-up to the meeting define a few of the important components of a basic meeting workspace.

Blank Meeting Workspace

The Blank Meeting Workspace template, like its name implies, starts with no predefined pages containing specific web parts. This template best suits the experienced site designer who prefers to start with a clean site rather than spending time deleting web parts from a predefined template.

Decision Meeting Workspace

People call meetings for a variety of purposes. You might hold some meetings to brainstorm new ideas or plan out the steps of a project. You could hold informational meetings to inform your staff about activities in other groups or departments. You might even call a meeting to evaluate lessons learned after a project ends. But you probably also call many meetings to make a decision.

The Decision Meeting Workspace template includes web parts to document objectives, agendas, and attendees. It includes a document library that holds documents relevant to the decision at hand. It also provides a means to document the decision as well as to create follow-up tasks or even tasks needed prior to the decision meeting such as research or testing tasks.

Social Meeting Workspace

The Social Meeting Workspace template includes features that help plan for special events such as company picnics and awards presentations, or even prepare for a company conference. This workspace includes discussion boards, picture libraries, directions to the event, and lists of things to bring.

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Multipage Meeting Workspace

The Multipage Meeting Workspace template includes many of the features found in a basic meeting workspace but is organized over multiple pages. Of course, the other workspace templates permit the addition of more pages, but you may like to start with preconfigured pages.

Enterprise Site Types in MOSS 2007

All the previously mentioned, site templates come with both WSS 3.0 and MOSS 2007. However MOSS 2007 adds additional templates applicable to larger organizations. I will touch on some of these later, but for now let's take a quick look at what MOSS 2007 adds to the prior template list to help the enterprise user. Figure 1-4 shows the enterprise templates added by MOSS 2007 to SharePoint.

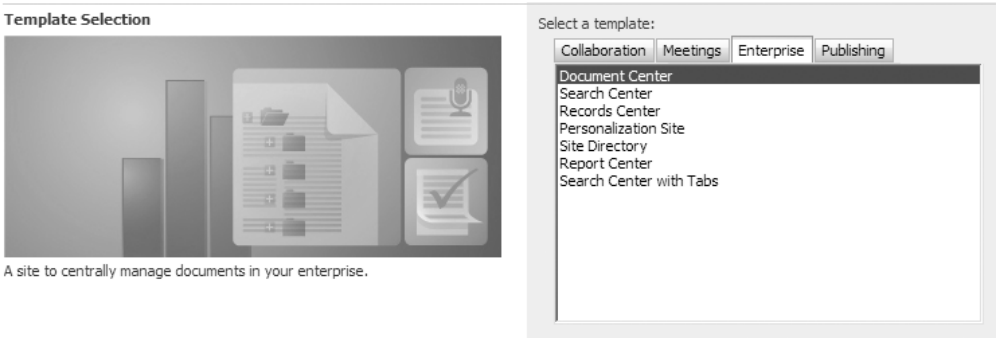

Figure 1-4. *Enterprise templates*

Document Center

The Document Center template is used to manage from a central location documents with a large volume of content and/or a large number of documents.

Search Center

The Search Center site template allows users to perform searches. This site does not include other content such as lists or libraries. Rather it allows users to define search criteria and to return the results of that search.

Records Center

The Records Center template supports records routing and can track and route records based on rules. It can hold records based on a date or approval status, store records with incomplete information separately so you can address them manually, and store records separately that do not match any existing routing rules. Unlike content added to most other SharePoint sites, you cannot edit records after you add them to the Records Center repository.

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RECORDS CENTERS

Most organizations have a Records Center—a central repository where documents are sent for long-term storage. These documents typically must be retained either for legal reasons or tax reasons for a specified number of years so that they can be retrieved at a future time.

Users do not create records in a Records Center. They create records in document libraries. Once they no longer actively need the document, they can send it to the Records Center where it will be stored and managed until such time as it can be destroyed. Typically your organization's legal department will have some level of control over the operation of the Records Center.

Personalization Site

The Personalization Site template allows users to create custom views of available site information. Users of a personalized site can define navigation to pages important to them, bypassing the navigation of the main site to which it belongs.

Site Directory

The Site Directory template lists and categorizes sites within the SharePoint installation. It includes the ability to list the top sites, the sites deemed the most important. It also supports a site map to provide a visual depiction of the sites within the entire SharePoint installation.

Report Center

The Report Center site template gathers together in one place reports, dashboards, and presentations of key performance indicator information as well as metrics and business intelligence data.

Search Center with Tabs

The Search Center with Tabs site template extends the capabilities of the Search Center site by adding tabs that allow different search scopes. For example, out of the box, SharePoint provides a tab that searches content and another that searches for people. However, you can add tabs for custom search scopes unique to your site.

Publishing Sites

In addition to enterprise sites, MOSS 2007 adds three special sites, shown in Figure 1-5, related to publishing content that can be inserted into a site collection, and two portal templates, shown in Figure 1-6, that can only be used as the top-level site for a site collection. These site templates apply primarily to those organizations creating internet or intranet sites either for the entire organization or for specific groups within the organization. These templates support features such as the page editing toolbar, content editor, and web parts specific to creating internet and intranet portals. While this book does not focus on creating web portals, it may be useful to know what publishing sites offer so you know when to use them.

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Figure 1-5. *Site publishing templates*

Figure 1-6. *Top-level site publishing templates*

Publishing Site

SharePoint designed publishing sites specifically to display basic content on web pages. Developers of internet or intranet sites often use the Publishing Site template as a starting point. However, you can include document and image libraries as well as lists and other web part objects.

Publishing Site with Workflow

SharePoint bases the Publishing Site with Workflow template on the Publishing Site template but adds the ability to include workflows. Workflows might require documents to have approval before making them available for the general user to view.

■ **Note** Within a Publishing Site with Workflow, you can only build subsites using the Publishing Site with Workflow template.

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News Site

The News Site template manages all types of news from basic news article pages to RSS feeds and photos. It also supports archiving of old news items rather than deleting them so they can always be searched later.

If it is the case that you do not have the Create Subsite permission, you will not be able to create your own sites. However, if you are responsible for content and working within one or more sites to add and maintain content, you should still have a basic understanding of the available site templates. For the purposes of much of this book, I will focus on several of the basic web site types that specialize in collaboration and interaction using Microsoft Office. By specifying the capabilities you need in a site and perhaps even the web part features, you can select the best site template for your needs.

Collaboration Portal

You must use the Collaboration Portal template to create the first site in a new site collection. Collaboration portals can form the framework around building an organization's intranet. They can include subsites, news sites, Search Centers, team sites, and others where the organization's employees can collaborate on projects and publish documents and lists of information that they want only other employees of the organization to see.

Publishing Portal

The Publishing Portal template differs from the Collaboration Portal template in that it has an outward-facing orientation or internet pages. Often SharePoint developers will customize the look and feel of these sites to establish a "branding" through the use of themes, custom master pages, and CSS files. Being outward facing, organizations use the Publishing Portal template to publish information that they want the general public to see.

■ **Note** The top-level site publishing templates described here can only be created from SharePoint's Central Administrator site.

Library Types

One of the most basic objects that you can add to most sites is a library. Libraries store documents, images, reports, and other objects. Some libraries serve as a general collection point for many different types of documents. You can create other libraries for very specific purposes with only particular file types allowed. Thus the type of library you need depends on what type of information you want to store in the library. Let's examine the basic library types shown in Figure 1-7 and how you can use them.

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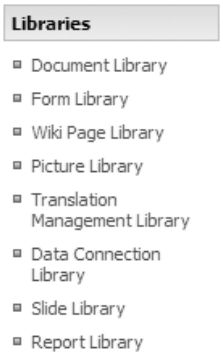

Figure 1-7. *Library templates*

Document Library

The Document Library is the most common library type. It can hold any document type that you would normally find in a directory on your computer's hard disk. A document library, like a disk directory, typically stores various file types with little or no relationship to each other. However good file management applies as much to SharePoint libraries as it does to your hard disk. Just as you would create different directories for different types of files, projects, or applications, you should consider organizing your document libraries so all files in one document library have a common focus, perhaps even a common type.

Form Library

The Form Library stores the XML source documents for forms created with Microsoft Office InfoPath. Users with InfoPath installed on their local computer can form definitions stored here and then publish them as templates for other libraries. I cover working with InfoPath and form libraries in more detail in Chapters 9 and 10.

Wiki Page Library

The previous section briefly described wiki sites, and you saw that they provide a forum for users to add their own content on individual topics. So it should come as no surprise that wiki sites need a special type of library to support that user collaboration. SharePoint uses the Wiki Page Library as the storage container to hold all wiki page content.

Picture Library

The Picture Library provides a common place to store images for content pages in your site. You might also use a picture library to store images or photographs for your sales or marketing staffs to help them provide a consistent message. Picture libraries also provide a storage location for pictures used in web pages. You will learn more about picture libraries in Chapter 12.

Translation Management Library (MOSS 2007 only)

The Translation Management library is found only in MOSS 2007, where advanced site designers use it to manage translation workflows. A Translation Management workflow manages the

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process of routing a document to designated translators read from a Translators List. The workflow notifies each translator for the document of the task. As each translator finishes the translation of their copy of the document, they can mark their part of the workflow as complete. The entire workflow is not complete until all translators for the document have finished their translations.

Data Connection Library

When Office documents created with InfoPath or Excel need to interact with back-end data sources, you can store connection definitions centrally in using the Data Connection Library.

Slide Library

SharePoint provides the Slide Library to work specifically with PowerPoint 2007 to store individual slides. You will examine slide libraries in greater detail in Chapter 12.

Report Library (MOSS 2007 only)

The Report Library stores Excel Services reports, KPIs, and dashboards. You will examine report libraries in greater detail in Chapter 8.

Permissions and Groups

When your SharePoint administrator sets up a top-level site, she needs to determine who can view, edit, and design pages and content on the site. You may have a very simple site that everyone can view, or you may want to limit your site to only the people in your company, your department, or your project. You also need to decide who can contribute content to your site and who can make design changes or can approve content before making it visible to all. You may at first think you can do this on a person-by-person basis, but for most sites, you typically will have groups of people that you want to assign the same rights to. In fact, you may only have a small number of groups that require unique rights. For that reason, SharePoint allows you to associate users together in groups and then assign permission levels to those groups. Then when you need to assign permissions to a new user, you can simply determine which group he should belong in and assign him to that group to define his permissions.

You will encounter the site owner group first. When your SharePoint administrator creates a new site, he can associate up to two site owners to it. A site owner has all rights to the site, allowing her to add users and groups to the site, to customize or delete items within a site, and to create subsites under the current site.

The SharePoint administrator also determines when he creates the site whether the site allows anonymous access and whether anonymous access applies only to users authenticated through the domain or all users.

After the SharePoint administrator creates the site, the site owner can go into the site and add additional users to one of the default site groups. New sites begin with the three default groups listed here. Notice that each group name begins with the site name.

<Site Name> Visitors This group defines the lowest default security group, and SharePoint associates it with the Read permission level, which allows the group members only to view pages and items. They cannot contribute content. They may have the ability to create a Self-Service Site if the SharePoint administrator activated that feature. They then serve as administrators in these sites. The Read permission level grants the following individual permissions:

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- View Items
- Open Items
- View Versions
- Create Alerts
- View Application Pages
- View Pages
- Browse User Information
- Use Remote Interfaces
- Use Client Integration Features
- Open a Web Site, List, or Folder

While your SharePoint administrator typically handles the creation of permission levels and security groups, you might be interested to know that SharePoint supports 32 different individual permissions, which you can combine in various ways into permission levels. The default Read permission level includes just the ten permissions previously listed.

<Site Name> Members SharePoint associates this group with another predefined permission level: Contribute. Compared to the Visitors group, this permission level has the additional rights to add, edit, and delete items and pages. Users in this group can work with web parts and create content. However, they cannot create new lists or libraries. Depending on how the SharePoint administrator defined the site, their content updates may require approval by a person with approval rights before others can see them.

<Site Name> Owners SharePoint associates the Owners group with the Full Control permission level. By default, this level includes all 32 individual permissions. Users assigned to this group can view, add, update, delete, approve, and customize all aspects of the site. They also have the ability to add new users and groups, as well as assign permissions and create new sites.

Should you decide not to include a new user in one of the predefined site groups, you can assign her to a permission level directly using the options in the **Give Permission** section of the **Add Users** page shown in Figure 1-8. Initially, SharePoint defines the following four permission levels, of which three are directly associated with one of the site groups just discussed:

- **Full Control**: Users with this permission level usually share the same permissions as the Owners group.
- **Design**: Designers can manage lists and libraries, create pages, and customize them. They may approve pages created by the Members group. They can also override check-out locks on lists and library items created by contributors.
- **Contribute**: Contributors can view, add, update, and delete content on the site, but they cannot approve that content on sites that require approval. Therefore, visitors to the site cannot see their changes until someone with the permission to approve them does so.
- **Read**: Readers can only view data on the site. They cannot contribute or change any content.

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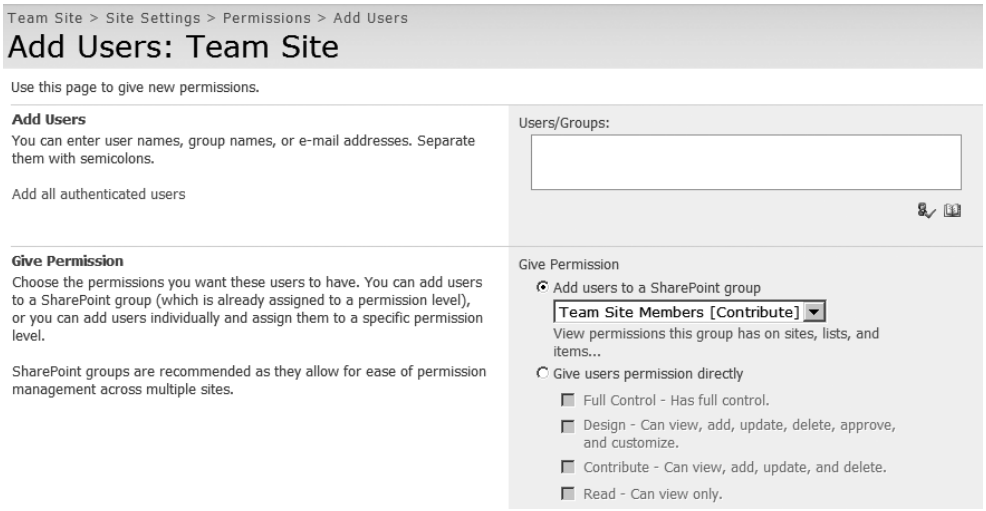

Figure 1-8. *Permission options*

In addition to the default groups, you can add other groups or edit the permissions of existing groups. For example, you may want to create a separate group that has permission only to edit and approve list items, pages, and documents, but cannot add anything new. To do this, begin by opening the **Site Actions** drop-down menu on the upper right of the page and select **Site Settings**. Figure 1-9 shows this menu.

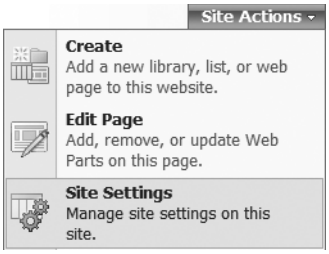

Figure 1-9. *Site Actions menu*

The **Site Settings** page displays options that change the way a site and the objects within the site look and react to users. SharePoint breaks down these options into five groups:

- **Users and Permissions**: Define users and their permissions.
- **Look and Feel**: Define the site's appearance. An option allows you to create a new site template from the current site.
- **Galleries**: Add reusable components here that can be used to build your sites.
- **Site Administration**: Manage the features of the site.
- **Site Collection Administration**: Options to manage the entire site collection. These options only appear when you open the **Site Settings** page from the top-level site.

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Select **People and Groups** from the **Users and Permissions** column of the **Site Settings** page. On this page, look down the left column menu and select **Site Permissions**. This page shows the groups currently defined for the site and their permissions. You can see details of any group's permissions by clicking its group name. You can even change the permissions associated with the group, or you can add new groups with unique permissions by clicking the arrow to the right of the **New** button and selecting **New Group** or **Add Users**. If you add a user, you can immediately place her in a group rather than assign permissions to individuals. But what if you do not like the permission groups predefined by SharePoint?

Out of the box, SharePoint provides four permission levels and associates one of them to each of the default groups. These are the same groups you would add new users into. If you don't like the permission levels associated with these groups, you have two choices: either change the permissions associated with a permission level or create a new permission level with unique permissions and assign it to an existing or new group. However, before you can decide what to do, you need to examine what permissions make up each permission level. To do this, select the **Permission Levels** option from the **Settings** drop-down menu as shown in Figure 1-10.

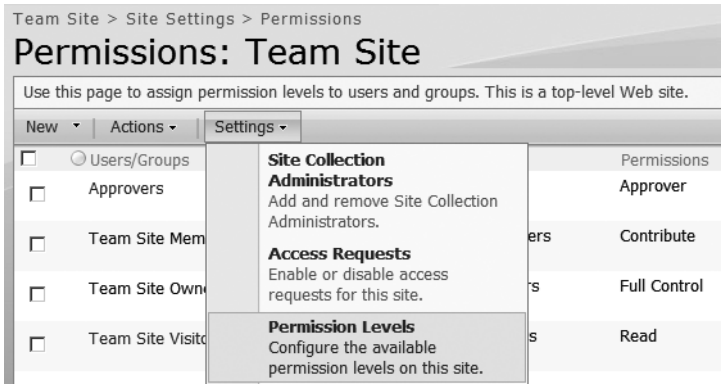

Figure 1-10. *Selecting the Permission Levels option*

The **Permission Levels** page shown in Figure 1-11 lists the permission levels that have been defined. Notice that you cannot access the Full Control and Limited Access permission levels, because these levels must always exist, and their definitions cannot change. The Full Control level belongs to site owners. The Limited Access level belongs to site guests who only have limited access to specific lists or documents libraries, not the entire site.

Suppose you decide to add a new permission level called **Approver**. Click the **Add a Permission Level** menu option near the top of the page to display the page shown in Figure 1-12. The first section asks you to provide a name and description for the new level. Then you can select from the possible permissions. SharePoint splits permissions into three major groups:

- **List Permissions**: Permissions related to list objects, including libraries
- **Site Permissions**: Permissions related to sites
- **Personal Permissions**: Permissions related to personalization

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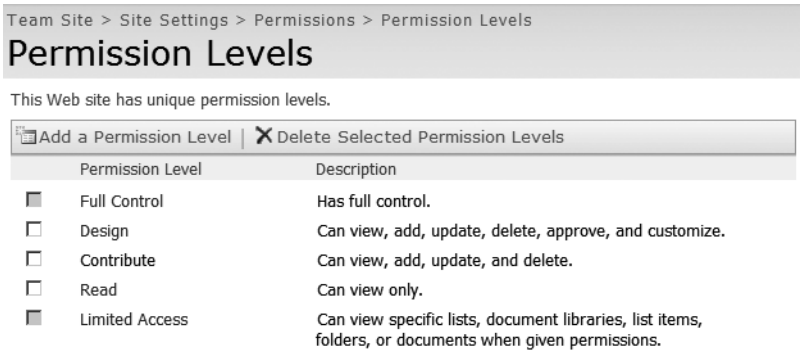

Figure 1-11. *Reviewing permission levels*

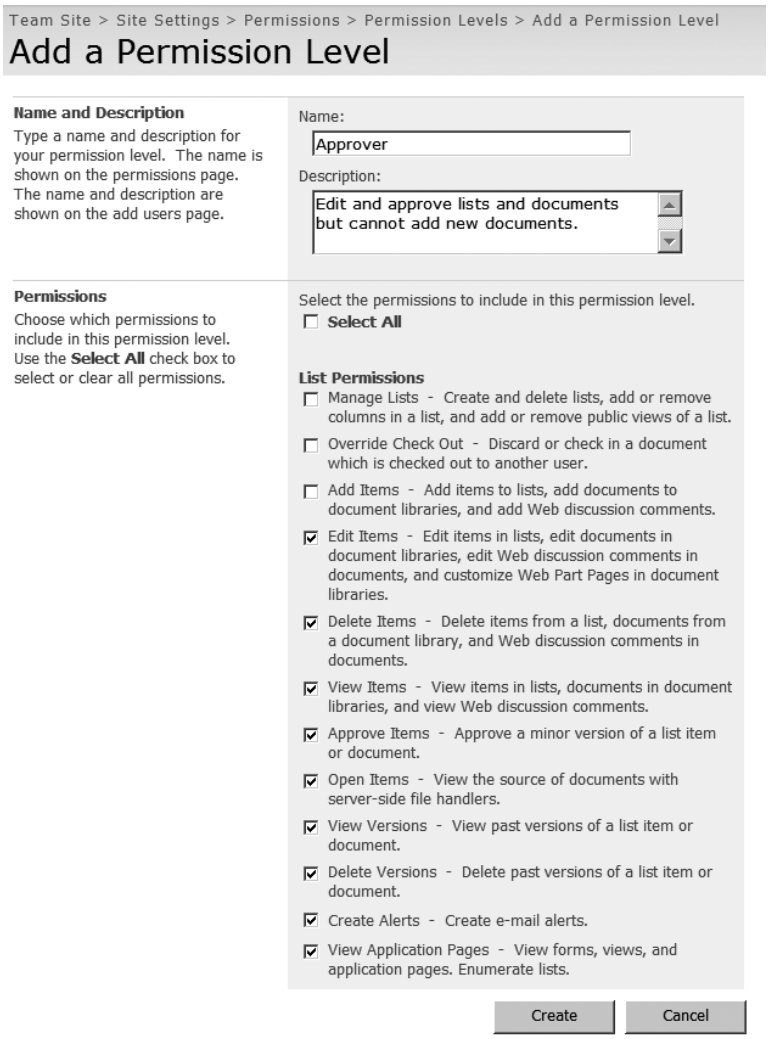

Figure 1-12. *Adding a permission level definition*

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Of course, you can select all of them by either clicking each check box individually or checking the **Select All** option. However, for your version of the Approver level, you want to selectively choose permissions that allow the user to view, edit, and approve items, but not create them or override a checkout. Therefore, you might make the permission selections shown in Figure 1-12.

When satisfied with the permissions selected for your new level, click **Create** to build the new permission level definition. Returning to the **Permission Levels** page, you will now see the Approver permission level.

At this point, you might go back to the **People and Groups** page for your site and add a group specifically for approvers: using the **New** drop-down menu at the top of the page, select **New Group**. In the **New Group** page, add the group name (**Approvers**) along with a description. You will see other options that allow you to add an owner for the group, change group settings, and handle membership requests. I will not detail these options here because your SharePoint administrator typically defines most of this for you. However, the last series of options allows you to define the permission level you want to give to this group for this site. As shown in Figure 1-13, you can see that a new permission level now appears, verifying the successful addition of the Approver level that you just created.

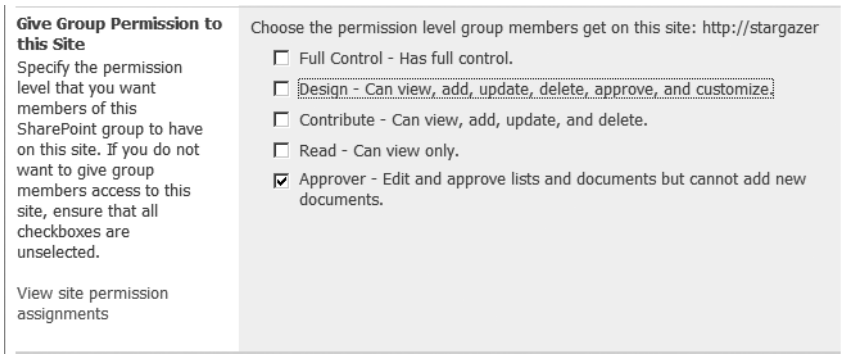

Figure 1-13. *Your new permission level appears when defining a new group.*

When you click **Create**, you will see the **Approvers** group in the **Groups** list along the left side of the **People and Groups** page. You can now add individual users or other groups to this new group.

■ **Tip** You can nest one group inside another group. This can be faster than removing users from one group and adding them to another.

In summary, before adding users to a group, you need to determine what groups you need and what permissions those groups should have. Then you can work with your SharePoint administrator to create those groups and ensure that he adds users to the appropriate group.

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Adding a Document Library

In most cases, when you first create a site, you get a default document library called **Shared Documents**. However, you may want to add your own document library with its own name. In fact, just like you would use multiple directories on your local hard disk or your file server for different file types or projects, you should use multiple document libraries in SharePoint to organize your documents.

To create a new document library for your specific document needs, click **View All Site Content** or **Documents** from the **Quick Launch** area to show your current document libraries. If someone has already created document libraries other than the **Shared Documents** library, you will see them here. Next, click the **Create** menu item at the top of the **Document Libraries** list as shown in Figure 1-14.

Figure 1-14. *Adding a new document library*

The **Create** page lets you create several different object types for your site. SharePoint divides these object types into five categories:

- Libraries
- Communications
- Tracking
- Custom Lists
- Web Pages

Locate and click **Document Library** under **Libraries**. Figure 1-15 shows the options that you can define for a new document library. Besides specifying a name for your new library, you can supply a description for the library and define whether the library appears in the **Quick Launch** menu.

By default, the library does not support versions. In other words, when you make changes to documents in the library, the changes replace the previous versions. This document mode uses the least amount of storage space, but it leaves you unable to retrieve a previous document version to compare changes or to revert back to a previous version.

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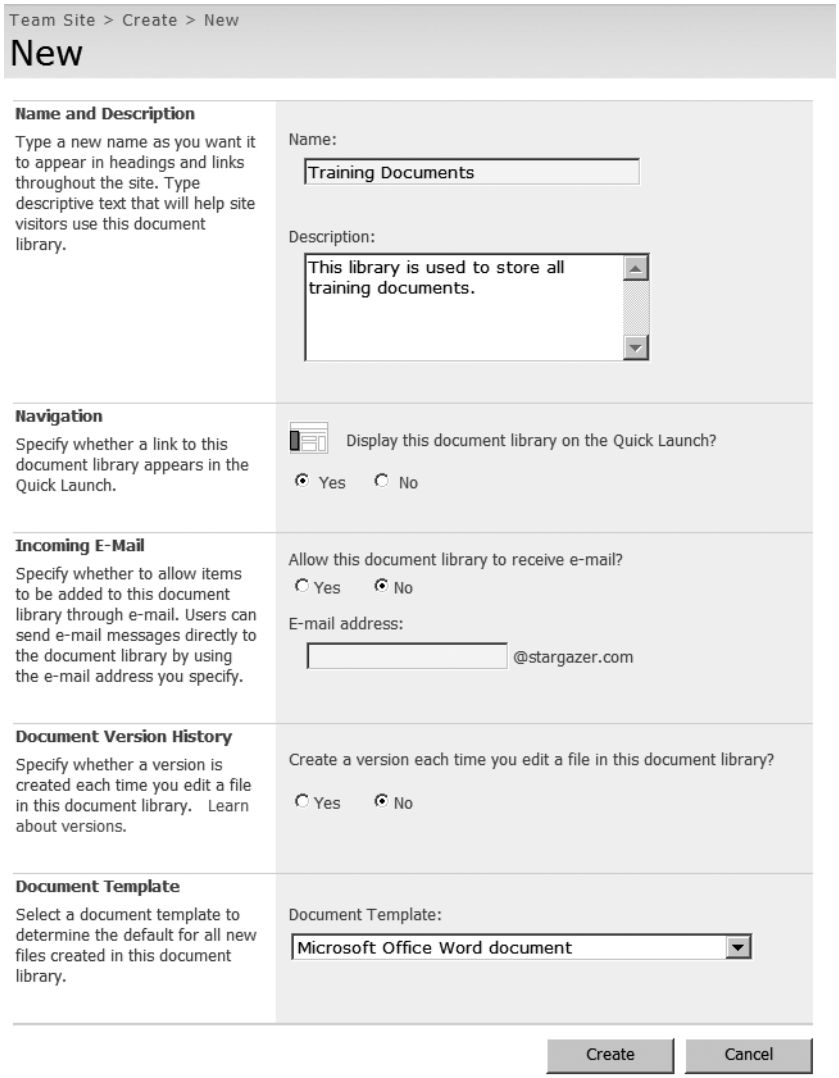

Figure 1-15. *Defining document library properties*

The last option lets you select a default document template when creating a new document within SharePoint for this library. Each library can have only one default template, so you should select the most likely document template for the library. Some SharePoint site designers create a separate library for each document type needed when they define custom templates. In Chapter 10, you will see how to define multiple content types for a single library.

After defining the options for your new library, click **Create** to build it. You can then add documents from your local or network drives (using the **Upload** option from the menu at the top of the library) or create new documents using the default template from within SharePoint (using the **New** option from the same menu).

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■ **Tip** While you can upload documents of different types into a single library, you may consider creating a separate library for each major document type you need to store, especially if you add a custom template to your document library. There are several advantages to this. First, users do not have to decide on a content type. They just click **New**. Second, you don't have to define different views to support the different metadata that might be associated with different content types. This topic is covered in later chapters when discussing metadata with libraries and multiple content types, with a particular emphasis in Chapter 10 on supporting multiple content types.

Knowing Your Document Templates

The **Document Template** section shown previously in the page in Figure 1-15 allows you to define a default template to use when you choose to create a new document directly from within the library. My default list of available templates includes the following:

- Microsoft Office Word 97–2003 document
- Microsoft Office Excel 97–2003 spreadsheet
- Microsoft Office PowerPoint 97–2003 presentation
- Microsoft Office Word document
- Microsoft Office Excel spreadsheet
- Microsoft Office PowerPoint presentation
- Microsoft Office OneNote section
- Microsoft Office SharePoint Designer Web page
- Basic page
- Web Part page

In this list, the difference between the two Word templates is that the template named Microsoft Office Word document defaults to the Word 2007 format, whereas the other defaults to earlier versions. A similar difference explains the multiple Excel and PowerPoint entries.

Each of these predefined templates represents blank Office templates or web pages. However, your SharePoint administrator may have also preinstalled document templates from which you can choose. For example, a folder for expense reports may have a blank formatted expense report form created in Word or Excel. These templates do not limit what you can save within the library. They merely define a default document type when you create a new document directly from within the library.

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Adding Your First Document to Your New Library

When most people start using SharePoint for collaboration, they create a document library as one of their first tasks so they can store the files that they want to share with others. If you had your SharePoint administrator create a site for you or if you created it yourself, you probably noticed that a **Shared Documents** library already exists in your site. This library appears under **Documents** in the **Quick Launch** menu along the left side of the main site screen.

To open the **Shared Documents** library, click it. SharePoint opens a screen that displays a list of your shared documents. Of course, a new library has no documents in it. To create your first document, open the **New** menu at the top of the library list by clicking the down pointing arrow and then click **New Document** as shown in Figure 1-16.

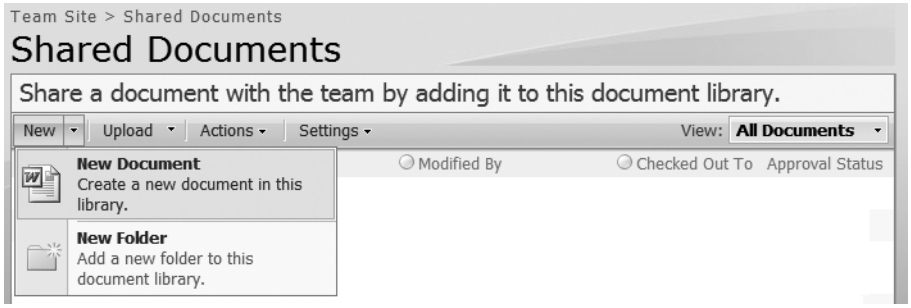

Figure 1-16. *Creating a new document*

■ **Tip** You can also just click the **New** button to create a new document using the default content type.

This menu lets you create a new document or a new folder within the library to organize your documents. Let's continue by creating a new document.

If you select this option, SharePoint by default attempts to open a new Word document based on the default document template defined for the library. Even after you create the library, you can change the document template by pointing to a different file in the `Forms` folder of the library. You can place any Microsoft Office document in this folder and select it as the document template. For example, if you have a standardized expense report, you can create a separate document library, and add a blank expense report created in Word to the `Forms` folder of the library. Then point the document template URL for the library to that form. Now when you click **New** in this library, SharePoint displays a blank expense report for you to fill in rather than just a blank Word document.

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CHANGING THE DEFAULT TEMPLATE FOR A DOCUMENT LIBRARY

In twelve easy steps, you can change the default template for any of your existing document libraries.

1. First create the document you want to use as a default template.
2. In SharePoint, open the library from the **Quick Launch** area or click **View All Site Content** if your library does not appear as a separate entry, and then click your library.
3. Open the **Actions** menu and select **Open with Windows Explorer**.
4. Browse to the template you created in step 1 (use the address bar to point back to your computer).
5. Right-click the file and select **Copy**.
6. In the Explorer view, click the **Back** button until you get back to the library's `Forms` folder.
7. Right-click a blank area and paste your document in this folder.
8. Close the **Explorer** window.
9. Select the **Settings** menu of the document library.
10. Click **Document Library Settings**.
11. Click **Advanced Settings** under the **General Settings** column.
12. Change the template URL to point to the file you pasted. The URL will look like

    ```
    /<LibraryName>/Forms/<TemplateName>
    ```

    where `<LibraryName>` is the library name and `<TemplateName>` is the name of the document pasted into the `Forms` folder in step 7.

The next time you create a new document in this library, it will default to the new template. In Chapter 10, you will learn how to set the default library template to an InfoPath form.

Assume for the moment that you want a new default document on this site, and you click **New Document**. Using the new document created by the default template, create a document. When finished, click **Save** in the **Office Button** menu of Word. Notice that when the **Save As** dialog box appears, it does not display files from your local directories. Rather, it displays a reference to the **Shared Documents** site.

Next enter a name for the document. Notice at the bottom of the **Save As** dialog box shown in Figure 1-17 that the document type is a Word 2007 document as identified by the `.docx` extension. When I created my site and the document library within it, I selected the default document type for the **Shared Documents** library; on my machine, which has Office 2007 installed, Word 2007 is correctly selected. Your installation default may vary depending on the version of Office you have installed on your machine.

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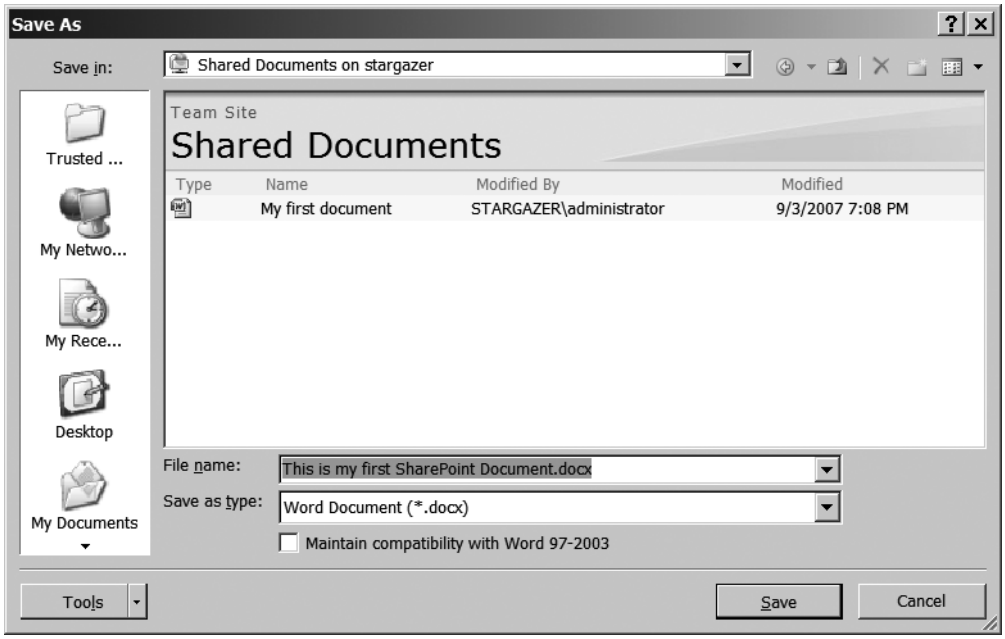

Figure 1-17. *Saving your new document to SharePoint*

If your **Shared Documents** library defaults to Word 2007 like mine, but you must share documents with people who have not yet switched to the new Word 2007 format, you should save your document in the 97–2003 format by clicking the check box **Maintain compatibility with Word 97–2003**. After entering a file name, click **Save** and then close Word.

Figure 1-18 shows that on returning to the `Shared Documents` folder in SharePoint, you will see your new document. SharePoint displays at least three default properties for each document. The first column displays an icon representing the document type. These are the same icons you see in Windows Explorer for different file types. Clicking the icon opens the file or folder. The second column displays the document name. Notice the green text after your file name: !NEW. SharePoint automatically adds this text to new documents as an indicator that the document has recently been added. This indicator displays for about 1 or 2 days, and then SharePoint automatically removes it. But in the meantime, it helps you identify new documents, especially if you have many people adding documents to the library.

In the third column, SharePoint displays the date and time that the file was last modified. SharePoint displays the name of the person who made the modification in the fourth column. If you click the person's name, a screen appears with information about that user. If the site administrator who added the new user included her e-mail address, you can send an e-mail to that person by clicking that e-mail address.

In addition to the user's name and e-mail address, this screen can include the person's photo, department, job title, and Session Initiation Protocol (SIP) address, which is an address used to uniquely identify the user.

The fifth column tracks who has a document locked for editing; you will learn more about this property in Chapter 2. SharePoint may not show this column. For now know that SharePoint tracks this information, but does not display it by default.

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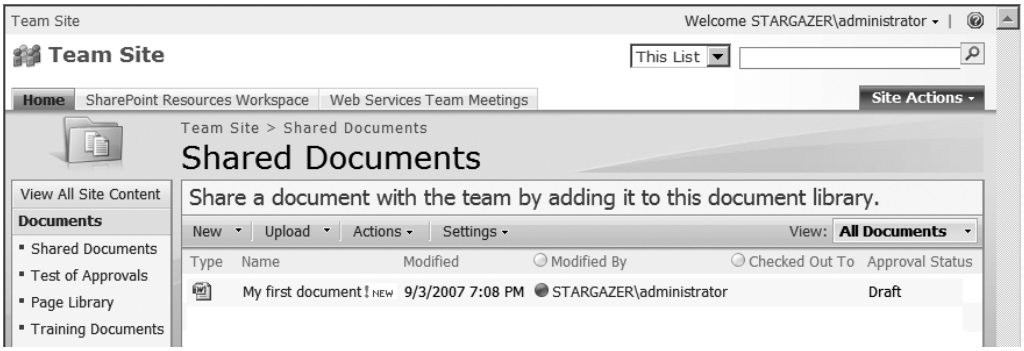

Figure 1-18. *Viewing your first saved document in the library*

The sixth column shown in Figure 1-18 only appears if the document library has the **Require content approval for submitted items** setting from the library's **Versioning Settings** page enabled and shows the current status of the document. In this figure, a status of **Draft** indicates that the document creator has not yet finished editing and preparing the document for publication. You'll learn more about approval of content in the section "Requiring Document Approval to Hide Drafts: A Simple Workflow" later in this chapter.

ADDING COLUMNS TO A VIEW

Documents have many more properties than shown in Figure 1-18. In fact, as with the **Checked Out To** column, SharePoint does not display many document properties unless you ask it to. After all, a screen row only has so much horizontal space.

To add another property to the **Document Libraries** list, click **Settings** in the top menu bar and then select **Document Library Settings**. Then scroll down to the **Views** section and click the **All Documents** view. The displayed page allows changes to the view name, columns, sort, filter, and many more properties. For now, focus on the **Columns** group. Notice that it displays over a dozen possible columns, of which only a few have their check box selected. Scan through the list until you find **Checked Out To**. Select this column by clicking the check box to its left.

You may have also noticed the drop-down lists to the right of each of the columns. The numbers in these fields define the column order from left to right. To change the order, click the column you want to reposition and change the position value. SharePoint adjusts affected columns between the old and the new value by one to make room for the moved column.

Now when you return to the **Shared Documents** library, you will see a new column telling you who checked out the document. As with the **Modified By** column, you can use the information stored about the user to send an e-mail to him asking when he might finish using the document.

If the person also uses MSN Messenger, Live Messenger, or a compatible presence awareness application such as Microsoft Office Communicator, an icon appears before the person's name. The color of the ball indicates the user's status as shown in Table 1-1. When you hover over the colored ball, it opens a menu as shown in Figure 1-19.

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Table 1-1. *Messenger Status Indicator*

Color of Icon	Status
Green	Online
Orange/Red	Busy/In a call
Yellow	Be right back/Away/Out to lunch

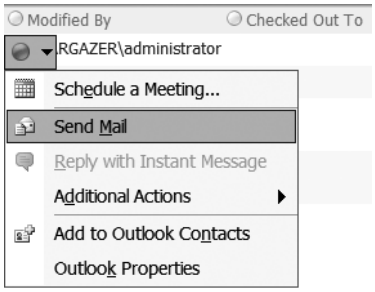

Figure 1-19. *Options for Modified By person*

Uploading a Document

If you previously created documents to upload to your **Shared Documents** site, click the **Upload** button in the library's menu bar. Figure 1-20 shows the **Upload Document** screen.

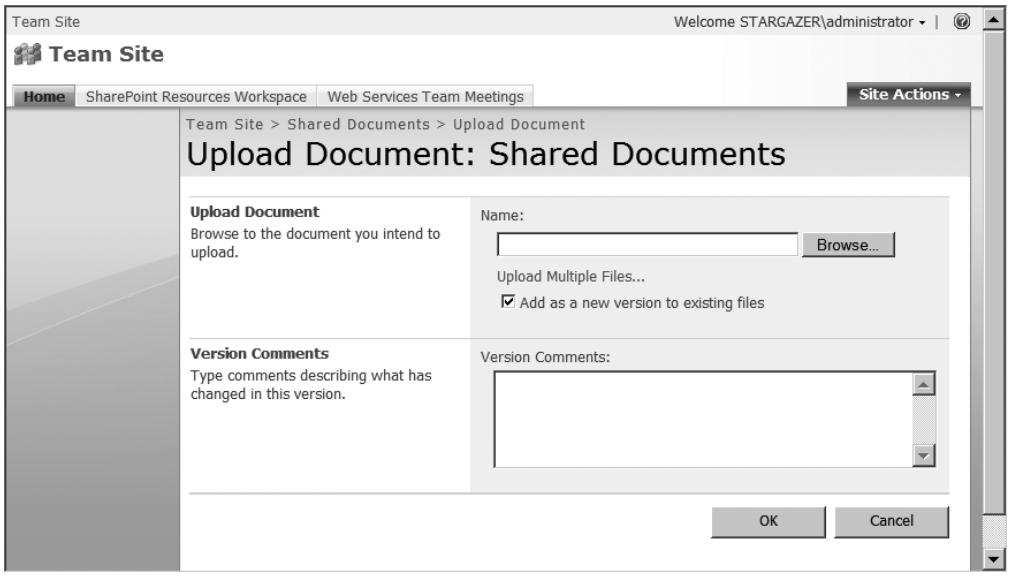

Figure 1-20. *Uploading a document*

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In this screen, you have three options for selecting files to upload:

- You can directly enter the name of the document that you want to upload.
- You can click the **Browse** button to open a browse window to find and select the file to upload.
- You can click the **Upload Multiple Files** option to upload more than one file in a single operation.

I'll let you explore the first two options on your own. However, the third option proves rather useful when uploading groups of existing documents. When you click this link, the window shown in Figure 1-21 appears.

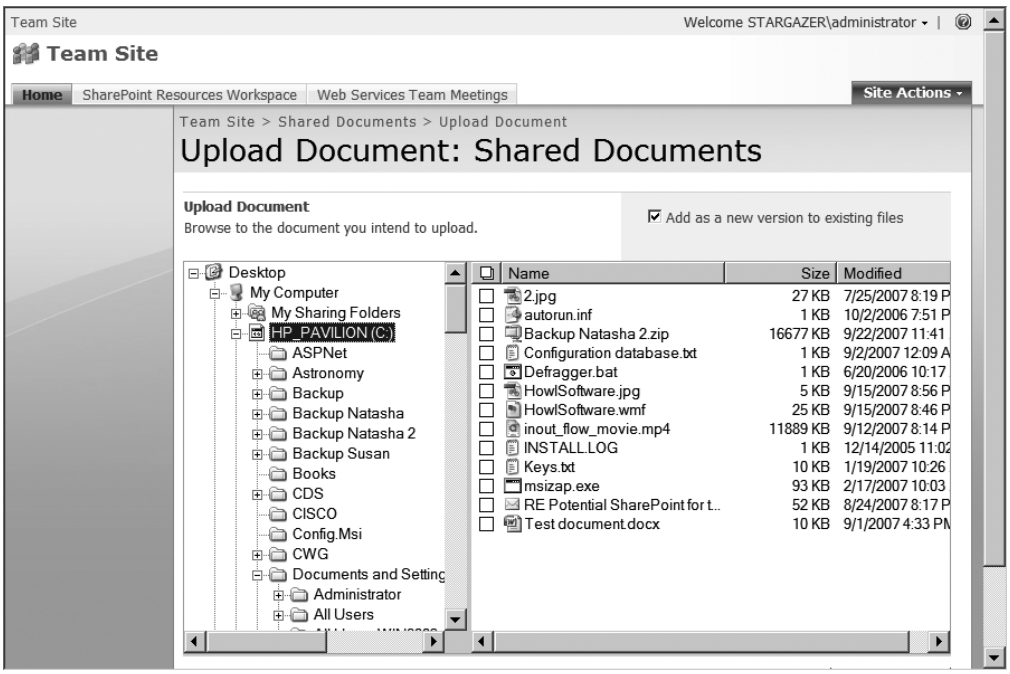

Figure 1-21. *Upload multiple documents screen*

Note that this screen consists of two parts. Use the tree structure on the left to navigate the drives and directories you have rights to. You can even open **My Network Places** to retrieve files stored on another computer. The list on the right side of the screen displays the files in the selected folder. A check box precedes each file name. To upload a file, click the check box before the name. By clicking the double check box in the title bar of the file list to the left of the column header **Name**, you can quickly select all files in the current directory for upload. This saves you time if you build your SharePoint site from previously created documents. Note also that you can check the box to overwrite existing files already in the SharePoint directory. If you do not check this option and you select a file that already exists in the library, SharePoint will not upload the file, even if the file selected has a more recent modified date than the version SharePoint

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already has. Finally, you can select multiple check boxes but only within the currently selected folder. Figure 1-22 shows several files marked for upload.

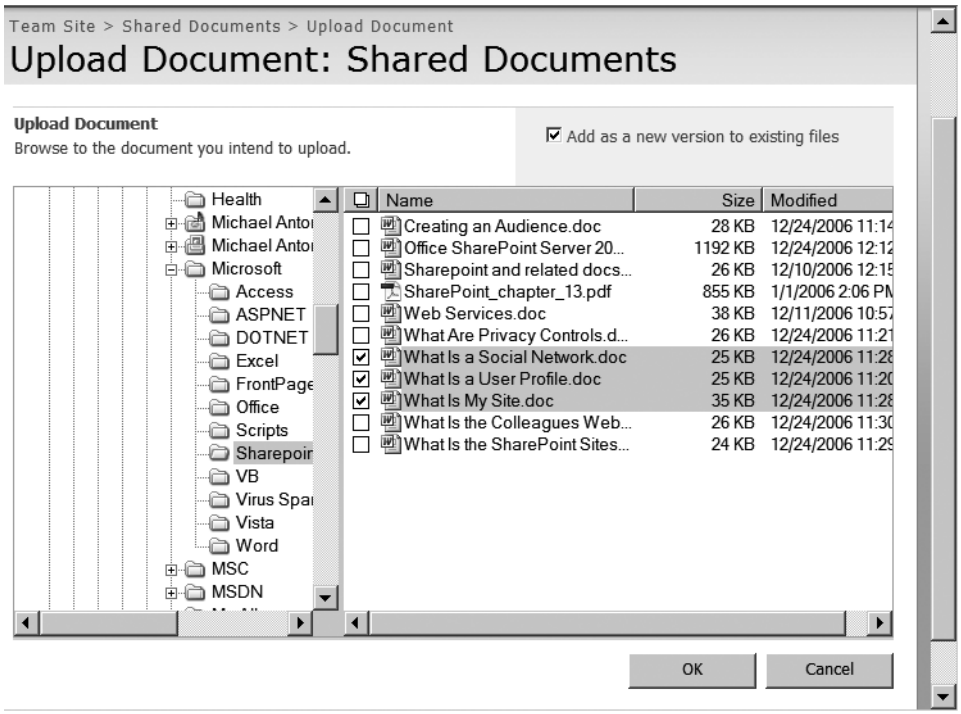

Figure 1-22. *Selecting multiple files to upload*

To complete your selection, click the **OK** button. SharePoint prompts you with a message box to confirm your desire to upload documents to the library. Click **Yes** to execute your upload request. SharePoint then takes a few moments to retrieve and upload your files. The amount of time needed depends on the number of files you are uploading and their sizes.

■ **Note** By default, sites limit uploads to 50MB for the entire upload, whether it consists of a single file or multiple files. However, this setting can be changed by your SharePoint administrator by going into **Central Administration**, selecting the **Application Management** tab, and then selecting **Web Application General Settings** under the group **SharePoint Web Application Management**. On the resulting page, she can update the field associated with the **Maximum Upload Size** option. Therefore, your maximum upload size may be different from the default.

Figure 1-23 shows the **Shared Documents** library after uploading the selected documents from Figure 1-22.

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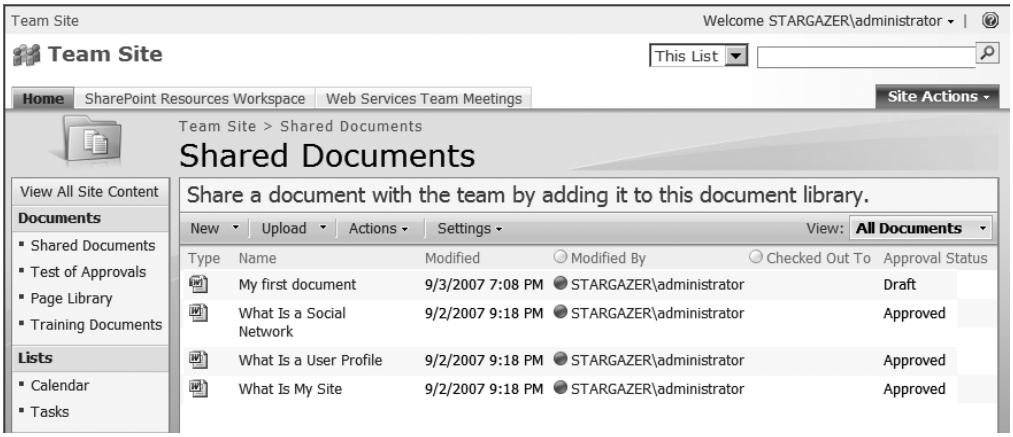

Figure 1-23. *Shared Documents library after uploading multiple documents*

You may not have noticed that the uploaded documents were Word 2003 files in the DOC format. Looking at the list of four Word documents in the **Shared Documents** library, how can you tell a Word 2003 document from a Word 2007 document? The icons to the left of the file name do have a small difference, but an easier way exists. When you hover over the document icon with your mouse, a tooltip style box appears below the cursor with the full file name, which also displays in the **Status Bar** at the bottom of the window. Either way, the file's extension suggests the version of Word used to create that document.

You can change the sort order of your document list by clicking the column header by which you want to sort. The first time you click the column header, SharePoint sorts that column in ascending order, and it displays a small up arrow to the right of the column name. The second time you click the column header, SharePoint sorts that column in descending order and adds a small down arrow to the right of the column name.

You can also sort a column by hovering over a column header to highlight it. On the right side of the column header, a drop-down arrow appears. Click this arrow to open a menu of options that allow you to sort the column. In addition to sorting, the drop-down list allows you to filter the list based on values in the selected column. Figure 1-24 shows that you can filter document types based on their extension.

■ **Note** You cannot filter the **Name** column.

If you select the **.doc** filter from the **Type** column, the library displays only the three documents stored as Word 2003–style documents. SharePoint does not delete the Word 2007–formatted document when it applies a filter, it merely hides it. You could add an additional filter on another column, in which case SharePoint displays only documents that match the filters from both columns.

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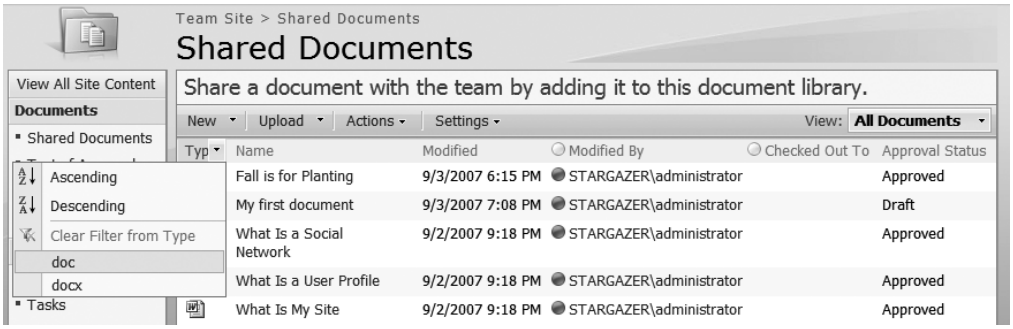

Figure 1-24. *Filtering the shared documents in a library*

■ **Note** A column with an active filter displays a funnel to the right of the column name.

To remove filters, open the drop-down for each column that has a filter and select the **Clear Filter** option.

Displaying Documents in the Datasheet View

Before looking at how to edit a document in the library, let's look at two other ways to view your documents. You can access both methods from the **Actions** menu at the top of the **Shared Documents** page.

Figure 1-25 shows the first alternative view: **Edit in Datasheet**.

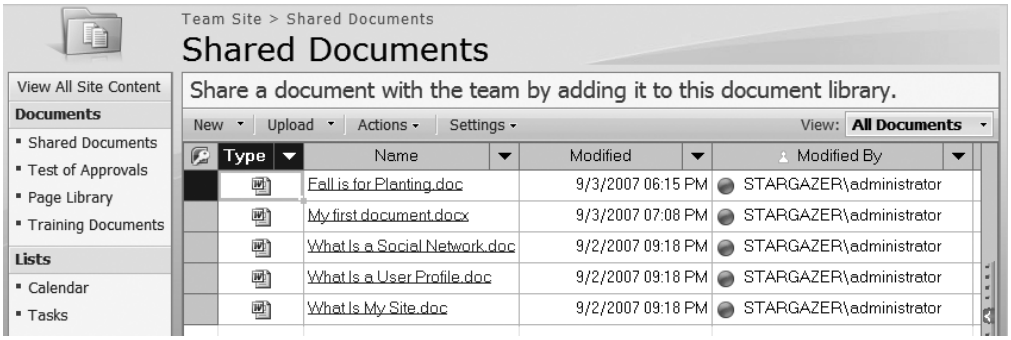

Figure 1-25. *Library displayed in Datasheet View mode*

As you can see, this view displays the same information as the **Standard View**. In **Datasheet View**, notice the icon in the upper-left corner of the table. This icon resembles the icon used by Access. In fact, SharePoint displays the list of documents as a table because that is exactly how it stores document information in SQL Server.

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This view also supports the ability to sort and filter the information displayed. However, rather than hovering over the column header, click the down arrow to the right of the column header name as shown in Figure 1-26 to open the menu.

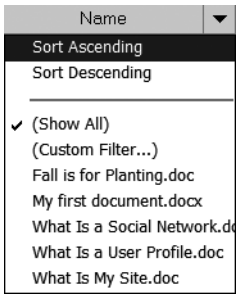

Figure 1-26. *Sorting and filtering in Datasheet View mode*

Notice that the sort options appear at the top of the list in this figure. Beneath the sort options you will find the filter options. In addition to filtering on specific values found in the selected column, you can define a custom filter. This feature can help you find documents in large libraries when you only remember a part of their file names. Figure 1-27 creates a custom filter in which the values in the **Name** column must begin with the word "What."

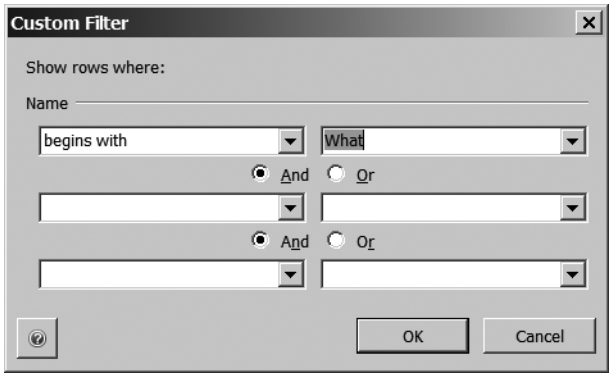

Figure 1-27. *Defining a custom filter*

■ **Note** You can filter on any displayed column within the library using this method. For example, if the document list displays a **Created By** column, you can filter on documents created by a specific person.

When defining a custom filter, you can specify up to three expressions for the filtered column. You can then connect each of these expressions with either an **And** or an **Or**. When you connect expressions with **And**, the expressions on either side must be true for that document to appear in the library list. When you connect expressions with **Or**, only one of the two

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expressions must be true for the document to appear. If you use expressions connected with both **And** and **Or** connectors, SharePoint executes the expressions from the left to the right. The **And** expression does not have precedence over the **Or** expression.

■ **Tip** Use the **Datasheet View** if you have to make changes to a custom column across many of the documents in the library. You can edit the data in the columns in this mode just like you edit data in an Excel spreadsheet.

Displaying Documents in Windows Explorer

The last way you will look at the document library in this chapter begins by opening the **Actions** drop-down menu and selecting **Open with Windows Explorer**. This action opens a separate window and displays the documents using Windows Explorer. This view has an interesting feature. If you open a second Windows Explorer session from your desktop, you can drag and drop files between the two windows. In other words, this view provides another way to upload documents into SharePoint libraries. In Figure 1-28, you can see two separate Windows Explorer sessions. The figure shows that I have just selected the file `Fall is for Planting.doc` from a directory in my local machine and dragged it into the **Shared Documents** library.

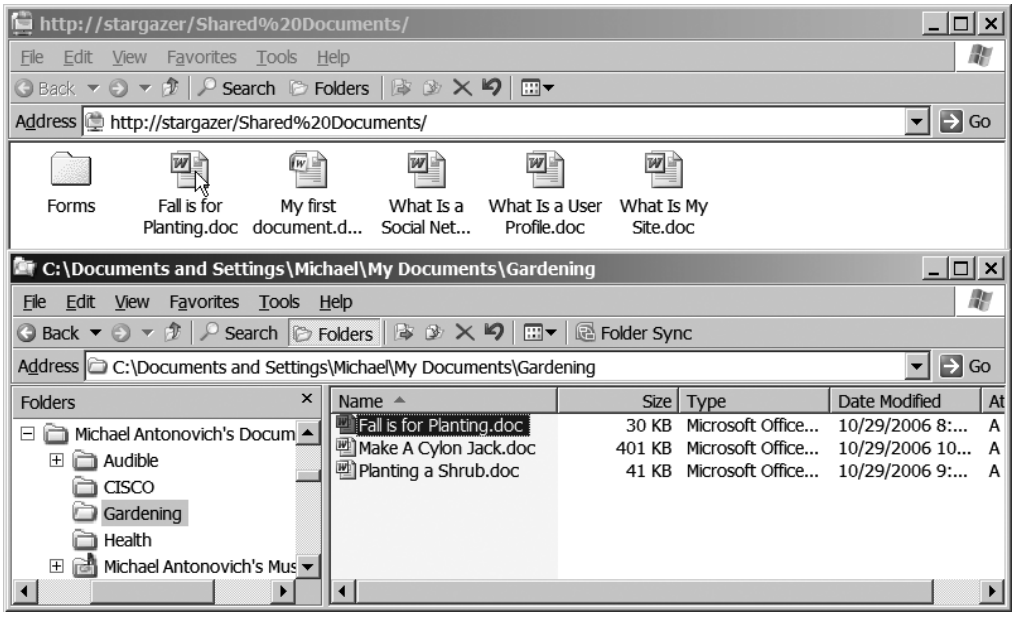

Figure 1-28. *Dragging and dropping documents into SharePoint*

When you return to your SharePoint session, you may need to refresh your page, but you will see that the new file now appears in the **Shared Documents** list.

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Editing Documents Stored in Your Library

After you have saved several documents to your library, you probably at some point want to edit them. You can choose from several ways to edit a document depending on your currently selected library view.

Editing a Word Document from Standard View

Suppose you want to edit one of the Word documents previously added to the library. Open the **Shared Documents** library. Hover the cursor over the name of the document you want to edit. Notice that SharePoint surrounds the document name with a box and a drop-down arrow to the right. It also underlines the document name, changing it to a hyperlink. You can edit this document by either clicking the document icon or its hyperlinked name. This action opens the dialog box shown in Figure 1-29 that lets you open the document for editing or just view it in **Read-Only** mode.

Figure 1-29. *File download prompt*

By default, SharePoint tries to open documents as read-only files. You should open documents this way if you only want to view, download, or print a copy of the document. This allows other people to open the document for editing. However, if you need to edit the document, click the **Edit** option before clicking **OK**.

Even if you forget to select **Edit** and open the document as read-only, Word displays a bar across the top of the opened document that allows you to switch to **Edit** mode as shown in Figure 1-30.

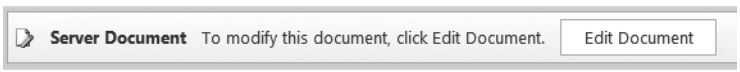

Figure 1-30. *Switching a document to Edit mode*

Once in **Edit** mode, you can make changes to the document and save them by clicking **Save** in the **Office Button** menu.

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You can also begin editing a document by clicking the down arrow displayed to the right of the document name when you hover over the name to open the drop-down menu. This drop-down menu shows options available for that document. Select **Edit in Microsoft Office Word** as shown in Figure 1-31 to edit the document.

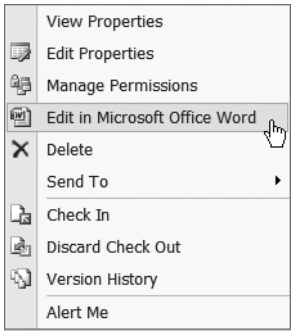

Figure 1-31. *Choosing to edit in Microsoft Word*

Editing a Document from Datasheet View

If you prefer to use the **Datasheet View** of your documents, you can also initiate editing of a document by right-clicking in the **Name** field of the document you want to edit. This opens a drop-down menu of available options. Move down to the **Document** option to display a submenu. This submenu, shown in Figure 1-32, presents options to open the document in **Read-Only** or **Edit** mode.

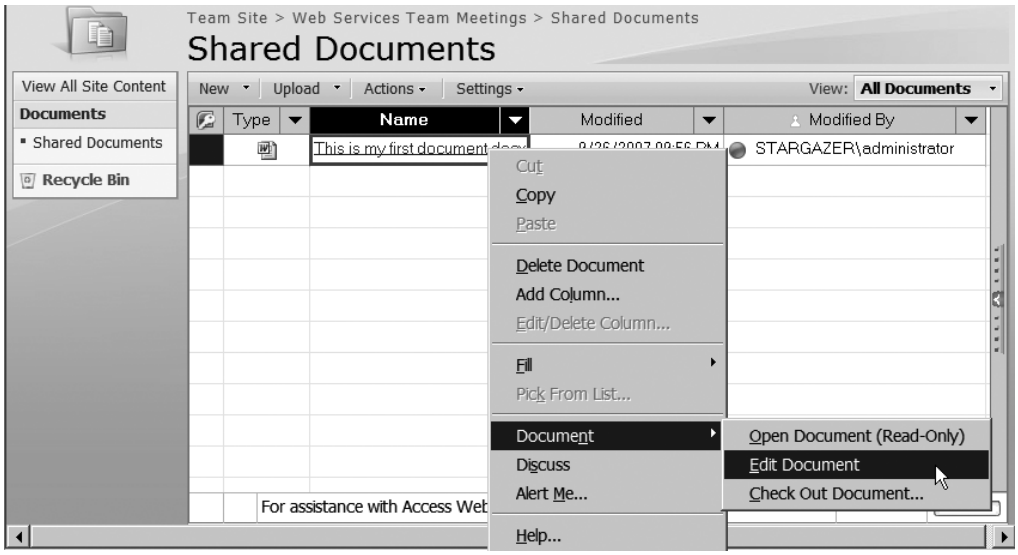

Figure 1-32. *Document options in the Datasheet View*

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The **Edit Document** option opens the document in **Edit** mode assuming no one else has the document open for editing. If they do, SharePoint can only open the document in **Read-Only** mode.

Under the **Actions** menu, you can also display your document library using Windows Explorer. While Windows Explorer does not directly show all the document options presented in either the **Standard View** or the **Datasheet View**, it still recognizes when someone else has the document open and by default tries first to open the document in **Read-Only** mode.

So now you know several different methods of opening a document for editing. But what happens when someone attempts to open your document while you have it open in **Edit** mode?

Simple Locking of Documents

When you open a document in **Edit** mode with one of the preceding methods, the document is temporarily locked. If another user attempts to open the document while you have it open, he receives a warning message like the one shown in Figure 1-33.

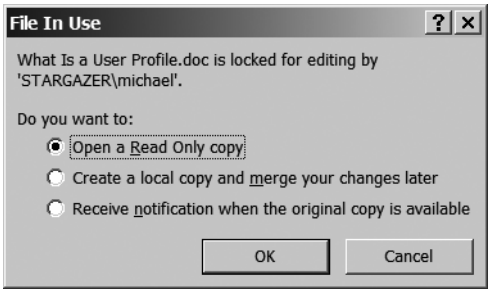

Figure 1-33. *"File in Use" message*

When SharePoint locks a file, it gives you three choices of what to do (actually four if you count closing the dialog box and going away):

- Open a read-only copy.
- Create a local copy and merge your changes later.
- Receive notification when the original copy is available.

Let's assume that you really do need to edit the document, not just view or print it. In that case, you could select either the second or third option. I will cover option two in Chapter 4. Option three provides an interesting alternative. With this option, you can ask SharePoint to notify you when the other person closes her copy of the document so you can open it. With this option, you do not have to even keep the read-only version of the document open. You can focus on another task, and when the document becomes available for editing, SharePoint sends you a message like the one shown in Figure 1-34.

When you receive this message, click the **Read-Write** button to begin editing the document, or if you no longer need to make the changes, click the **Cancel** button to make the file available to others.

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Figure 1-34. *"File Now Available" message*

For most quick changes, working in **Edit** mode as described in this section with the automatic locking that SharePoint provides may not pose a problem. However, the default SharePoint locking does not last forever. In fact, depending on the operating system used by the person editing the document, the lock may only guarantee exclusive use of the document for 15 to 30 minutes. Thus, if you need more time than that to edit the document, you could have a concurrency problem.

What Is a Concurrency Problem?

A concurrency problem occurs when two or more people open a document for editing at the same time. As an example, say you open a document in the **Shared Documents** library. After 30 minutes, suppose that you still have the document open, but you leave for lunch without closing the document. Now Natasha from the office down the hall opens the same document. Since more than 30 minutes have passed, SharePoint no longer maintains the lock on the document. So Natasha opens the document, makes her changes, and saves them. Finally, you come back from lunch an hour later and realize that you have not closed your document. So you click **Save** and close the document.

Later that same day, Natasha goes back into the document to check one of her changes and discovers that she cannot see her changes. Furthermore, the document looks entirely different from the one she edited. She wonders, did someone delete her changes?

Well actually yes, someone did delete her changes, but not intentionally. When you came back from lunch and saved the document, SharePoint happily overwrote the existing version in the library, the one containing Natasha's changes.

Because Windows XP holds a lock on a file for only 15 minutes by default, relying only on this basic lock functionality when opening a document can lead to problems. If you have Windows Vista, you can keep a file open for 30 minutes while the automatic lock remains in place. For quick changes, 15 to 30 minutes should provide adequate editing time. However, when you need to make major changes to a document, you may want to use a feature called Check-Out first before you edit the document.

Why Use Check-Out and Check-In?

Using Check-Out results in a more secure way to lock a document before opening it for editing. This manually applied lock stays in place until you decide to check the document back in. That means you can keep a document checked out for an hour, a day, or even longer without worrying about someone else making changes to the document while you have it. Think of Check-Out as getting exclusive control over a file, like checking a book out of a physical library. While you have it checked out, no one else can check it out. (Well, almost no one—I'll get to that in a moment.) But unlike your public library down the street, when you check out a document

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from a SharePoint library, other people can come in and open a read-only copy of the last saved version.

Checking out a document has other advantages. Both the **Standard View** and the **Datasheet View** can show you the name of the person who has the document open. Therefore, if you really need to get to that document, you can just walk down the hall, call him, or instant message him to ask when he will finish editing the document so you can open it to make your changes.

How to Check Out a Document

To check out a file when using **Standard View**, open the drop-down menu for the document and select **Check-Out** as shown in Figure 1-35.

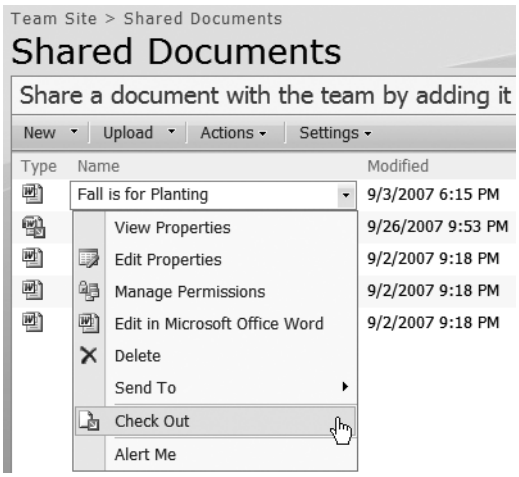

Figure 1-35. *Checking out a document in Standard View*

After you check out a file, you still must return to the drop-down menu to select **Edit** in Microsoft Office Word to open the document in Word. However, from the time you check out a file until the time that you check it back in, you have exclusive access to the file. Remember, if you choose to display the **Checked Out To** column in your **Shared Documents** view, you will see who has documents checked out. This feature does not exist if you rely on the automatic locks provided by simple document editing. However, if you attempt to edit the document, the **File in Use** dialog box shown earlier in Figure 1-33 will display the name of the user who has the file open for editing. Figure 1-36 shows an example of how the **Standard View** looks when someone has checked out the document "Fall is for Planting."

If you check out a document and realize you picked the wrong document or you no longer need to make changes to that document, select the **Discard Check Out** option, which only appears in the drop-down menu after you have a document checked out.

When you check out a document, SharePoint asks whether you want to save a copy of the document in your local drafts folder as shown in Figure 1-37. If you do not click this option, SharePoint creates a copy on the server that you can edit. However, saving intermediate changes to the server takes more time, and only by saving a copy in your local drafts folder can you work on the file offline, a topic that I will cover in Chapter 4.

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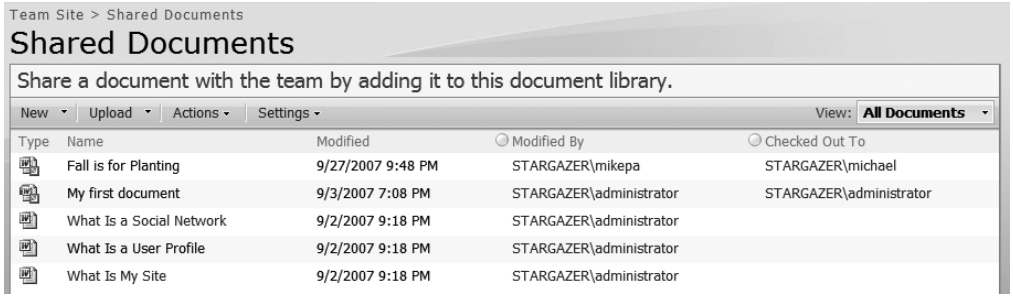

Figure 1-36. *Checked out files listed in Standard View*

Figure 1-37. *Saving a copy in your local drafts folder*

■ **Note** You may need to make your SharePoint site a trusted site in your Internet Explorer Security options before you can use your local drafts folder.

Once you check out a document, you can edit the document for hours or even days if necessary. When you are done, make sure that you save your changes, close Word, and then check the document back in. Saving your changes and closing Word does not automatically check in the document. Good office etiquette requires that you only check out a file for as long as necessary to make your changes. Keeping a file checked out longer than necessary merely prevents others from getting their work done.

If someone were to not notice the checked out information in the **Shared Documents** listing and attempt to edit this document anyway, she would receive the warning shown in Figure 1-38.

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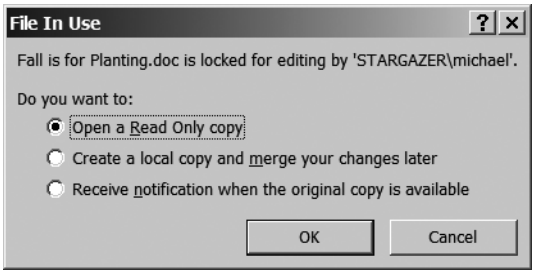

Figure 1-38. *"File in Use" warning*

Checking Documents Back into the Library

When versioning is not turned on, SharePoint does not make visible your intermediate changes until you check the document back into the library. This functionality differs from editing a document without checking it out. In that case, every time you save the document, whether you close Microsoft Word or not, other users can see your changes.

When versioning is turned on and you edit a document directly, each time you save your changes, SharePoint creates a minor version of the document. When you check in the document, other users with permission to edit can open your document and make further edits. Minor versions of the document may or may not be visible to users with only Read permission, depending on the **Draft Item Security** setting in the library's **Versioning Settings**. Thus, you can use this setting to determine whether users with Read permissions can see minor versions of the document. When you check out a document to your local drafts folder, SharePoint hides all changes until you check the document back in because you are working with a local copy of the document. At that time, the user saving the document can assign the update a minor or a major revision number and provide revision comments.

When you close the Word session used to edit the document, a message prompt reminds you that SharePoint does not make changes visible to other users until you check the document in. If you have not finished with your changes but merely want to go to lunch, click **No**. However, if you have finished, click **Yes** to check your document back in as shown in Figure 1-39.

Figure 1-39. *Prompt to check in changes*

When you check in changes with versioning turned on, SharePoint provides several alternatives to label your new version as shown in Figure 1-40.

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■ **Note** You will not see the **Check In** dialog box if your site does not use versioning.

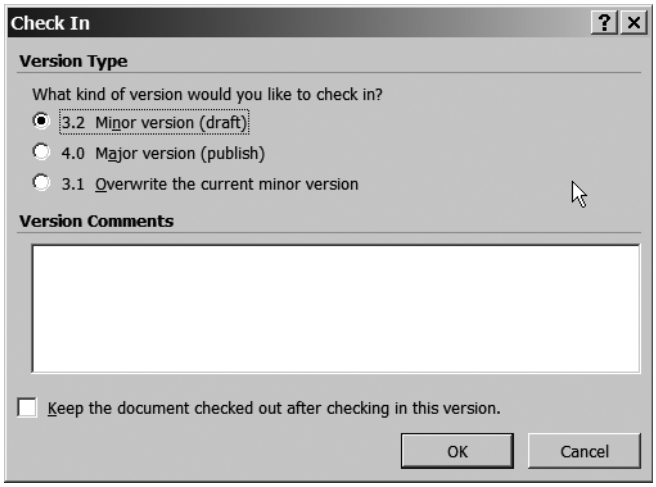

Figure 1-40. *Select check-in version and add comments via the Check In dialog box.*

By default, SharePoint labels your checked-in version with the next available version number. If your site only uses major versioning (whole numbers), SharePoint increments the version by 1. If your site uses minor versioning, SharePoint increments the version by 0.1. If your site supports minor versions, you must decide when to accept the next available minor version number or instead use the next major version number. How you decide depends on you, but if you made major changes to a document, you probably should go with the next major version number. Alternatively, if you started from a previous draft version and only made a few spelling corrections, you could simply replace the current version. How your SharePoint administrator has set versioning in your library may also affect which option you can choose.

In addition to selecting the version for your changes, you can enter comments about the new version. In the comments section, you should include information about the changes you made, who requested them, who approved them, or what impact the change will have on your organization. You can view these comments when you display a document's version history (which you'll learn more about in the upcoming section, "Tracking Document Versions").

Overriding a Check-Out

Previously I stated that a document checked out by a user cannot be edited by anyone else. However, suppose you absolutely must get into a document, but the person who checked it out has left for a two-week Mediterranean cruise. If you have administrator rights to the document library, you can right-click the document and select **Check-in** to bring up a dialog box asking you to confirm you want to override the check-out as shown in Figure 1-41.

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Tip If you do not have the rights to override a checked-out document, contact your SharePoint administrator or the site owner. She can either check in the document or modify your rights to allow you to override a check-out.

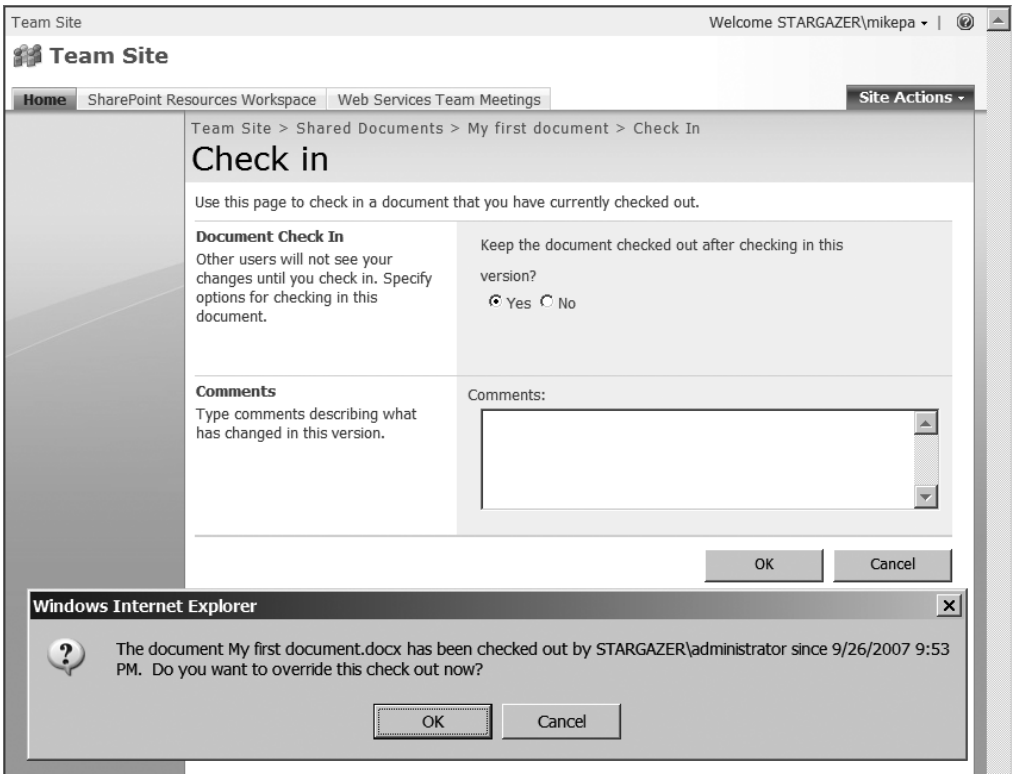

Figure 1-41. *Overriding a check-out.*

When an administrator overrides a checked-out document, the user who had originally checked out the document may lose some of his changes unless he edited it from his local drafts folder. Therefore, it is good office etiquette to let the other user know that you had to override his checked-out document while he was out of the office.

Tracking Document Versions

When your SharePoint administrator turns on document versioning, SharePoint stores multiple copies of each document, representing saved changes to the document. To see the versions for a document, click the down arrow when hovering over a document name in a library and select **Version History**. Figure 1-42 displays the versions for the document `Fall is for Planting.doc` in the `Shared Documents` folder.

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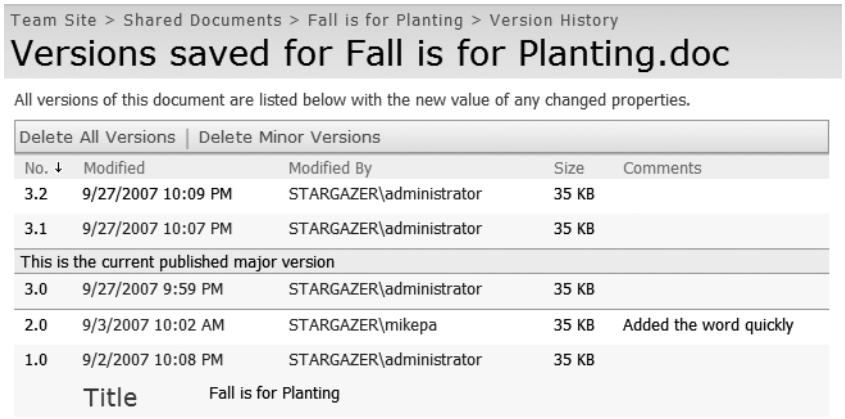

Figure 1-42. *Displaying a document's version history*

Notice the version history of the selected document includes both major and minor revisions. Recall that whole numbers define major versions, and minor versions contain decimal portions like 2.1.

Depending on how you use your **Shared Documents** library, you may not want to track minor versions. Including an approval process for content is the primary reason to consider tracking minor versions. When doing this, you might only allow a specific group of people defined as content creators to have the ability to view and edit both major and minor versions of a document. However, only a content approver can publish a new version of a document. Everyone else may only view the most recently published version.

In the case of using document approvals, consider a major version to be one ready for the general public to read. Within an organization, you might designate a project group to have access to both major and minor versions of a document. However, the rest of the organization sees only major versions representing finished documents from the group that only change periodically.

Your SharePoint administrator may also limit the number of both major and minor versions that SharePoint stores. After all, the more versions you track, the more disk space you need. Therefore, a SharePoint administrator may allow you to store only the last three major releases and the minor releases made from the current release. Figure 1-43 shows how a SharePoint administrator might configure versions so that only users with permission to edit can view minor releases, and minor versions are kept only since the last major version.

■ **Tip** To change the version settings, select **Document Library Settings** under the **Settings** drop-down menu of the **Standard View** of the library. On the **Customize Shared Documents** page that appears, select **Versioning settings** in the **General Settings** section.

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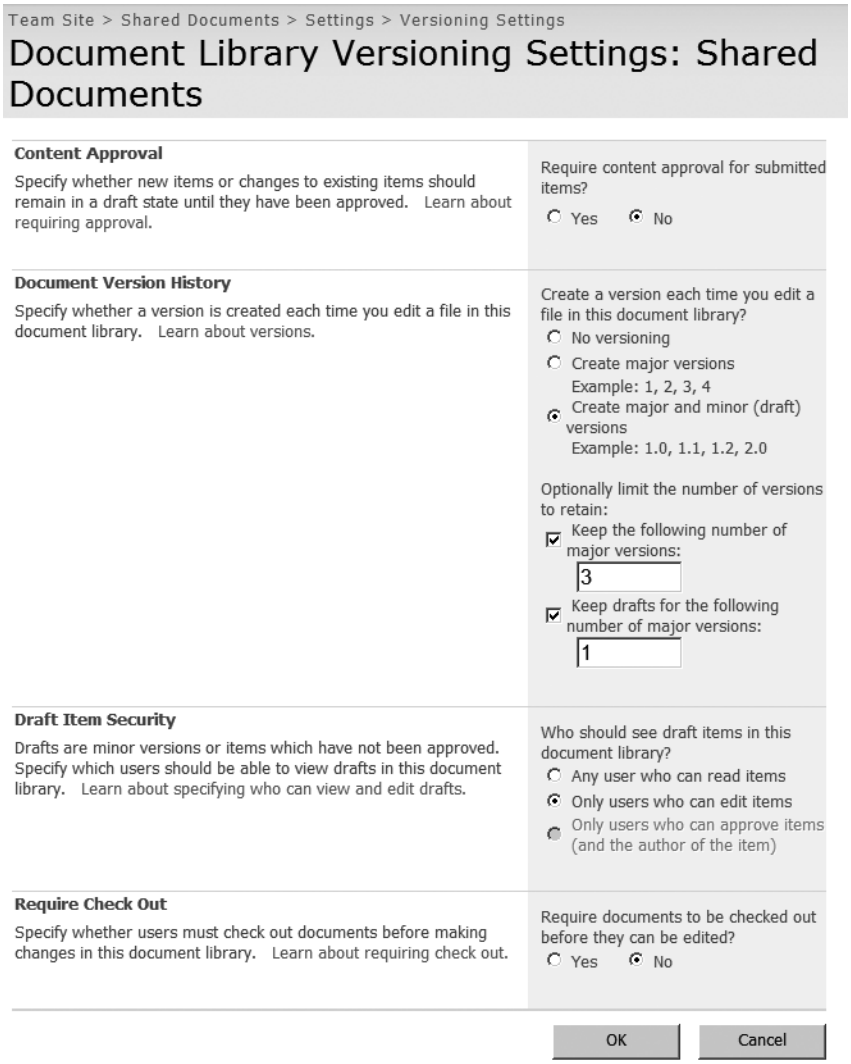

Figure 1-43. *Defining versioning settings*

Promoting a Prior Version to the Current Version

Occasionally, you may need to return to a previous version of a document. Perhaps the change you added to a policy document has been rescinded by management, and they want the previous policy statement reinstated. Of course, you could edit the current document and hope to reverse all the changes, returning the document to its previous content. That could entail a major effort fraught with the potential of missing a change. It is far easier to simply view the version history for the document and select the prior version, making it the current version.

To do this, first check out the document from the **Standard View**. Then select **Version History** in the document's drop-down menu. Next, hover over the **Modified Date/Time** of the version you want, and click the **Restore** option in the menu as shown in Figure 1-44.

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Note If you do not first check out the document, SharePoint displays an error message informing you to first check out the document.

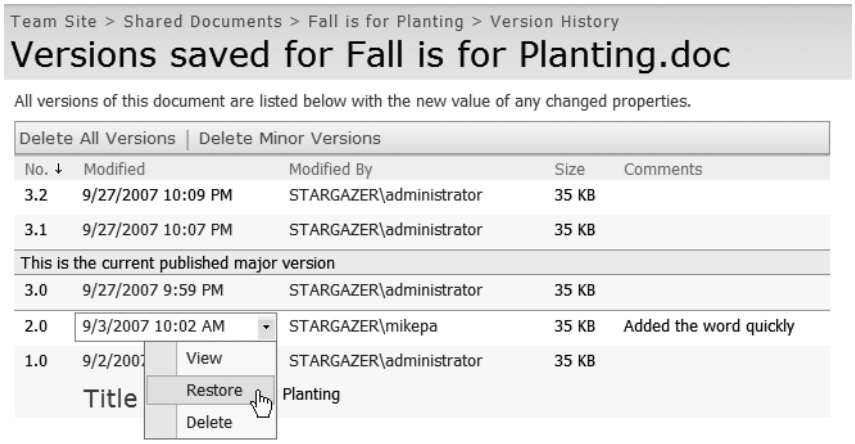

Figure 1-44. *Restoring a prior document version*

SharePoint prompts with a warning that you are replacing the current version of the document with the selected version. Click **Yes** to proceed.

The **Version History** page now displays a new minor version of the document as shown in Figure 1-45. When you open this document, you see that it is a copy of version 2.0 selected in Figure 1-44.

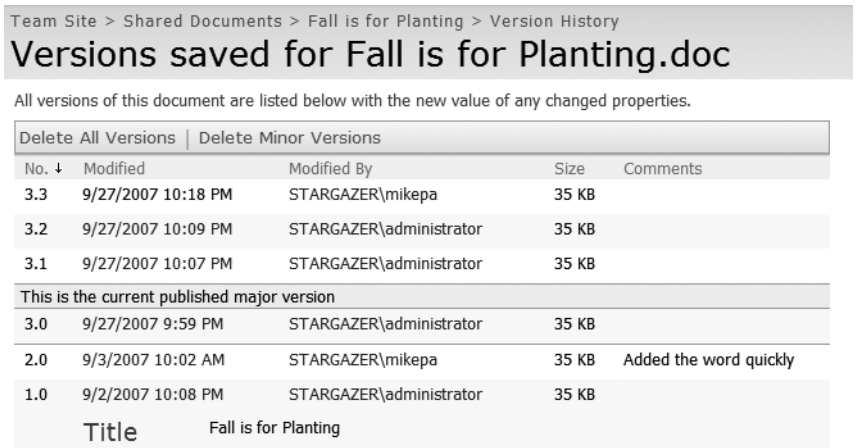

Figure 1-45. *New version created from a prior version*

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Publishing Documents to Your Document Library

If your site requires content approval, you can only approve and publish major versions of a document. So when you promote a prior document version as shown in the last section, or when you add minor version changes to your document, your changes may not be immediately visible to everyone. In fact, even without content approval, users other than the content creators and approvers may not be able to see minor versions based on the version settings in the library. Obviously, you do not want to publish every minor version. To avoid this, you could ask your SharePoint administrator to turn off minor versioning, thus effectively turning every saved version into a major version.

When you turn off all versioning, management of the document library becomes informal. Only do this if you do not need to save previous versions. This practice reduces the amount of space needed by your site. However, if you ever need a prior version of a document, you may be out of luck unless you can restore one from a backup copy of the database. However, retrieving documents from a backup copy of the database requires time and a separate place to restore it. Such extra work will not earn you bonus points with your SharePoint administrator.

To publish your most recent document, return to your `Shared Documents` folder and open the drop-down menu associated with that document. Notice that it shows the document as still checked out because the **Check In** option appears. Click the **Check In** option, and the page shown in Figure 1-46 appears. This page allows you to determine whether you want to keep the document as a minor version or publish it to the next major release number.

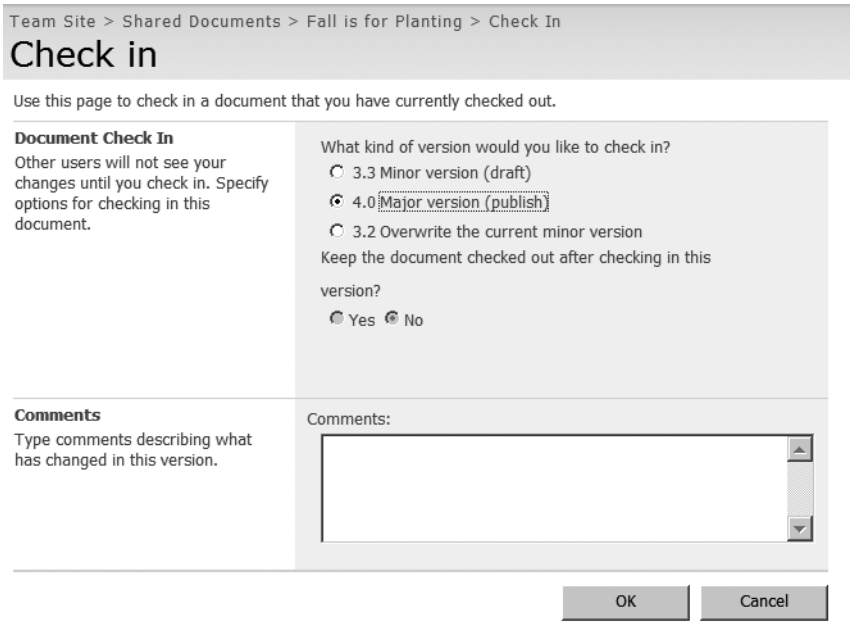

Figure 1-46. *Publishing a restored document during check-in*

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If you choose to leave the document as a minor version, you can always return to the document later in the **Standard View**, open the drop-down menu, and click **Publish a Major Version**. As shown in Figure 1-47, you can add comments when you publish a major version, documenting what has changed since the last major version.

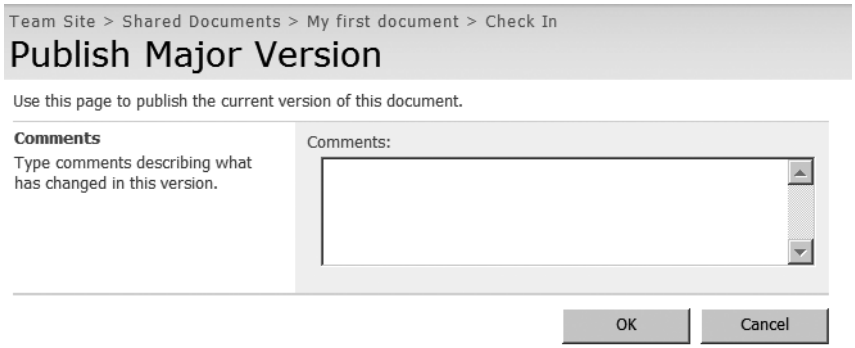

Figure 1-47. *Publishing a major version*

Notice the message at the top of Figure 1-47. If your **Shared Documents** library requires approval of major document changes before the public can view the latest document version, SharePoint displays this message. Click **OK** to submit your request to publish this version for approval. If the site does not require approval, saving a document as a major version makes it public immediately. However, if your document library requires approval, saving a major version merely sets the status of the page to **Pending** as shown in Figure 1-48.

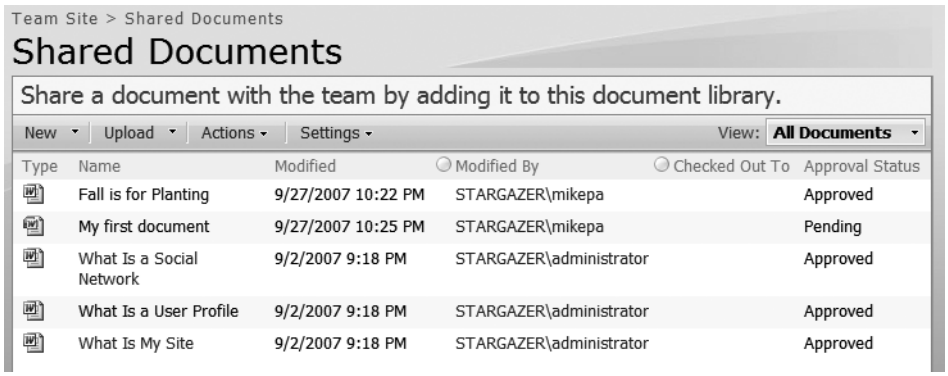

Figure 1-48. *Viewing document approval status*

SharePoint adds the column **Approval Status** automatically when your SharePoint administrator requires documents on your site to be approved before publishing them.

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To approve the content, log in as someone with approval permission. If you have approval permission, go to the **Shared Documents** page and open the drop-down menu for the document. Notice you now have a new option: **Approve/reject**. Clicking this option displays the page shown in Figure 1-49.

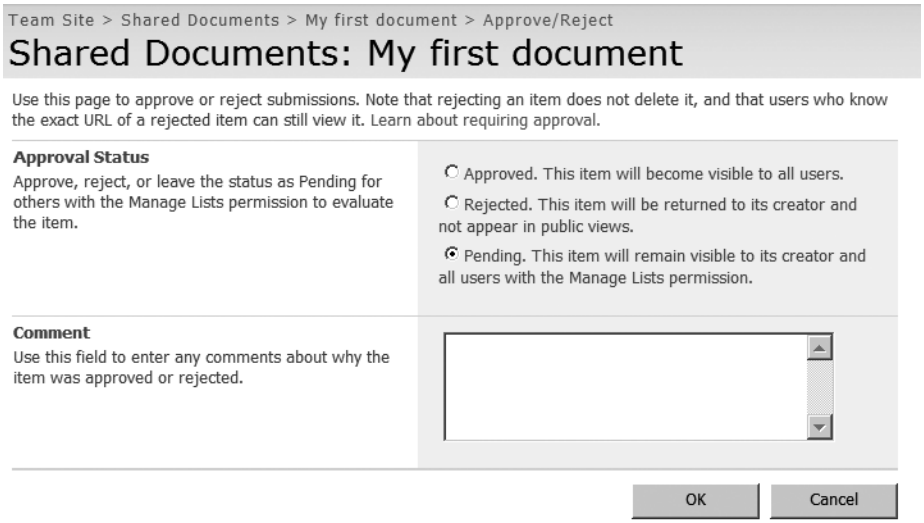

Figure 1-49. *Approving a document for publishing*

As you can see in this figure, approvers have three possible actions they can select for this request:

- **Approve**: The document becomes visible to all users.
- **Reject**: The document does not become public. This option returns the current source to its creator.
- **Pending**: The document remains in its current state. This option can be used by approvers when asking for further clarification.

No matter what action the approver selects, she can include a comment. An approver should always include comments when rejecting a document or sending it back pending additional work, information, etc. When the approver selects **Approve** and clicks **OK**, SharePoint publishes the page, making it available to all viewers of the site, and in the **Shared Documents** page, the approval status is changed to **Approved.**

Figure 1-50 looks at the version history for this document. You see a new major release (2.0) now listed and all the minor releases from version 1.0 have been removed. This occurs because the version setup defined in Figure 1-43 tells SharePoint to retain only minor releases for the current major release.

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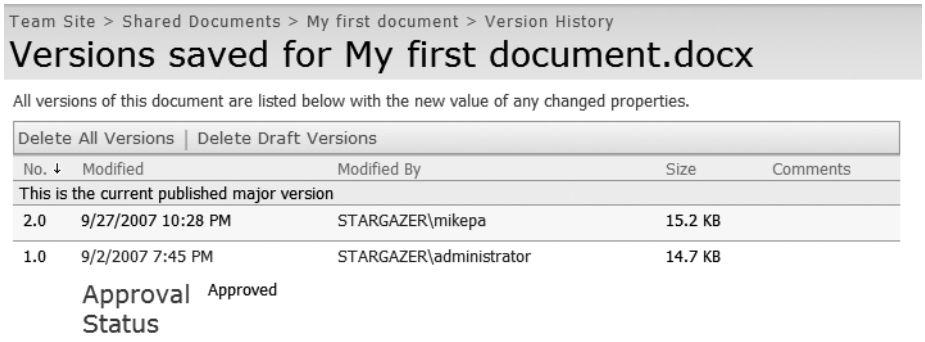

Figure 1-50. *New major release after publishing document*

Requiring Document Approval to Hide Drafts: A Simple Workflow

Workflows constitute an important feature of collaboration. Most business environments pass documents created by one person to two or more people for review, further editing, and ultimately approval before publishing them. In the past, organizations implemented workflows by physically transferring a document from one office to another via interoffice mail or by walking it from one office to another. More recently, e-mail replaced the need to physically move most documents between offices. However, even with e-mail, organizations have an inherent need for the person who receives a document to know who to send the document to next. Workflows can automate that entire process.

Workflows manage the flow of documents through various stages and, based on the action taken at any stage, determine who should receive the document next. Workflows also manage the development of a document from initial draft through editing, approval, and finally publishing. Also, since SharePoint carries out all steps in the workflow electronically, it is possible to locate where each document exists in the flow and where bottlenecks slow down the process.

For simple document approval, use the document library's **Versioning settings**. Open the library you want to work with and choose **Document Library Settings** from the **Settings** drop-down menu at the top of the **Library** list. From the settings page, click **Versioning settings** in the **General Settings** group. Define the versioning settings similar to those shown in Figure 1-51. These settings turn on content approval for new and edited items. Use major and minor version history to track multiple draft versions prior to publishing a major version. Then set the **Draft Item Security** so that only the content author and people who have approval permission can view the draft documents. Finally, select the **Require Check Out** option to force SharePoint users to check out the document before editing it.

A simple workflow begins with the content creator. While working on a document, SharePoint sets the document status to **Draft**. Once the content creator completes a document, he submits it for approval, which changes the status to **Pending**. An approver may approve, reject, or leave a document in a pending state (refer back to Figure 1-49). Some approvers may have permissions to perform basic editing tasks, or their rights may limit them to verifying the information in the document. If the approver rejects the document, SharePoint sets the status to **Rejected**. Similarly, SharePoint changes the status of an approved document to **Approved**.

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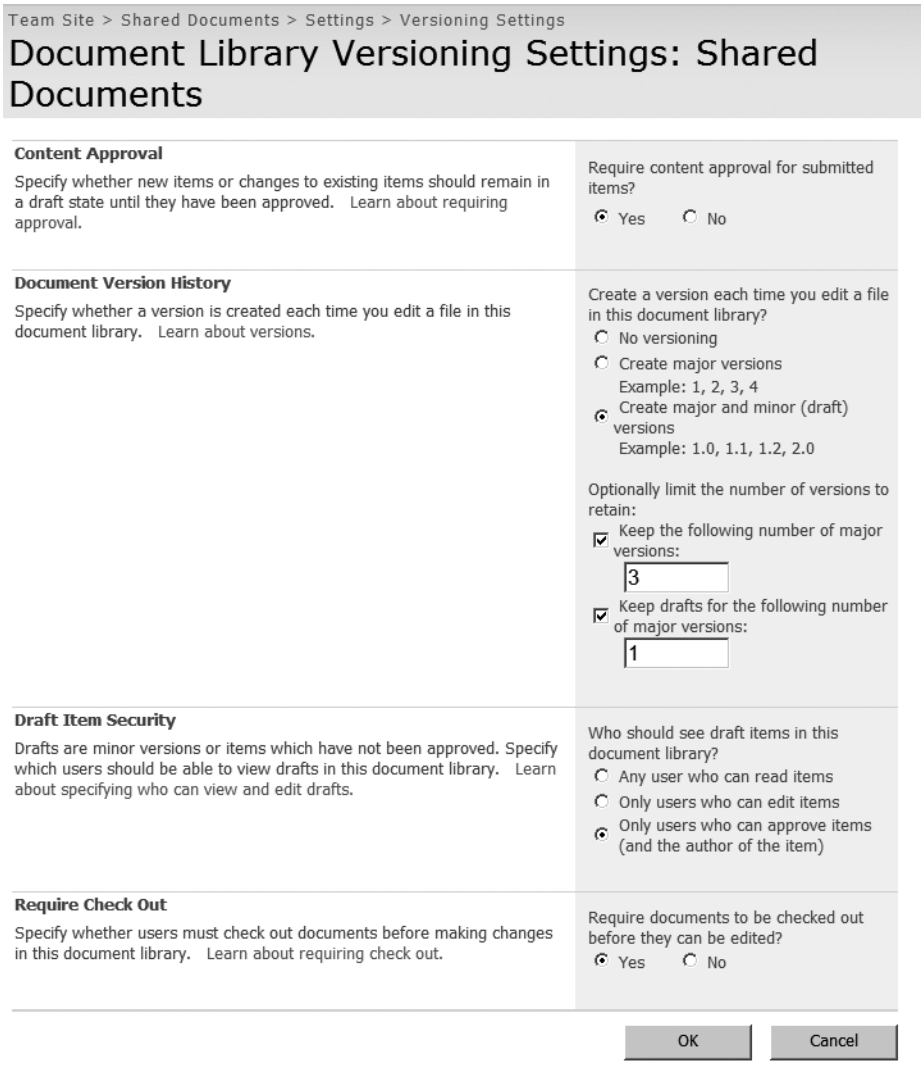

Figure 1-51. *Library Versioning settings for document approval*

This simple workflow for a document allows documents to remain hidden while in draft mode, usually requiring a person other than the content creator to approve the document. However, at this level, SharePoint provides no dynamic notification to approvers when a document has been submitted for approval. Nor does SharePoint provide notification to the content creator when the approver changes the document status to approved or rejected. Rather all parties must constantly monitor the status of documents in the various libraries. If you only have a single library, this may not seem like a major inconvenience. However, if you support several sites, each of which has multiple document libraries and lists, manually checking the

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status of documents and lists will probably not happen on a regular basis. You will see in Chapter 2 how to set up alerts and RSS feeds, which you could use to monitor changes to your libraries. What you need to make this workflow really useful is e-mail notification when a task is passed from one person to another. I will return to this issue so you can see how to create more complex workflows to make this happen in Chapter 10.

Recovering Accidental Deletions with the Recycle Bin

When you delete a document from your **Shared Documents** library, SharePoint prompts to confirm that you really want to delete the file. You may ask why you would need to worry about accidental deletions. I did too at first, until I realized that with more than one person having access to a site, not everyone may realize the value of the documents you decide to publish.

For those situations when someone accidentally deletes a document, both WSS 3.0 and MOSS 2007 support a Recycle Bin, which like the Recycle Bin on your desktop, allows you to recover deleted files. For example, suppose you accidentally deleted the file `My first document.docx` from the `Shared Documents` folder and then realized that you really need to keep that document. Click the **Recycle Bin** option at the bottom of the **Quick Links** menu on the left of the **Shared Documents** page. This option, shown in Figure 1-52, displays a page listing all documents deleted within the last 30 days.

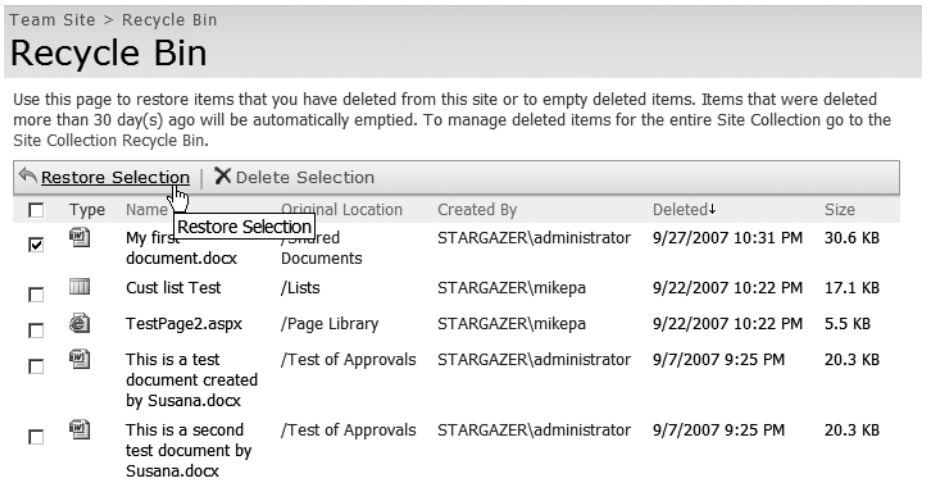

Figure 1-52. *The Recycle Bin collects all deleted documents.*

To recover a document, click the check box to the left of the document and click the **Restore Selection** option at the top of the page.

When you delete a document, you delete all versions of that document as well. You may be surprised to learn that when you recover a document from the Recycle Bin that you also recover all versions of that document as well. So rather than thinking of files in your document library as single files, think of them as a small collection of files with the same name.

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■ **Tip** You can ask your SharePoint administrator to change the length of time items stay in the Recycle Bin. She can go into Central Administration and select the **Application Management** tab. Then by selecting the **Web Application General Settings** page, the administrator can scroll down to the **Recycle Bin** section and change the number of days items are kept in the Recycle Bin.

Summary

This chapter began by looking at how SharePoint organizes sites into a hierarchical structure starting with a top-level site and nesting additional sites within it. If you are using WSS 3.0, you can choose from ten collaboration and meeting site templates. If you are using MOSS 2007, you have additional templates grouped under the group titles of enterprise and publishing templates. Remember that a template just provides a starting point for building your site. You can find many of the features that are available in one template in other templates as well. This allows you to customize a template no matter which one you start with.

Next, I showed you how to add users and permissions to a site. By default, when you create a new site under the top-level site or even another site, you can simply inherit the permissions used on that site from its parent. This can save you a lot of time. However, if you need to customize the permissions or the users who have access to your site, you can add users for specific sites as well as assign them to custom group definitions having custom permission levels.

After defining which users can access a site, you typically will start building content for the site. Therefore, the text examined one of the library types provided by SharePoint, document libraries. A document library can hold just about any type of file. However, most Microsoft Office users think first of Microsoft Word documents. Therefore using Microsoft Word, you saw how to create new documents in the library as well as upload existing documents. With respect to editing these documents, anyone with a compatible client application can edit a document stored in a library. However, unless the library forces documents to be checked out or you manually check out the document first, you could have concurrency problems. Also, if you check out a document, remember to check the document back in so others can see your changes and to allow others to make further changes to the document.

Document versions allow you to track changes made to the document. You can track both major and minor versions. Keep in mind that visitors to your site may only be able to read major versions. Therefore, you can use minor versions as working documents within your team until you are ready to publish the final version, and then save the document as the next major version.

You can also use the document approval feature to allow documents to remain hidden until someone with approval permission can release the document. Organizations often use this model when publishing information that the general public can view on internet pages. They may allow nearly everyone in the organization the permission to create new documents or to edit existing documents. However, until an approver reviews those documents, the general public cannot see them.

Finally, the chapter closed with a brief look at the Recycle Bin. This feature helps you recover documents accidentally deleted. However, as you will see in later chapters, it works with many other SharePoint objects, including objects shared with Microsoft Office tools.

The next chapter extends this introduction to SharePoint to lists and Chapter 3 to content web pages.

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