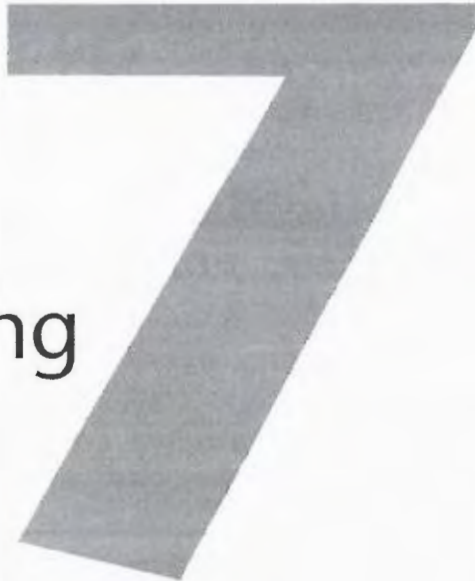


Chapter 7

Finding and Reading Documents



Collabra Share was designed to make the everyday task of reading shared documents as easy and productive as possible. Most of your time in Share will be spent finding and reading documents written by others, so any time you save performing those tasks will be highly leveraged.

The word that best describes Share's user interface, according to reviewers and first-time users, is "intuitive." In this chapter, you'll see how the Forum window maintains your information context visually as you read documents, and you'll learn about the InfoNavigator features that help you find the most relevant documents quickly.

This chapter covers the following topics:

- Threaded discussions and hierarchical categories
- The Forum window
- Navigating from document to document
- Finding unread documents
- Searching for and sorting documents
- Viewing selected documents
- Hotlists
- Printing
- Links to electronic mail

Understanding Threads and Categories

One of Share's goals is to eliminate information overload. Share employs two key elements toward this objective. First, by storing documents in categories, the number of documents you have to scan at once is reduced. Second, Share maintains and presents the context of your documents, as you'll see.

You can think of categories as a terse summary of the documents that they contain. When you contribute to a shared forum, you choose a particular category for it and thereby help your readers find your document and understand its subject. You're also relating your document to others on the same topic, which can lead to fresh insights.

Besides its category, there are other contextual clues that help readers make sense of particular documents. For example, all electronic mail users are familiar with chronology, because mail inboxes are typically sorted by date. Knowing which message came first is useful information, often not expressed in the message itself.

Documents are often inspired by other documents. In a mail application, if the title is "Re: Something else" you have a clue—but only a clue—that a message is in reply to another message.

Another contextual clue is the crisp distinction in Share between a document that introduces a new subject and a response to that document. The initial document is called a *topic document*, and responses are called *replies*. Figure 7.1 illustrates the way Share displays documents. Topic documents are at the left margin and have a white page icon, while replies have yellow posted note icons and are indented. You can reply to a reply and the "conversation" can diverge down several paths, but the entire *thread* is controlled by the original topic document.

When everyone has expressed themselves on a given topic, you might create a *thread summary*, which has a distinctive icon but is otherwise treated like a first-level reply. Creating summaries and other kinds of documents is described in Chapter 8, "Contributing to Forums."

Table 7.1 summarizes the terms that you've just learned.

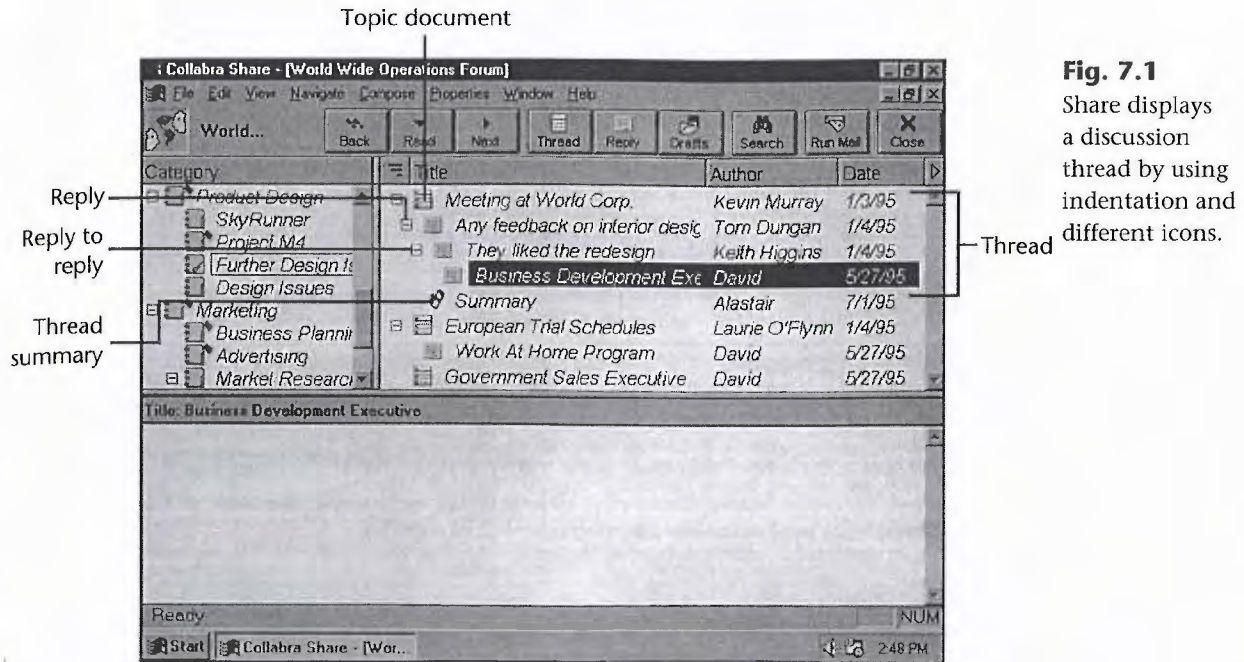


Fig. 7.1 Share displays a discussion thread by using indentation and different icons.

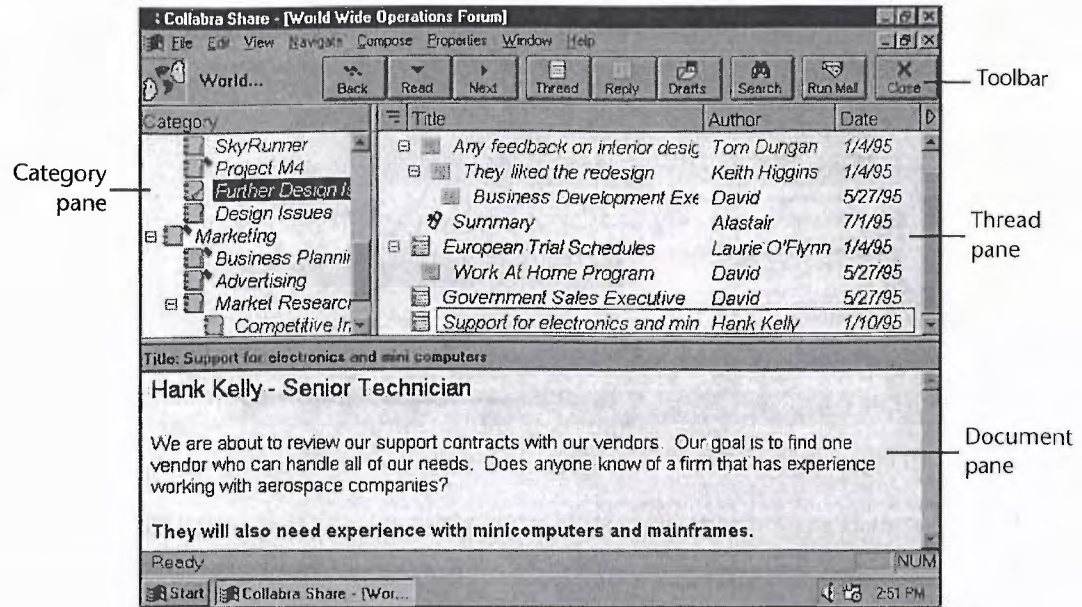
Table 7.1 Share Terms	
Term	Definition
Topic document	A document that is not a reply to another; the start of a thread.
Reply	A document in reply to a topic document.
Reply to reply	A document in reply to another reply.
Thread	A topic document and zero or more replies.
Thread summary	A reply that contains the other documents in the thread.

Using the Forum Window

The Forum window, shown in Figure 7.2, presents the contents of a forum. Whenever you open a forum from the Library, another Forum window is created to display it.

Fig. 7.2

A Forum window is your view into a forum.



Using Forum Window Panes

The Forum window is divided into three panes. The pane in the upper left is called the *Category pane*, and it presents a list of the forum's categories. The pane in the upper right is called the *Thread pane*, and it displays the topics and replies associated with the category selected in the Category pane. The pane at the bottom is called the *Document pane*, and it displays the contents of the document that is selected in the Thread pane.

Notice that control flows clockwise from the Category pane. Selecting a different category changes what the other two panes display. Selecting a different document in the Thread pane, however, only affects the Document pane, not the Category pane.

Category Pane

The Category pane, shown in Figure 7.3, displays the forum's list of categories. The order of the categories never changes; they cannot be sorted. Categories are created by a forum's Moderator and are positioned in the list at that time.

Categories containing documents you have not yet read have red flags on their icons.

Forums are not required to have categories. The first entry in the Category pane represents the root category, named for the forum, and it can contain

documents just like any other category. There are a few gotchas, however. The root category has no properties, for example, and the Mail Agent, therefore, cannot direct mail to the root using keywords.

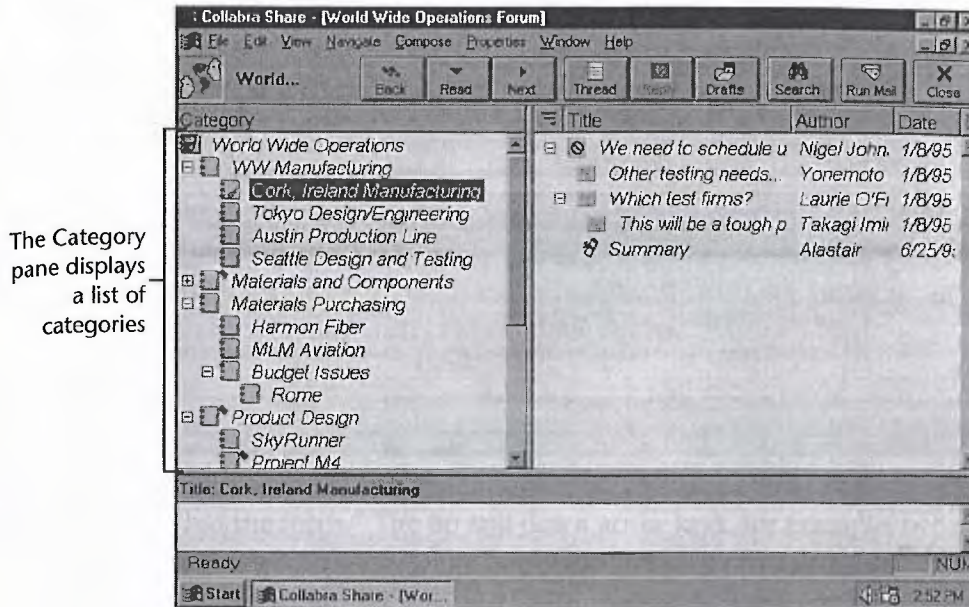


Fig. 7.3
Use the Category pane to select which category appears in the Thread pane.

You can select several categories at once by using Shift+Click, but Ctrl+Click is not allowed. When more than one category is selected, the Thread pane displays the most recently selected category.

Thread Pane

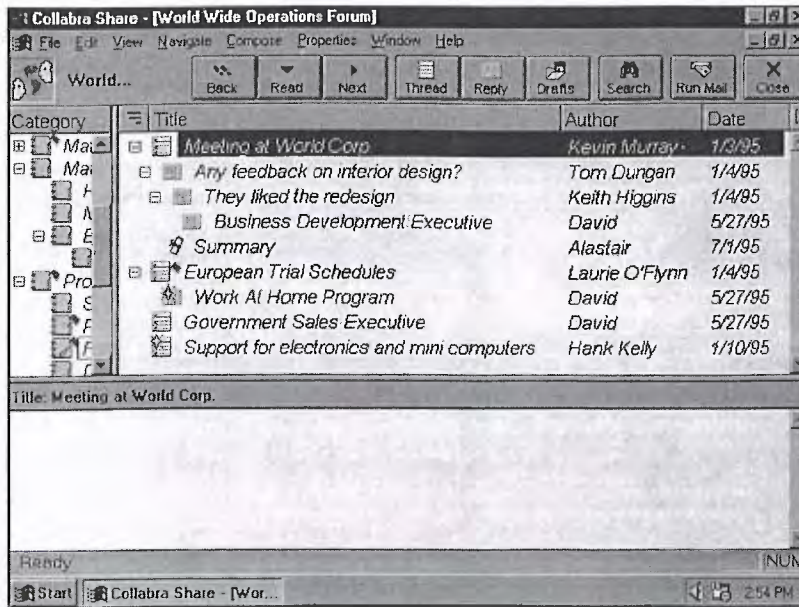
The Thread pane, shown in Figure 7.4, is arguably the most important pane. It displays the documents of the currently selected category (or the root). Unless you have chosen a special view, the documents are shown in thread order, with replies nested under topic documents.

As you can see, the Thread pane displays the title, author, and creation date of each document. It can optionally show the document size (in kilobytes). Unread documents have "sparkles" on their icons; topics and replies that have unread replies have red flags on them as well. Notice that a document that has a red flag may not have a sparkle, and vice versa.

You can select more than one document by using Shift+Click to extend the selection or Ctrl+Click to select several individual documents. In this case, the Document pane is cleared.

Fig. 7.4

Use the Thread pane to select which document appears in the Document pane.



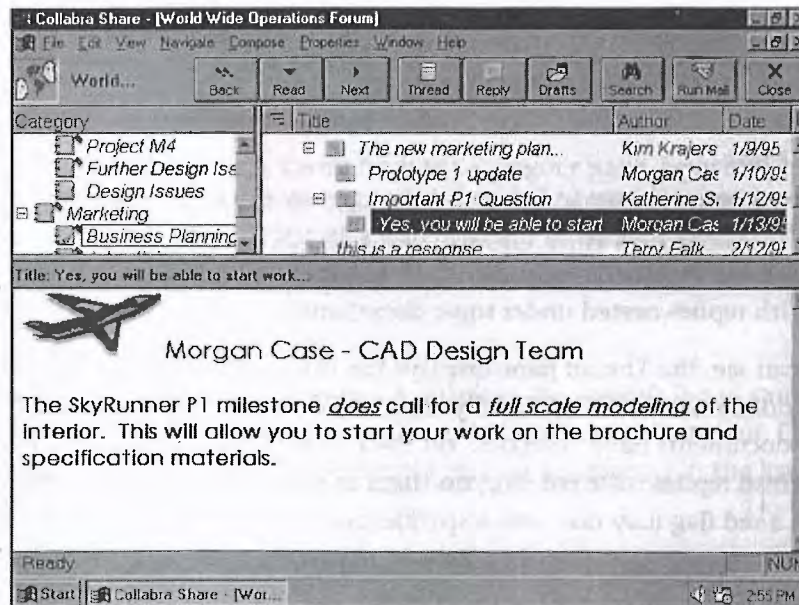
The Thread pane displays documents in thread order

Document Pane

The Document pane displays the contents of a single document. As shown in Figure 7.5, the document's title is echoed as part of the Document pane.

Fig. 7.5

Use the Document pane to view a single document.



The Document pane displays the contents of a document

You will learn about the creation of documents in Chapter 8, "Contributing to Forums," but you should realize that you can use the Document pane for more than reading.

You can select text and embedded objects in the document and use the Edit, Copy command to copy it to the Clipboard.

If a document contains embedded objects created by other applications, such as Microsoft Excel or Shapeware's Visio, you can double-click on the object to launch the other application. Often, the creating application has additional tools for viewing the object. For example, you can rotate a three-dimensional chart to see hidden data, or you can use Visio's Zoom command to get more detail. You will learn about using embedded objects from other applications later in the section, "Using Other Applications."

Navigating between Panes

As you use the three-pane Forum window, be aware that the current selection can be in only one pane at a time. Knowledgeable users say that the selected pane "has the focus." The up and down arrow keys, for example, behave differently in each pane. If the focus is in the Category pane, then the up and down arrows move you to different categories, changing the other panes as you go. If the focus is in the Thread pane, the same arrow keys change documents but leave you in the same category. In the Document pane, up and down move by lines without changing the current document or category.

Pay attention to the way Share displays the selection. As you can see in Figure 7.6, the current selection is shown as a highlighted bar in the pane that has the focus, and as a rectangular outline in other panes.

You can switch the focus clockwise from pane to pane by choosing the View, Next Pane command (or press F6).

When you click on a new category, there is (initially) no selection in the Thread pane. So, instead of a document, the Document pane displays the description of the category, as shown in Figure 7.7. The description is intended to help you decide whether this is the category for you. If you click on the root category named for the forum, the forum's description is displayed in the Document pane.

Maximizing Panes

If you want to view a forum's contents but not its documents, try the View, Full Pane command (or press F9) when the focus is in the Category or Thread

Tip

If you move by category when you meant to move by document, use the Navigate, Back-track command (or press B) to undo the move.



pane. The result, shown in Figure 7.8, is that the Document pane is minimized while the other two panes fill the window. Pressing F9 again (or choosing the View, Partial Pane command) restores the previous three-pane view.

Fig. 7.6
The Thread pane has the focus.

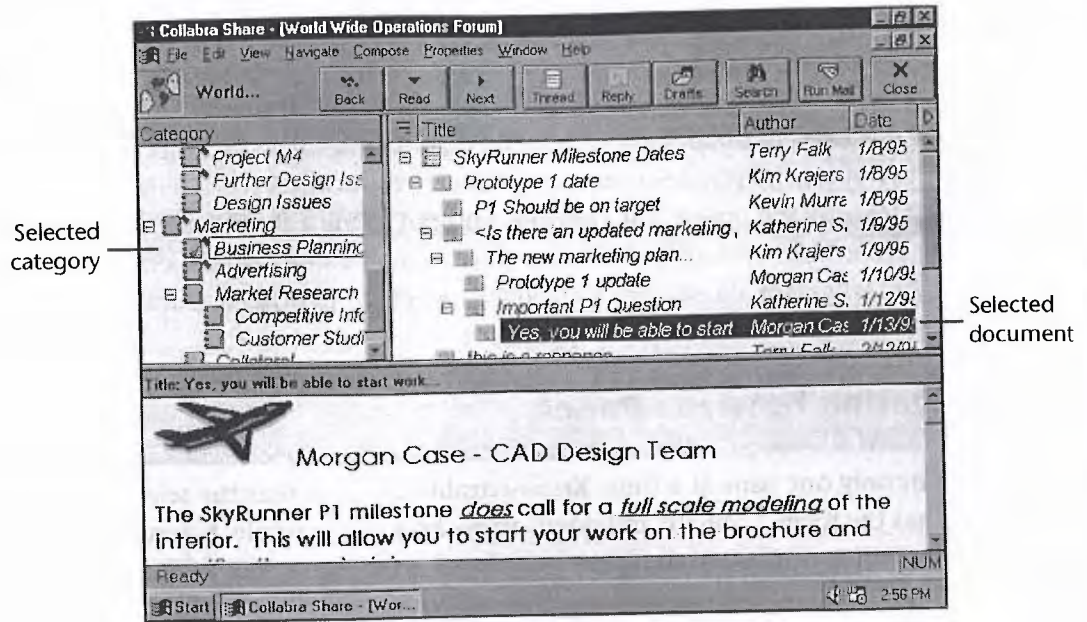
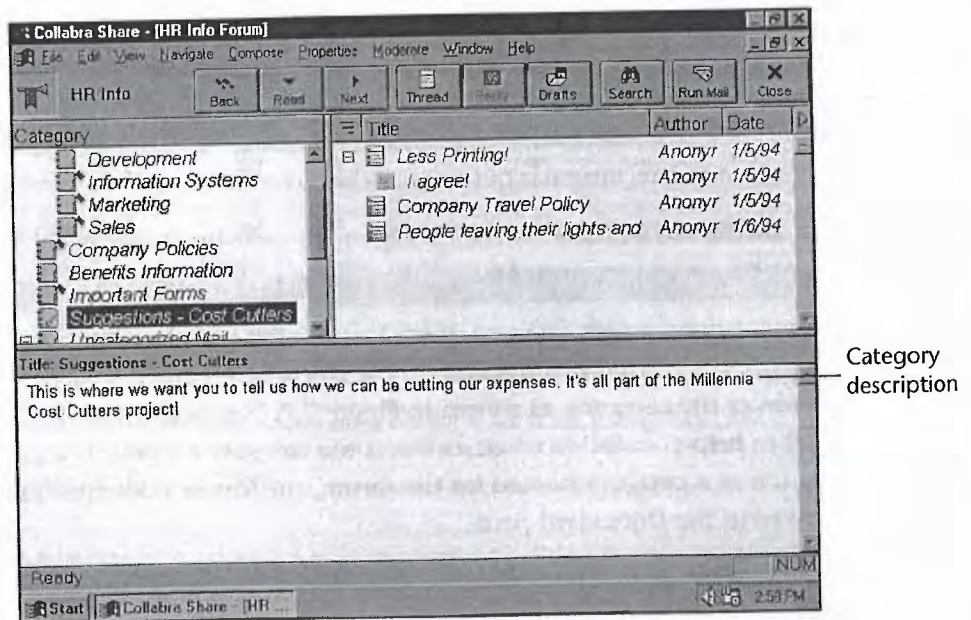


Fig. 7.7
Use the category description feature to learn more about the category on which you've landed.



If you click in the Document pane and press F9, the document contents fill the window instead and the Category and Thread panes are minimized.

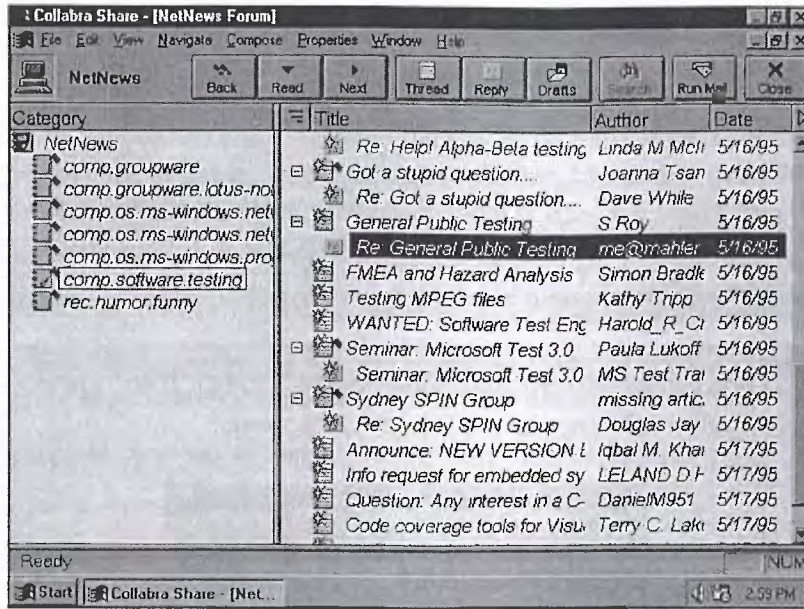


Fig. 7.8
Press the F9 key to minimize or maximize the Document pane.

You can also customize the pane sizes by dragging the dividing lines between panes with the mouse. You can, for example, drag the vertical line between the Category and Thread panes all the way to one side or the other and thus maximize one of the two panes. (Dragging the horizontal line above the Document pane all the way up or down is what the View, Full Pane command does.) Figure 7.9 illustrates an unusual pane layout.

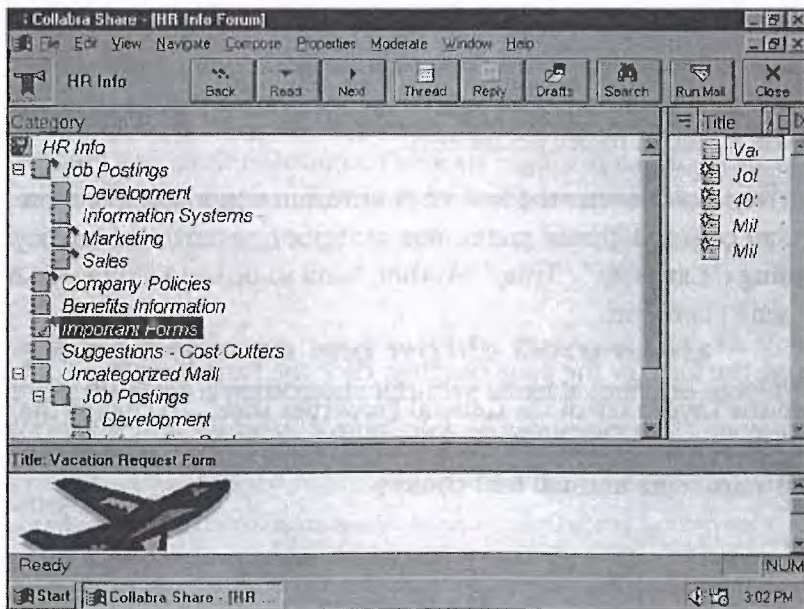


Fig. 7.9
You control the sizes of the three panes in the Forum window.

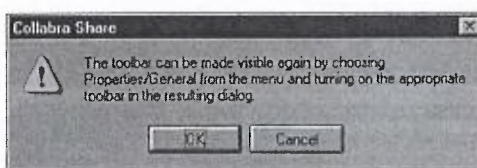
Working with Share

Using the Toolbar

Like the Library, discussed in Chapter 6, “Managing Forums with the Library,” the Forum window has an optional toolbar. You can choose the simple toolbar, which has large, labeled buttons or the full toolbar, which has more buttons but no labels. By using the Toolbars tab of the Properties, General command, you can specify which windows have toolbars. Notice, however, that the choice of simple or full affects all toolbars in Share.

Double-clicking on the toolbar background switches from simple to full. Clicking with the right (or second) mouse button displays a context menu with two choices: Simple (or Full) Toolbar or No Toolbar. If you choose the No Toolbar option, the message in Figure 7.10 appears.

Fig. 7.10
Share explains how to restore the toolbar when you turn it off.



Check the Forum Toolbar box on the Toolbars tab of the Properties, General dialog box to restore the toolbar.

Customizing Panes

Your choices for the toolbar or for the size of the three panes affect only your computer. Others may view the same forum, but their windows will reflect their choices. This is not the same, for example, as the font and color choices you make when you contribute a document. In that case, everyone views the document in the same way (to the extent possible) your font and color choices are public in forum documents.

Another way to customize the look of your Forum window is to choose fonts for the Category and Thread panes. You can specify a font, size, and style for the heading (“Category,” “Title,” “Author,” and so on) and a different font for the pane’s contents.

To change the font for the pane heading, click the Pane Headings Font button from the Layout tab of the General Properties sheet. To change the font used for categories and documents, click the Pane List Font button. Figure 7.11 illustrates some unusual font choices.

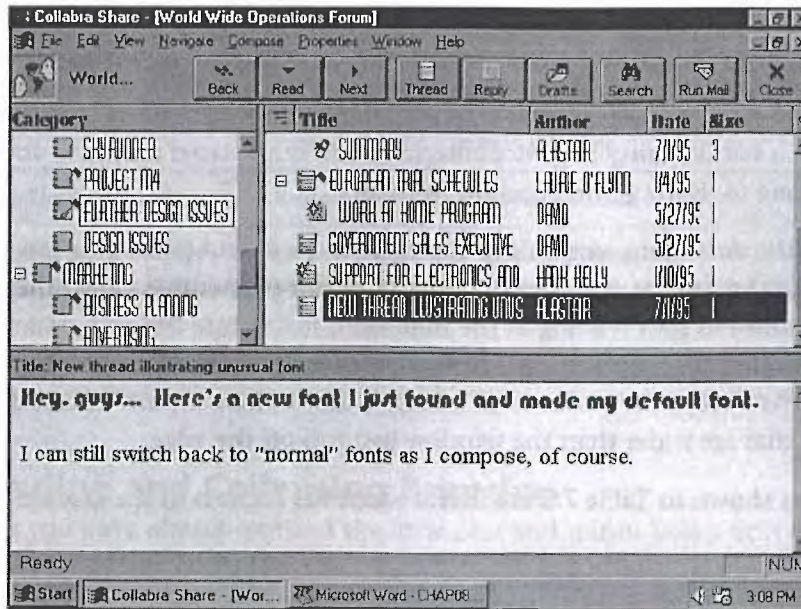


Fig. 7.11
Customize your Forum window by selecting different fonts.

Reading Documents

Now that you understand the elements of the Forum window, you can begin to learn how to use it to choose and manipulate documents.

Unlike a simple database of documents, Share is optimized to help you find the most relevant documents easily. You will learn about these more advanced features in the next section, after you have covered the basics of navigating in the Forum window.

As explained in Chapter 1, “Making Your Team More Productive,” there are essentially two kinds of forums. There are highly dynamic forums, which capture group discussion, and there are more static document repository forums. The information in this section is most applicable to repository forums.

Navigating between and within Documents

Share’s user interface is particularly intuitive when it comes to moving from document to document. Simply click on a category and choose one of the documents that appear in the Thread pane. To select a different document, click again.

You can use the Navigate, Next command to move to the next document (whether it is a topic, reply, or summary), and the Navigate, Previous

Tip

There are much fancier ways to locate documents; you will learn about these in the next section. If you're impatient, however, try pressing the space bar.

command to move backward. If the focus (highlighted selection) is in the Thread pane, you can use the up and down arrow keys to move from document to document.

Share can handle fairly large documents (there is no stated limit), so you'll need some tools for getting around in them.

First, if the document won't fit in the current document pane, you can use the vertical scroll bar. You can drag the indicator (sometimes called the scroll bar's thumb) to start reading at the midpoint, just before the end, or any point in the document. There is never a need for a horizontal scroll bar because Share wraps the words to fit in the width of the window. Embedded objects that are wider than the window just run off the edge.

The keys shown in Table 7.2 are useful when the focus is in the Document pane.

Table 7.2 Keyboard Navigation in the Document Pane

Key	Action
Left arrow	Move left one character
Right arrow	Move right one character
Up arrow	Move up one line
Down arrow	Move down one line
Home	Move to beginning of line
End	Move to end of line
Ctrl+left arrow	Move back one word
Ctrl+right arrow	Move forward one word
Ctrl+up arrow	Move up one paragraph
Ctrl+down arrow	Move down one paragraph
Pg Up	Move back one pane
Pg Dn	Move forward one pane
Ctrl+Home	Move to beginning of document
Ctrl+End	Move to end of document
Shift+left arrow	Extend selection to previous character
Shift+right arrow	Extend selection to following character

Key	Action
Shift+up arrow	Extend selection to previous line
Shift+down arrow	Extend selection to following line
Ctrl+Shift+left arrow	Extend selection to previous word
Ctrl+Shift+right arrow	Extend selection to following word
Ctrl+Shift+up arrow	Extend selection to previous paragraph
Ctrl+Shift+down arrow	Extend selection to following paragraph

Expanding and Collapsing Branches

Perhaps you have already noticed the little plus and minus boxes next to some categories and documents (see Fig. 7.12). They are buttons that expand or collapse branches of Share's hierarchical tree.

To learn about what these buttons do, try clicking them to see what happens. If you don't have Share handy as you read this, these controls are also found in the Windows 95 Explorer. If you're still left out, it's like double-clicking a subdirectory in the File Manager. The entries seem to expand and collapse.

A plus button indicates that the entry is collapsed, meaning that there are subcategories or replies hidden beneath the entry that would appear if it were expanded. A minus button shows that because the entry has subordinate items, it can be collapsed.

You'll notice that you can collapse replies that have been replied to without collapsing the entire thread. However, if you do collapse the thread, all the replies at every level become hidden.

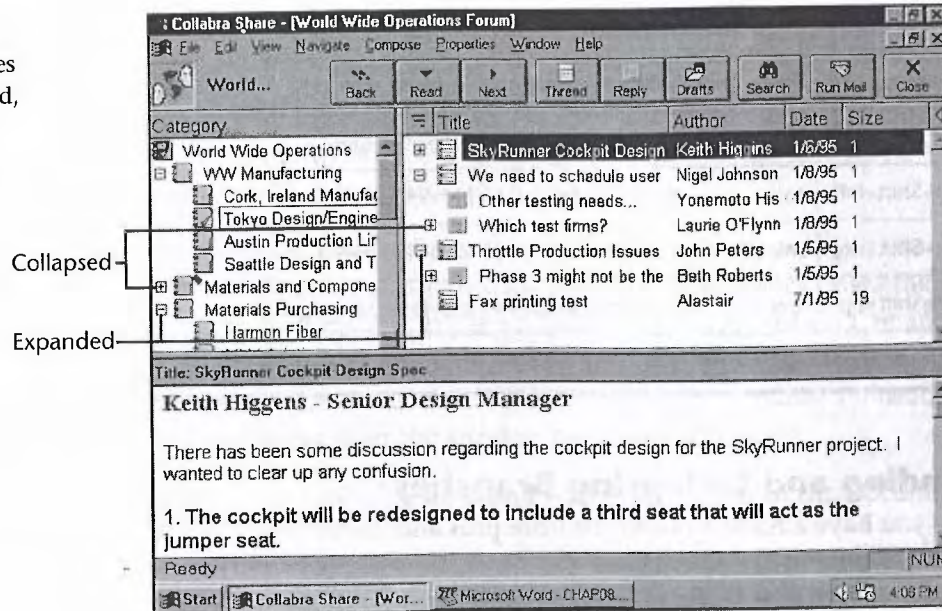
In addition to clicking the plus and minus buttons, you can select the category or document to expand or collapse and choose from the **V**iew, **E**xpand/**C**ollapse submenu. You can **E**xpand (or press the + key) or **C**ollapse (or press the -] key), or you can choose to **E**xpand **A**ll (the * key) or **C**ollapse **A**ll (the \ key).

Finding Text in a Document

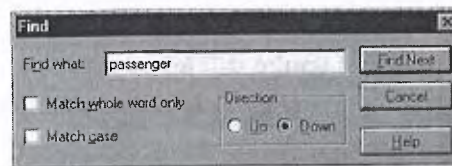
The **E**dit, **F**ind command (Ctrl+F) locates text in the current document. The search begins at the current position and you can choose to search forward (down) or backward (up). Use the dialog box shown in Figure 7.13 to specify what to find, which direction to search, and other options.

Fig. 7.12

Collapsed entries can be expanded, and expanded entries can be collapsed.

**Fig. 7.13**

Use the **E**dit, **F**ind command to locate text in the current document.



Enter the text to search for in the **F**ind What field and press **F**ind Next. The first match in the document is highlighted and the document pane scrolls if necessary. Click **F**ind Next again to find the next match.

The Find dialog box is unusual because it “floats” above Share’s window. You can click in the Share window to switch away from the Find dialog box, but it will persist until you dismiss it by choosing the Cancel button or pressing Esc. Click in the Find dialog box first to select it and make its buttons active.

The other options are two check boxes: **M**atch **W**hole Word Only and **M**atch **C**ase. By default, these options are turned off. Check **M**atch **W**hole Word when you are looking for letters that occur often in other words. For example, if you are looking for references to “ER,” the television show, you would check **M**atch **W**hole Word to avoid finding words containing the letters “er,” such as “letter.”

Saving Attachments and Exporting Documents

Documents can have entire files embedded in them, as shown in Figure 7.14. Embedded files are displayed as icons and are called *attachments*, just as they are in most electronic mail applications. A Share document is limited to 20 attachments.

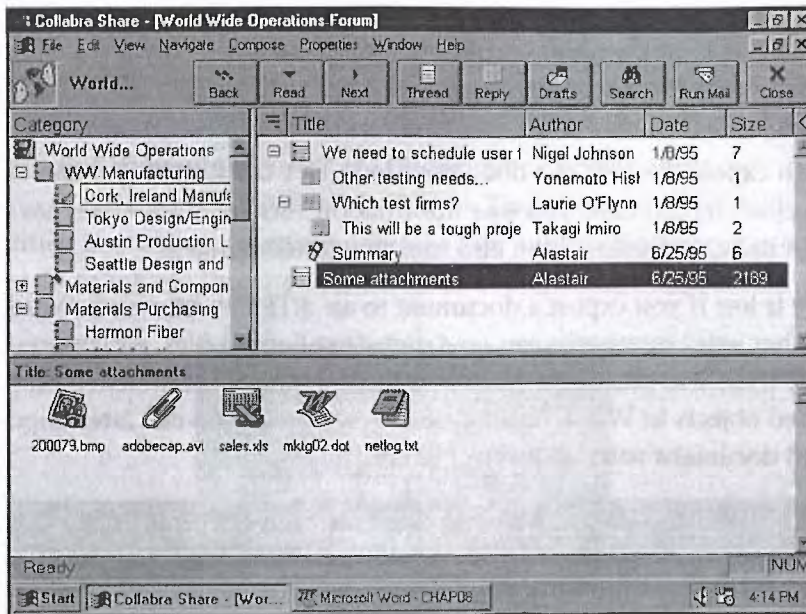


Fig. 7.14
A document with attachments.

If the attached file's type (extension) is registered by the File Manager, Share displays the appropriate icon. That is, if you view a document with a Microsoft Word attachment on a computer with Word installed, then the Word icon is displayed. If Word is not installed, a generic paper-clip icon is shown.

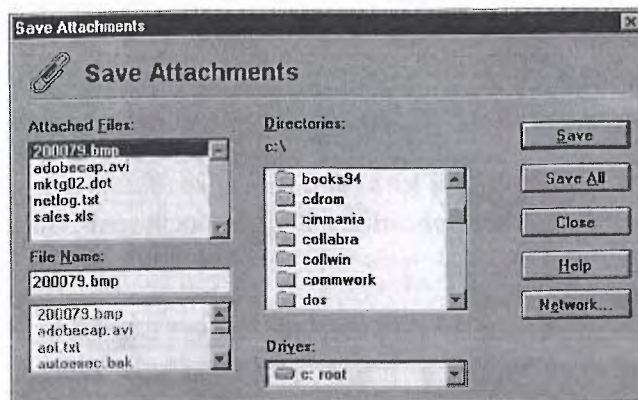
To extract an attachment and save it as a file, choose the **File**, **S**ave **A**ttachment command, which displays the dialog box shown in Figure 7.15.

Select each attachment you want to save and navigate to the directory (folder) in which you want to save it. You can also give the file a different name if you like. Press the **S**ave button to write the file. To extract all attached files to the same directory, choose the directory and click the **S**ave **A**ll button.

You can extract entire Share documents by choosing the **File**, **E**xport **F**ile command. As with attachments, you simply choose a directory and a file name.

Fig. 7.15

The File, Save Attachments command lets you extract files from Share documents.



Share can export the text of a document to a .TXT file suitable for an editor like Notepad. In this case, you lose information such as fonts, styles such as bold and italic, and colors. You also lose any attachments.

Nothing is lost if you export a document to an .RTF file. Microsoft Word and many other word processors can read Rich Text Format files, which preserve the font, style, and attachment information. You can't see attached files or embedded objects in Word, but they are preserved so you can later import an exported document with no loss of fidelity.

Note

If you want to extract the text of a document, including attached files and embedded objects, choose the File, Send, Current document command, which composes a mail message consisting of the text of the Share document. You can mail this to yourself or use the Clipboard to paste the text into a text editor.

Using Other Applications

When you compose documents in Share, you can call on many other applications in your system to create text, pictures, charts, and the like by using a Windows facility called *Object Linking and Embedding*, or OLE. (Share supports the OLE 2.0 specification.) Creating documents containing objects from other applications is described in Chapter 8, "Contributing to Forums."

Share documents with embedded pictures, graphs, and other objects can be viewed without help from any other applications. This is important, because

it means you can use an application, such as Visio, to create a drawing that everyone in your group can see, whether or not they have Visio installed on their computers.

Sometimes, however, it is convenient to view embedded objects by using the application that created them. You do this by double-clicking the object. For example, imagine a document with a graphic created in Visio (an OLE-aware graphics application). Share lets you see the graphic, of course, but by double-clicking to launch Visio, you can use Visio's commands to zoom to a higher resolution or even view Shape Sheet information about the graphical objects.

When you launch another application by double-clicking an embedded object, Share reminds you that you can't save any modifications by displaying the dialog box shown in Figure 7.16. Under some circumstances, you can appear to make changes, but don't be fooled. Documents in Share can only be modified in compose or edit mode. Click on another document and return (or press F5 to update the display), and your changes will disappear.

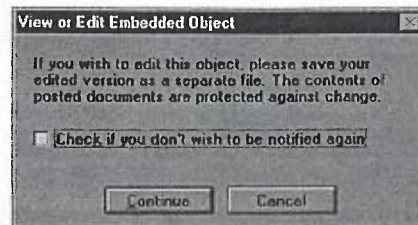


Fig. 7.16
You can launch the application that created an embedded object, but you can't save changes.

Other examples of embedded objects besides documents and spreadsheets include an array of applets that come with application suites, such as Microsoft Office. WordArt, Chart, ClipArt Gallery, Equation Editor, Graph, and even Organization Chart applications are available.

If you double-click on an embedded object with in-place activation (explained in more detail in Chapter 8, "Contributing to Forums"), you may not notice that the other application has taken control. You still seem to be in Share, but the object you clicked on is outlined and the menus and toolbar may have changed. To return to Share, click in the document somewhere outside the outlined object.

You must double-click on some kinds of embedded objects, such as media clips. For example, if a Share document includes an embedded .AVI file, double-clicking on the still picture starts the video clip and plays back the audio. Double-clicking on some sound or video objects brings up a control panel from which you must click Play or Start to view the object.

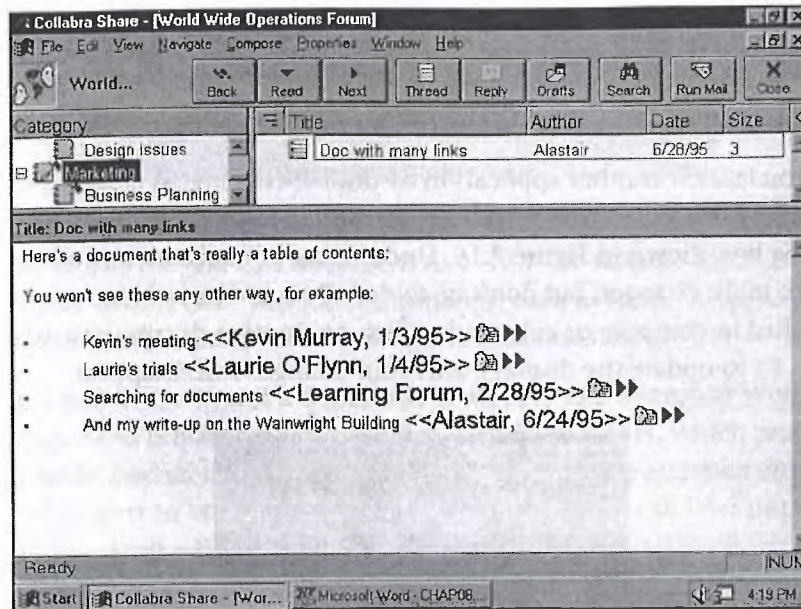
||

Working with Share

Following Links

Some documents you come across will include embedded *QuickLinks*, as shown in Figure 7.17. Double-clicking a QuickLink transports you to another document, possibly in another forum.

Fig. 7.17
A document
containing
QuickLinks.



If you follow a link to a different document, you can easily return by using the Navigate, Backtrack command (or press B). If the link must open a new forum, the Backtrack command doesn't close it for you.

You might not be able to follow a link to a different forum if that forum is not currently accessible or if the maximum number of forums has already been opened.

Viewing Properties

Categories and documents have properties, such as title and creation date. This Share 1.0 feature anticipated Windows 95's use of properties, and the facilities are quite similar.

The easiest way to view a document or a category's properties is to click on it by using the right (second) mouse button and choose Properties from the Context menu that appears.

The Document Properties dialog box shown in Figure 7.18 reveals only one piece of information that is not available in the Thread pane. It shows the document's title, author, creation date, and size (in kilobytes).

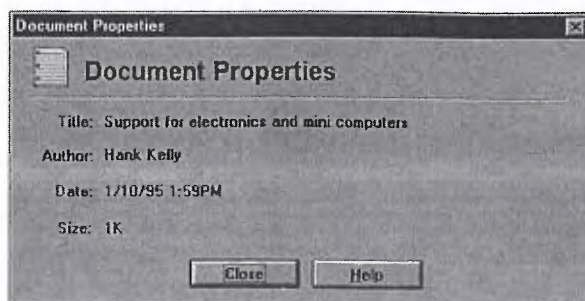


Fig. 7.18
Use the Properties, Document command to see the creation time.

It is often useful to know exactly when a document was posted, and the only way to find out is with document properties.

Category properties reveal much more than you can learn from the Category pane. Select a category and choose the Properties, Category to see the dialog box shown in Figure 7.19.

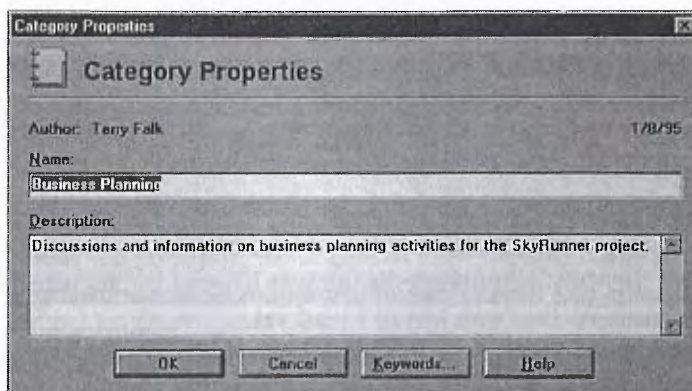
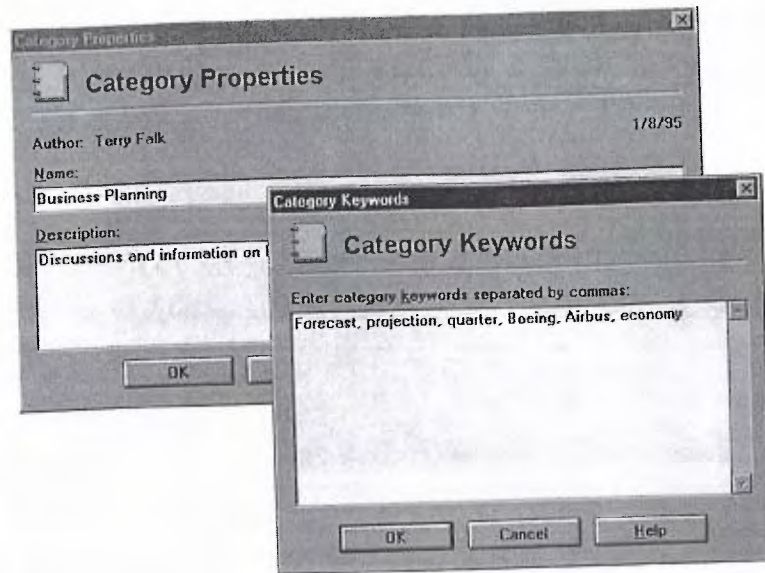


Fig. 7.19
The Category Properties dialog box.

Use the category properties to learn which Moderator created a category and on what date. If you are a Moderator, you can also change the category title and the text of the description that appears when no document is selected. For more information, see Chapter 10, "Moderating Forums."

The Category Properties dialog box includes the Keywords button. The Mail Agent, described in Chapter 15, "Replicating Forums," uses these keywords to automatically categorize electronic mail that has been sent to the forum. Clicking Keywords brings up the dialog box shown in Figure 7.20.

Fig. 7.20
Viewing category keywords can help you understand how incoming mail is routed.



Managing Information Overload

The previous section described how to move around using the Category and Thread panes and view documents in the Document pane. You learned how to follow links in documents to other documents and to external applications.

Share has a higher level of facilities, dubbed the *InfoNavigator* tools. It's all about routinely finding the most relevant documents to you. When you're looking for a particular piece of information, you'll use the Search command, described later. But as you monitor what's going on in your forums every day, you'll find that the most important documents in your burgeoning repositories are the documents that you haven't read yet.

Finding the New Documents

What's new? You ask as you open a forum. What haven't I seen? Share makes it very easy to jump to the documents that you haven't seen yet. Viewing a document in the Document pane automatically tells Share that you've seen it. The shortcut for this command is the space bar. It is designed to be insanely simple to use and it succeeds.



Use the Navigate, More Unread (or just the space bar, as we said) commands to move to the next unread document in the forum. Unread documents appear blue, by default, while documents that you've read are black. When you land on an unread document, it changes to black.

The space bar does more than jump to the next new document. If you're viewing a long document, pressing the space bar advances the Document pane by one pane (as if you had pressed PgDn). When you come to the end, pressing the space bar takes you to the next unread document.

To skip to the next document without finishing the current one, use the Navigate, Next Unread command (or press F2). If you're in a hurry, you can scan the title and first few lines of all new documents by repeatedly pressing F2.

However, every document that you scan with F2 this way will be marked Read, meaning that you won't see it again when you have more time and use the space bar. Share has thought of that, too.

When you are scanning new documents by pressing the space bar or F2, the Navigate, Backtrack command takes on an additional role. In addition to bringing you back to the last document you were on, it also "un-reads" the current document so it will still appear new.

When you have exhausted the new documents in a forum, pressing the space bar or F2 just produces a beep and a message on the status line: There are no more unread documents in this forum. If you suspect that new documents have been posted since you opened the forum, choose the File, Uppdate Forum command (F5) and try pressing the space bar or F2 again.

Skipping Threads and Categories

Some topic documents prove very controversial and generate many replies. If you find yourself reading reply after reply to a topic in which you have little interest, choose the Navigate, Next Thread with Unread command (or press T). This command marks all remaining replies as read and advances to the next unread document.

Share lets you pretend to have seen documents so you can get them off your unread list. The documents are still available to be read, of course. Also, if you want to undo the effects of pressing T, the Navigate, Backtrack command not only returns you to the document you were on, it also makes all the replies that were marked "Read" on your behalf appear unread again. Figure 7.21 illustrates the effects of the Navigate, Next Thread with Unread command.

The Navigate, Next Category command (or press C) marks everything in the current category as "Read" and advances to the next unread document in another category. This allows you to create forums with categories that appeal to only some of your group.

Tip

To change the color of unread documents, click the Browse Colors button on the Miscellaneous tab of the Properties, General dialog box.

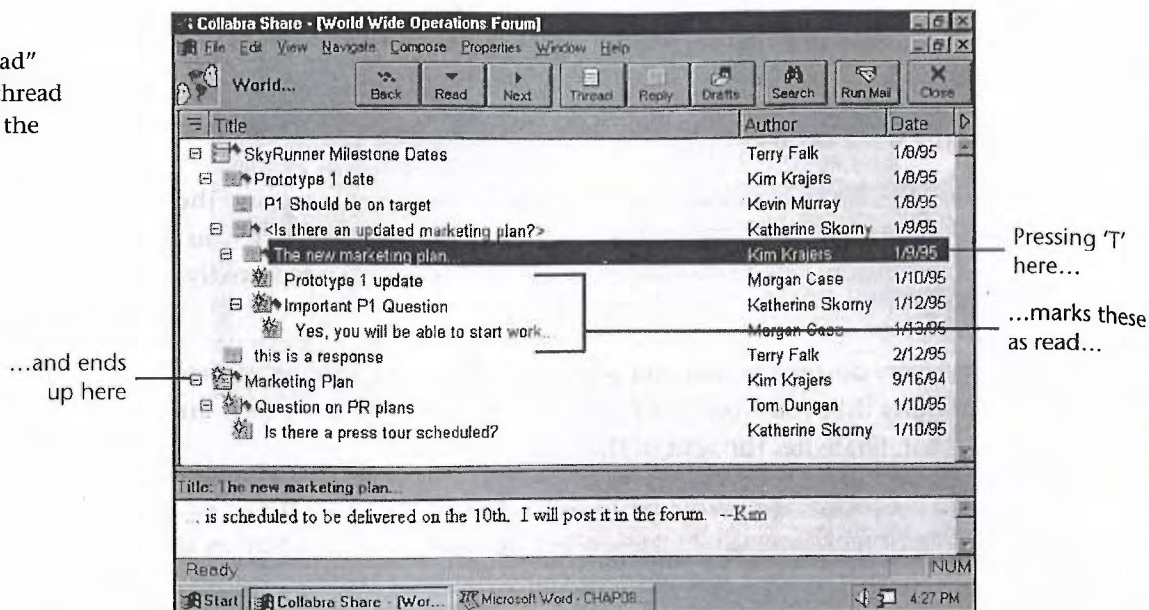


Tip

To skip a document now and read it later, choose the Navigate, Read Later command (or press L).



Fig. 7.21
Press T to “read”
the rest of a thread
and go on to the
next topic.



Ignoring Threads and Categories



To stop seeing new documents in a particular thread or category, use the Navigate, Ignore command.

Threads (but not categories) are automatically collapsed when you ignore them. The appearance of ignored categories and threads changes as shown in Figure 7.22. You can expand them again, if you like, and you can still see the documents that you have ignored, but no documents in ignored threads or categories will appear new. If you ignore a reply, Share assumes that you want to ignore the entire thread.

The Navigate, Ignore command is a toggle. Choosing it again restores the original state.

You can also choose to hide the threads that you have ignored. You do this by unchecking the View, Show Ignored Threads command.

Saving a Document for Later



As you scan the latest contributions to a forum by using the Next Unread command, you may come upon one or two documents that need more attention than you can give them now. Share lets you advance to the next unread document without marking the current document as Read.

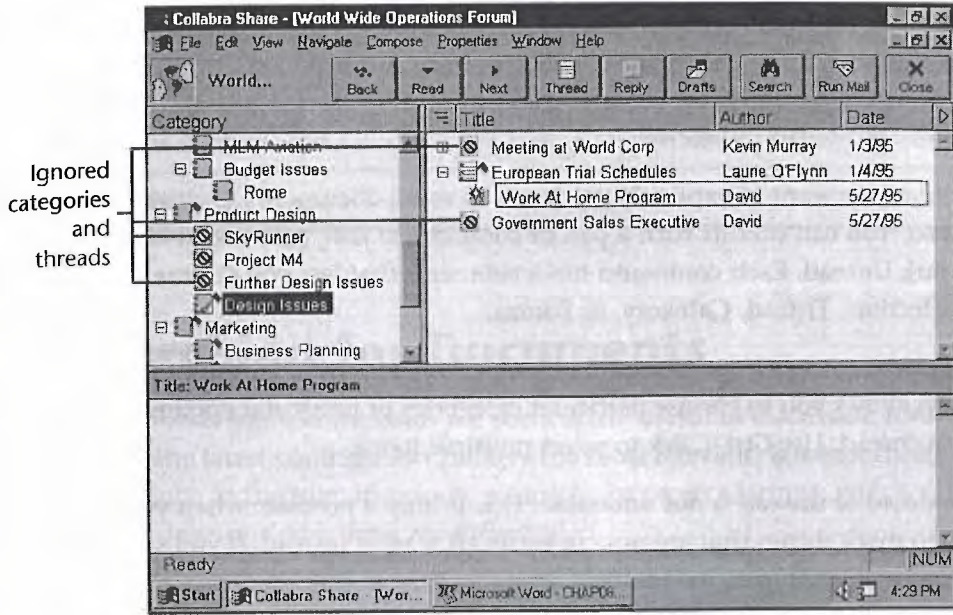


Fig. 7.22
Ignored categories and threads have a distinctive appearance.

Choose the Navigate, Read Later command (or press L) to advance to the next unread document (as if you had chosen Next Unread) but leave the current document unread so it will appear new next time.

Note

The Read Later command is an example of Collabra's understanding of how people use groupware every day. When Share 1.0 was barely 0.5, Collabra conducted usability tests with real people and that tradition continued during the development of 2.0. A lot of feedback was captured from customers and potential customers as well.

Documents you specify to be read later will not show up as new until the next time you open this forum. When the Next Unread command comes to the end of the forum, it looks at the beginning again in case new documents have been contributed. This behavior would mean that you would find your Read Later documents if you kept choosing Next Unread, and that's probably not what you want.

The Navigate, Read Later command isn't just for new documents, by the way. You can select any document and choose Read Later. The next time you open the forum, Next Unread will find the document you chose.

Tip
If you want to return to a particular document later in this session, add it to a hotlist by choosing the Edit, Add to Hotlist command, or just press H.

Working with Share

Specifying Read or Unread Status

The commands you've been learning about—More Unread, Next Unread, Next Thread, Next Category, Ignore, and Read Later—all affect a document's read or unread status indirectly.

Sometimes you want to explicitly mark one or more documents as either read or unread. You can do this with a pair of commands: Edit, Mark Read and Edit, Mark Unread. Each command has a submenu that lets you choose to mark Selection, Thread, Category, or Forum.

Thread and Category let you mark the current thread or the current category. Selection allows you to choose particular categories or particular documents within a thread. Use Ctrl+Click to select multiple items.

Marking read or unread is not undoable. This is only a problem when you choose to mark things that are not currently all read or unread. If you select only new, unread things, for example, and mark them Read, it is easy to undo this action by using the Mark Unread command. But if you mark the forum as unread, you'll need a good memory to restore it with Mark Read.

Consider a real-world example. As a result of ongoing network improvements, you're asked to use a replica of one of your forums on another server. Because you're using the replica for the first time, every document looks unread to you. If new contributions arrive, they'll look just as new as every other document.

Your solution is the Edit, Mark Read, Forum command. Now, new contributions will stand out as they should. But what about recent contributions? Not to worry. Choosing the View, Newest Documents command shows you the most recent contributions first and you can easily scan them until you come to a document you've already read.

The What's New? commands that you just read about are summarized in Table 7.3.

Table 7.3 InfoNavigator Commands

Command	Shortcut Key
More Unread	space bar
Next Unread	N (or F2)
Next Thread with Unread	T
Next Category with Unread	C

Command	Shortcut Key
Ignore	I
Add to Default Hotlist	H
Read Later	L

Searching for Documents

The InfoNavigator commands are particularly useful in discussion forums, in which the latest contribution is likely the most relevant. But repository forums, such as the human resources sample, or project forums, which capture design decisions over time, are different.

Finding the most relevant documents in large corporate knowledgebases is a specialized job, which is why Collabra Share includes a third-party, full-text engine. Forums are indexed for full-text by default, but Moderators can turn this feature off, as described in Chapter 10, "Moderating Forums." If the forum is not indexed, the Edit, Search Forum command will be disabled.

To locate documents that contain a particular word, choose the Edit, Search Forum command, which displays the dialog box shown in Figure 7.23. Share will find the word in the document contents, the title, or in an embedded object such as a Microsoft Word attachment.



Working with Share

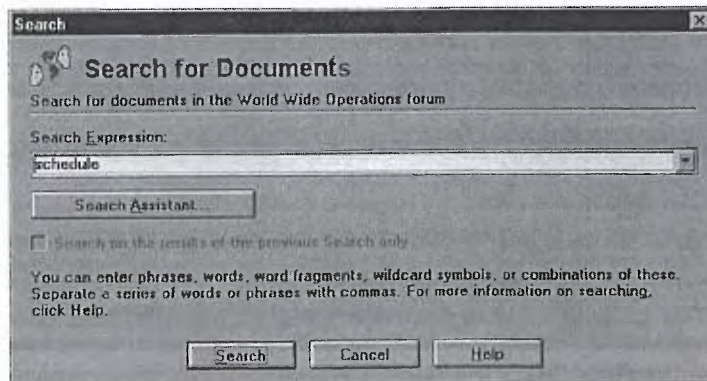


Fig. 7.23
Use the Edit, Search Forum command to find documents containing a particular word.

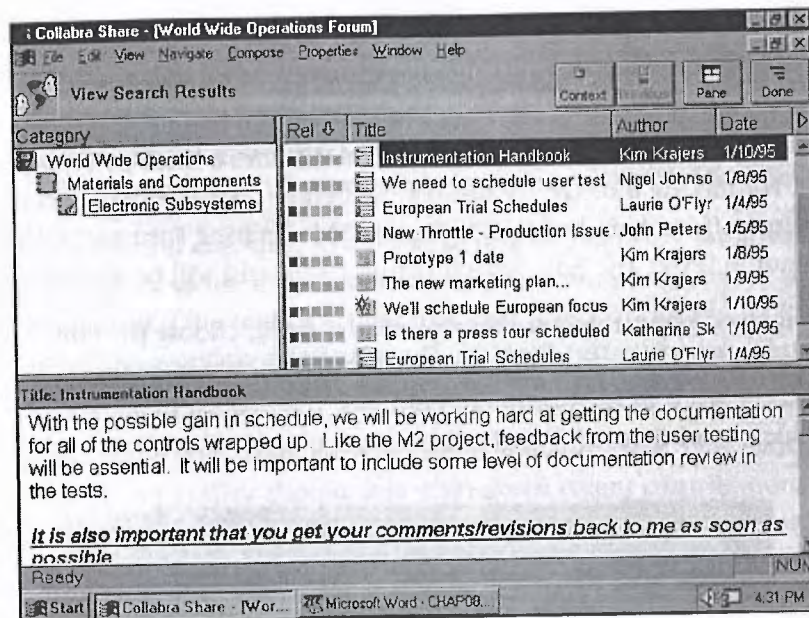
Enter a particular word, such as **schedule**. Don't worry about capitalization. Click the Search button to perform the search and view the results.

Viewing Search Results

The result of a search is a different view in which the Thread pane shows matching documents sorted by relevance. Whenever the Thread pane displays something other than the default Thread view, the Category pane shows the context of the current document. See the upcoming section, “Viewing Selected Forum Documents,” for a more complete description of custom views.

Figure 7.24 shows the results of a search. Notice the “Rel” column at the left in the Thread pane. These five squares are like a volume meter on a stereo: the more blue squares, the more relevant a document is to the search you requested.

Fig. 7.24
The results of the search results.



As you click on documents in the Thread pane, notice that the Category pane changes to show the category in which the document is found. To switch to a normal Thread pane view temporarily, choose the View, Document Context command. To return to the search results view, choose the View, Previous View command.



Use the View, Full Pane command (or press F9) to hide or maximize the Document pane.



To return to a normal Thread pane view and discard the search results, click the Done button on the toolbar.

Refining a Previous Search

Returning to the Search dialog box shown in Figure 7.23, notice that the entry field is actually a drop-down list. Your most recent searches are saved for you. Often, *what* you search for stays the same but the documents come and go.

Sometimes you want to search a subset of a forum's documents. You want to find documents from among those matching a previous search.

For example, say you search for "healthcare" and find 152 matches. You search for "Clinton" and find 90. You're looking for a particular document in which President Clinton discusses healthcare. Although you can use the Search Assistant to search for both at once, imagine that, instead, you search for "Clinton" and then check the Search on the Results of the previous Search Only box. Now you specify "healthcare," and Share only looks for that word in the 90 documents that contained "Clinton."

You can continue to refine a search as long as your search results in more than one document. A series of single-word searches is often easier than constructing a complex query expression.

Using the Search Assistant

The Search Assistant, shown in Figure 7.25, makes it easier to build complex queries.

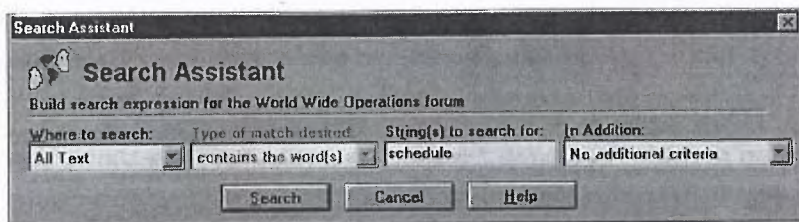


Fig. 7.25
Use the Search Assistant to specify complex search criteria.

The Search Assistant asks you Where (Where to Search), What (Strings to Search For), and How (Type of Match Desired).

You can search all text, document body, title, or author name. Body implies all embedded objects and attachments, if possible. All text implies nothing more than body, title, and author.

If you specify title or author name, then your choice in the Type of Match Desired list box becomes important. You can choose an exact match (Equals), a match on a character string (Contains the Substring), a match on whole words only (Contains the Words), or a match that Starts With or Ends With the string.

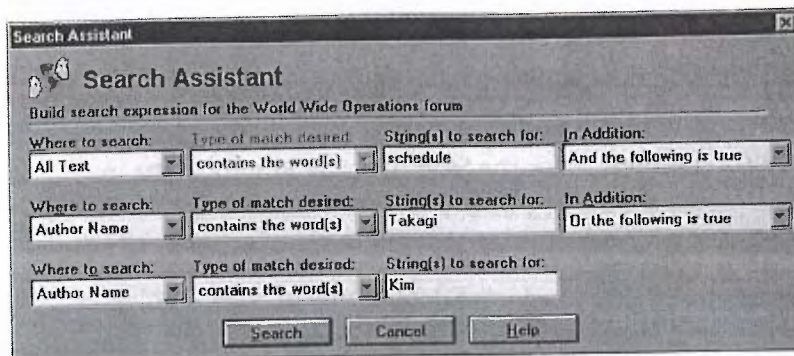
Working with Share

If you choose to search Author Name for “Bill,” only Contains the Substring, Contains the Words, or Starts With will match documents created by “Bill Clinton.”

The Search Assistant allows you to specify up to three searches at once, as shown in Figure 7.26. Logical combination options from which you choose in the In Addition list box include AND (And the Following Is True), OR (Or the Following Is True), and CLOSE (And Is Close to the Following).

Fig. 7.26

The Search Assistant dialog box expands to fit your query.



To continue the example, you can select the following options in the fields in the Search Assistant: All Text, Contains the Word “Clinton,” And the Following is True, All Text, Contains the Word “healthcare” and No Additional Criteria. The assistant will build the following query:

```
((Clinton) OR (AUTHOR <CONTAINS> Clinton)) AND ((healthcare)
OR (AUTHOR <CONTAINS> healthcare))
```

Specifying Complex Queries Directly

In addition to using the Search Assistant, you can also enter Verity's search syntax directly into the main search dialog box. This allows you to specify complex expressions that are not possible with the assistant.

You can use the Search Assistant to build a query and then edit it in the main Search dialog box.

To find documents containing this OR that, use a comma:

```
this, that
```

To find documents containing this AND that:

```
this AND that
```

One task you can't do with the Search Assistant is exclude certain words. For example:

```
this AND NOT that
```

This query will find documents that contain this but which do not contain that in addition. Use parentheses to clarify your meaning:

```
this AND (NOT that) OR other
this AND NOT (that OR other)
```

If you are familiar with Verity's simple query syntax, you'll find that most aspects work directly in Share. Verbs such as <MANY> and <NEAR> are explained in Share's Help system.

Verity's sophisticated "topics" are not supported in Share, nor are other concepts such as stop words. You can find notes on advanced tuning of the Verity system in Chapter 18, "Fine-tuning Workstation Options."

Organizing the Thread Pane

You can organize the Thread pane in several ways. You can change the column size, show or hide the document size column, and sort the pane by any column.

To change column sizes, click the mouse between two column headings (such as Title and Author) and drag until the columns are the desired size. Their behavior is similar to that of the Windows Explorer columns in the Details view.

The column headings—(thread), Title, Author, Date, and Size—are actually buttons. Click them to sort the Thread pane by that column. An up or down arrow appears next to the column name to indicate sort order. An up arrow indicates descending order—that is, the top line is the latest date, Z, or the largest size. A down arrow indicates ascending order—earliest date, A, or smallest first. With the addition of the arrows, this behavior is mimicked by the Windows Explorer Details view, as well.

The arrow button in the upper right of the Thread pane points to the right if document size is not shown or to the left if it is. Each time you click the button, the size column is either shown or not. The size column shows the document size in kilobytes.

To find documents by a particular person, click on Author and find the person in the alphabetical list. To view the oldest documents in a category, click on Date. Click on Date a second time to view the most recent contributions. Click on the Thread button in the upper left when you're ready to return to the default Thread view.

You'll find that sorting the Thread pane is particularly useful in concert with Share's custom *views*, which you will learn about in the next section.

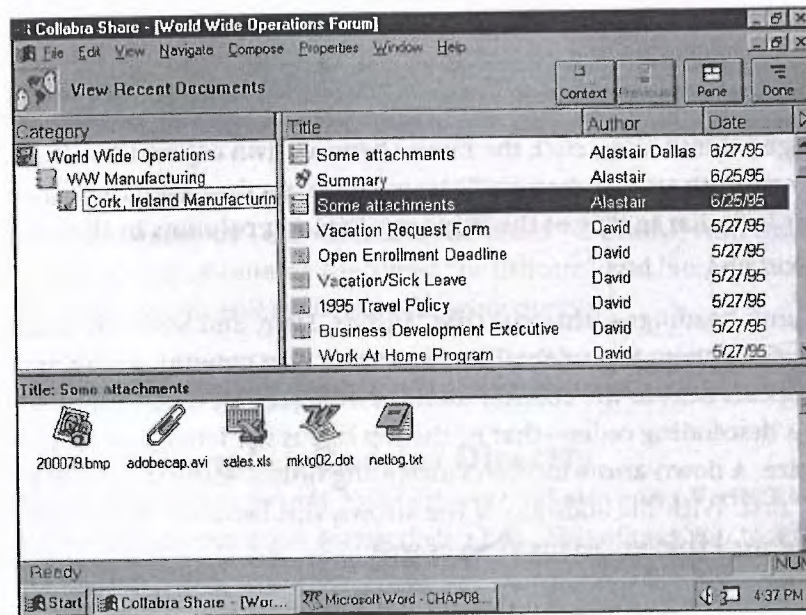
Viewing Selected Forum Documents

Ordinarily the Category pane shows you every category in the forum and the Thread pane displays every document in the selected category. You have already learned about one custom view: search results. In a custom view, the Thread pane lists documents from all over the forum. Selecting a document in the Thread pane causes the Category pane to display the category context for the document.

You select a custom view by using the View menu, the view button on the full toolbar, or by clicking the Category pane heading. Both the Category heading and the View button bring up submenus that list the possible views.

Use the View, Newest Documents command to display the 100 most recent contributions to the forum sorted by date, as shown in Figure 7.27.

Fig. 7.27
Use the Newest Documents view to catch up.



The Newest Documents view is perhaps the most useful view, because it allows you to catch up when there are too many unread documents to scan. Simply mark the entire forum as Read, then use the Newest Documents view to read the most recent postings.

Use the View, By Author command to create a view showing the most recent documents posted by a particular member. Choose the member by using the dialog box shown in Figure 7.28.

Use the By Author view when you remember who said it, but can't place the title or the category.

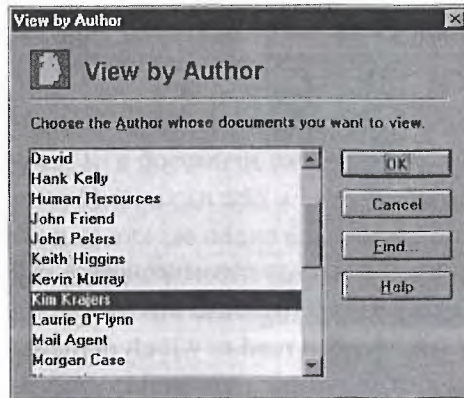


Fig. 7.28
The View, By Author command asks you to specify which member's documents to display.

The View, Documents to You command is handy, but a little obscure. The idea is that the most relevant documents might be replies to topics or replies that you have contributed.

The To You view first displays the dialog box shown in Figure 7.29 so that you can define the rules.

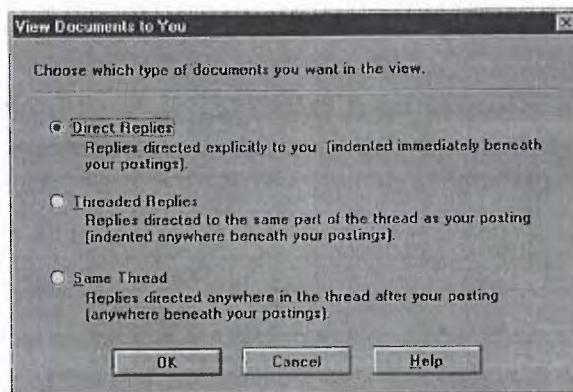


Fig. 7.29
The View, Documents to You command wants to know how you define "to you."

There are three ways to define "to you." The default is Direct Replies; that is, replies to documents that you posted. You can also choose Threaded Replies, which includes direct replies as well as any replies to direct replies and so on. All documents indented under your documents are considered Threaded Replies. Or you can choose Same Thread replies, which simply shows you all documents below yours in threads that you have created or contributed to.

The View, Oldest Documents command shows the oldest documents in the forum. This view is useful for Moderators trying to decide what can be deleted from a forum.

Likewise, the View, Largest Documents command shows the largest documents and is used by Moderators to determine which documents will free the most space if deleted.

Using Hotlists

You can select documents for your own custom views, called *hotlists*. Hotlists let you jump quickly to documents you use often, or you can use hotlists to remember documents you want to read or which demand action.

Because everyone sees the same forum, views such as Newest or Largest look the same for every member of the forum. Hotlists, on the other hand, are private views; no one else can see your hotlists.

You can define up to ten hotlists and each can contain documents from many different forums. The same document can appear on more than one hotlist.

One of your ten hotlists is the default and everyone starts with an empty hotlist called Default. You can rename Default and you can select any hotlist as your default.

Creating or Adding to a Hotlist

You use the Edit, Create New Hotlist command to create a new empty hotlist. (You can also use the toolbar menu or the Edit, Manage Hotlists dialog box.) Use the dialog box shown in Figure 7.30 to enter a name for the new hotlist.

Fig. 7.30
Creating a new hotlist is as easy as specifying a name.



Hotlist names can be quite long, but because they appear in a submenu, you'll probably want to limit them to about 32 characters. Two hotlists can't share the same name, but upper- and lowercase letters are enough to distinguish them.

The Edit, Add to Hotlist command is the slow way to add the currently selected document to a hotlist. Clicking the Hotlist button in the toolbar is

faster. The menu that appears allows you to choose which hotlist to add the document to from a list of hotlists. The fastest way, however, is to use the default hotlist.

To add a quick reference to a document to the default hotlist, simply select the document and press H. You can add several documents at once to a hotlist. All selected documents are added when you press H or choose from the submenu of hotlist names. You can also add references to categories to a hotlist, even though they are not distinguished from documents in any way.

Opening a Hotlist

To locate a particular document (or category) by using a hotlist, choose the **E**dit, **O**pen Hotlist command (or choose that command from the submenu under the hotlist button on the toolbar). Either way, a submenu of hotlist names appears and you select the hotlist you want from the list. The default hotlist is shown checked. Opening a hotlist brings up a dialog box like the one shown in Figure 7.31.

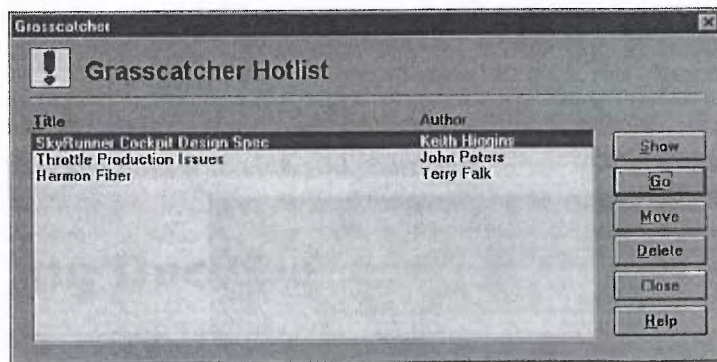


Fig. 7.31
Open a hotlist to view your custom list of documents.

The hotlist dialog box displays the title and author for each document in the hotlist. When opening a hotlist, the dialog box allows you to select the following:

- **Showing a Document**—You might notice that hotlists don't indicate what forum or category a document came from. This can make it difficult to find the document you're looking for, or at least frustrating to go to the wrong document and have to open the hotlist again. The solution is the **S**how button, which takes you to the selected document, opening the forum if necessary, but leaves the hotlist dialog box open.
- **Choosing a Document**—Usually you'll see the document you want and double-click on it. The hotlist dialog box will close, the Forum window

||

Working with Share

for the document's forum will be opened if necessary, and you'll be positioned on the document that you selected. You can also select a document in the list and press the Go button.

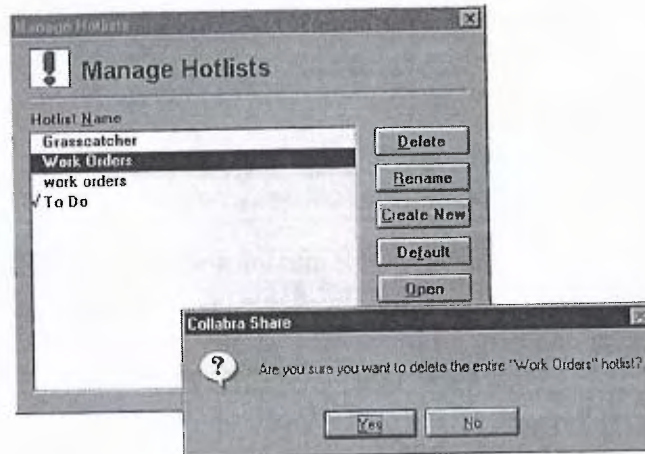
- **Moving a Document**—The Move button makes it very easy to move documents from one hotlist to another. When you press Move, a submenu appears and you simply select the destination hotlist. Unlike the Go or Show buttons, you can select multiple documents to Move. Use Shift+Click to select a range of documents or Ctrl+Click to select multiple documents.
- **Removing a Document**—Click the Delete button to remove the selected document references from the hotlist without affecting the document itself. You'll be asked to confirm the delete because it's not undoable, but it is fairly easy to re-add a document to a hotlist.

Deleting Hotlists

To delete an entire hotlist, use the Edit, Manage Hotlists command, select the hotlist, and click the Delete button on the Manage dialog box. The confirmation dialog box shown in Figure 7.32 appears. You are only deleting references to documents, not the documents themselves, so the operation is very quick.

Fig. 7.32

Are you sure you want to delete the entire <name> hotlist?



You can't delete the default hotlist, so choose a new default before you delete the old.

Renaming Hotlists

To rename a hotlist, choose the **Edit, Manage Hotlists** command, select the hotlist, and click the **Rename** button. The dialog box shown in Figure 7.33 appears for you to enter a new name.



Fig. 7.33
Rename a hotlist.

Remember that although there is no firm limit to the length of a hotlist name, you should limit it to about 32 characters.

Printing Documents

Share includes facilities to print single documents, several documents at once, or even whole forums. Documents printed from Share include headers identifying the document, the forum it came from, and who is printing the document. When a group shares a single printer, it can be useful to know who printed what.

Support for printing in Share is somewhat weak. For example, print preview is only available for a single document at a time. In addition, there is minimal control over the format of the header or footer, and no ability to set margins, scaling, or other advanced printing features.

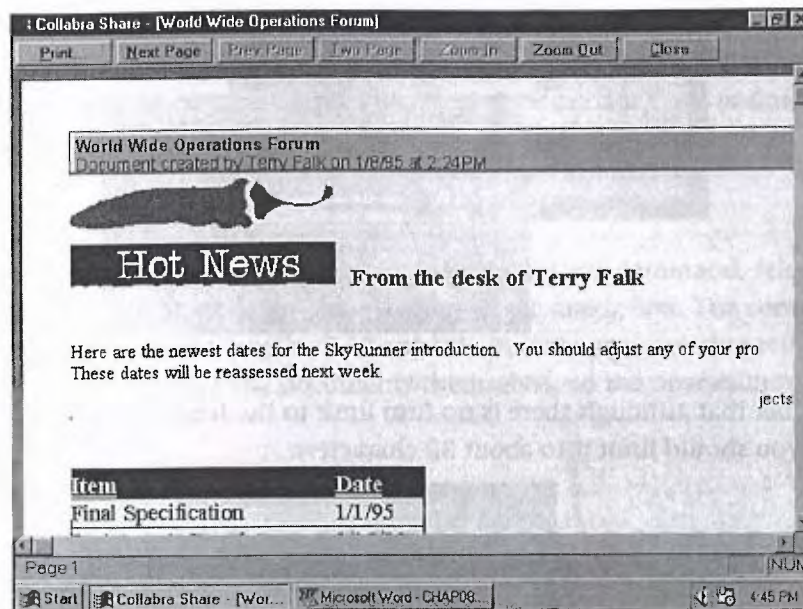
Of course, Share is designed to minimize the amount of paper that must be passed around to facilitate group and corporate communications. Share advances the cause of the "paperless office." By printing a document, you lose its context along with the ability to reply in place. Printed documents grow stale; they can't change over time.

Why print a forum document at all? To archive, consider exporting to an external file. To give a copy to a Share-challenged colleague, what about electronic mail?

Share offers the following printing features:

- **Print Preview**—You can preview a single document at a time with the **File, Print Preview** command. If you select multiple documents, **Print Preview** only shows the most recently selected document. **Print Preview** fills the Share window with the display shown in Figure 7.34.

Fig. 7.34
Preview a single document at a time.



- From the preview screen you can navigate through pages with the **Next Page** and **Prey Page** buttons; you can view one or two pages at a time. The current page number is shown on the status line at the bottom of the screen. You can zoom in or out with the **Zoom In** and **Zoom Out** buttons. To return to the normal Share screen, click **Close**. To print, either click **Close** and choose **File, Print, Document** or click the **Print** button in Preview mode.
- **Printing a Single Document**—To print a single document, simply select the document in Share and choose the **File, Print, Document** command (or press **Ctrl+P**).

Besides printing a single document, you can print a thread, a category, or an entire forum.

- **Printing a Thread**—Choose the File, Print, Thread command to print the current document and its context. When you print a thread, Share adds a Thread Outline at the start that summarizes which documents are replies to which. Multiple documents are printed on a page if they fit. Each document starts with a line such as the following:

Thread created by <author> on <date> at <time>

Replies start with a similar line with the addition of > characters, indicating the level that a reply is indented in the thread hierarchy.

- **Printing a Category**—Choose the File, Print, Category command to print a Thread Summary for each topic in the current category. The effect is exactly like selecting every thread in the category and choosing Print Thread. Each thread is summarized and each new thread starts a new page. In fact, page numbering starts over for each thread. Printing a category can be convenient, especially if the forum is organized like a book in which categories are chapters.
- **Printing an Entire Forum**—To print an entire forum, choose the File, Print, Forum command. The capability of reducing the whole forum to paper is useful for archiving a snapshot of an otherwise-dynamic knowledgebase.

Specifying Headers and Footers

By default, Share prints a header and footer on each page. The header identifies the forum, category, and document; the footer includes the page number and the following:

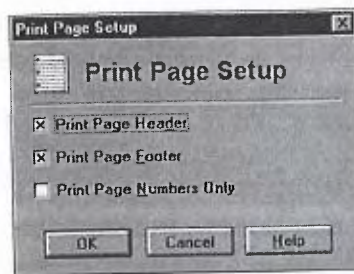
Printed from Collabra Share on <print date> for <member>

You have five options with regard to headers and footers:

- No headers or footers
- Headers, no footers
- Footers, no headers
- Headers and footers
- Page numbers only

To choose your option, select the File, Page Setup command, which displays the dialog box shown in Figure 7.35.

Fig. 7.35
Choose the File, Page Setup command to change header and footer options.

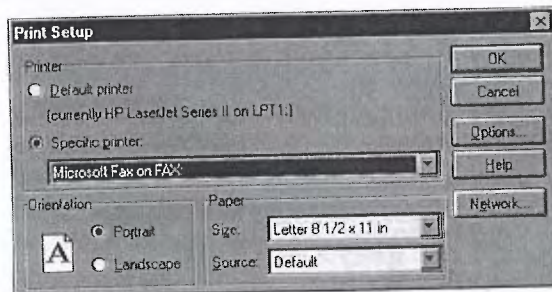


Unfortunately, there is no way to change fonts, the gray background, or other format choices on printed headers or footers.

Choosing Printer Options

To choose a printer and specify printer options, use the File, Print Setup command to display the dialog box shown in Figure 7.36.

Fig. 7.36
You control your printer from within Share by using the standard Print Setup dialog box.



This standard dialog box will vary in appearance depending on whether you are using Windows 3.1, Windows for Workgroups, or Windows 95. All these versions let you choose different printers, landscape or portrait orientation, page size, and other options specific to the selected printer.

If you want more control over your printed output, consider using the File, Export File command and printing from your word processor. Summaries, discussed in Chapter 9, "Creating Forums," export very nicely. Be sure to use the default .RTF file type rather than plain text, however, or you'll lose your document's format and styles.

Mailing Documents

You've already learned about how Share is integrated with your electronic mail system, whether it's cc:Mail, Microsoft Mail, GroupWise, or otherwise. As you use Share to read documents, you have several mail commands at your disposal.

You can switch to mail from Share, launching the mail application if necessary. Or, without opening the mail application, you can mail a note. If you find a document in which you think someone else would be interested, Share has commands that can send the user a notification or the entire document.

Switching to Electronic Mail

You can run your mail application from within Share. If mail is already running, Share switches to it. If not, it launches your mail application.



Use the **File**, **R**un **M**ail command (Ctrl+M) to switch to your mail application.

Actually, Share simply launches the application specified on the **Locations** tab of the **Properties, General** dialog box. If you specify **c:\windows\sol.exe**, choosing Run Mail from Share will bring up Solitaire.

You can send a simple electronic mail note without leaving Share. Choose the **File**, **S**end, **N**ote command to bring up a mail system-dependent dialog box.

Mailing the Current Document

To mail the text of the currently selected document to someone by electronic mail, choose the **File**, **S**end, **C**urrent **D**ocument command. Like the Send Note command, Send Document displays an addressing dialog, the specifics of which depend on the mail system you are using. Figure 7.37 illustrates a Microsoft Mail addressing dialog box.

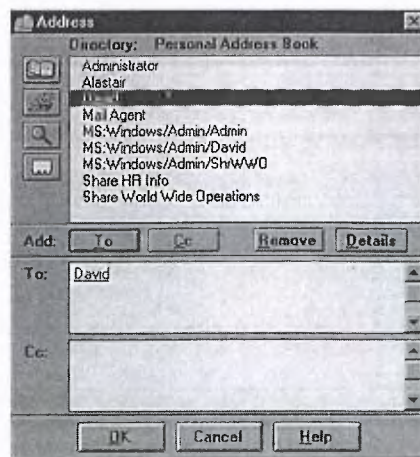


Fig. 7.37
Mail the currently selected document to someone who might not see it.

||

Working with Share

You can send the current document to any number of electronic mail recipients. They will receive your message containing the text:

Enclosed is a document of interest from the <forum> forum.

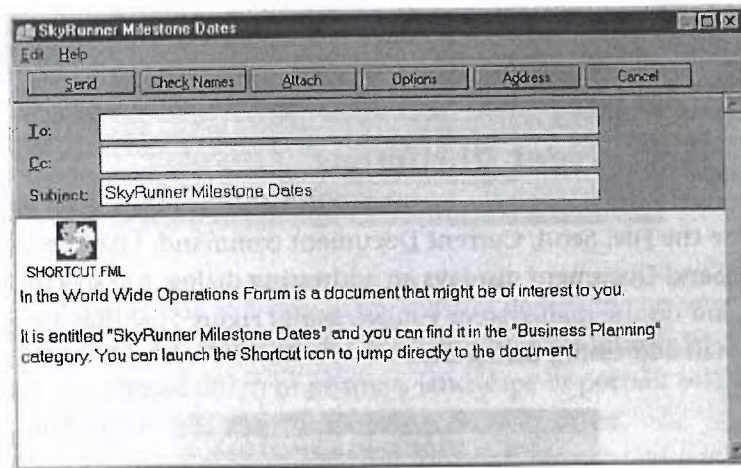
If the document is too big, Share will automatically convert it to an attachment. Some mail systems can't handle very large text messages, but sending the document as an attachment gets around this limit. Attachments can be extremely large and maintain complete fidelity to the original.

Notifying Others by Mail

If you happen across an important document hiding in Share, or unearth an old contribution that has recently become relevant again, you can use the File, Send, Notification command to send a mail message informing other team members of the document's existence.

Share creates the text of the mail message for you; as with sending a document, you have only to address the envelope. Share goes one step further, however, and includes a link (shown in Figure 7.38) that allows your recipients to leap into Share and land on just the document that you are referencing.

Fig. 7.38
The File, Send, Notification command includes a link leading back to the original document.



Note

When should you Send Notification rather than Send Document? It depends on your group's culture. I can tell you that at Collabra it is considered somewhat rude to send a notification of a single-page document. I, for one, would rather not take the one or two extra steps to follow a link into Share as I read my mail. But Send Notification makes sense if the document or the recipient list is large. Some say that Send Notification is more important for urgent postings or for getting the attention of infrequent Share readers.

From Here...

In this chapter, you learned how to get around in a forum. You learned how to search for specific documents, as well as how to avoid information overload by skipping over documents and by pinpointing the most relevant documents to you. The chapter covered alternative views, printing, and hooks to your electronic mail system as well. Now that you know how to read forums, you're probably eager to learn how you can contribute to forums yourself. That's in the next chapter.

For more information on the topics discussed in this chapter, refer to the following chapters:

- To learn how to search several forums at once, see Chapter 6, "Managing Forums with the Library."
- For a description of choices such as indexing for full-text, see Chapter 9, "Creating Forums."
- To find out how to use View Largest and View Oldest to manage forum size, see Chapter 10, "Moderating Forums."



Chapter 8

Contributing to Forums



Now that you are comfortable finding and reading documents in forums, it's about time that you started contributing your own documents. Just as there are different kinds of forums, there are many ways to contribute as well. Some forums are repositories of documents that have been carefully polished before being made public. Other forums are dynamic places full of one-line replies, such as, "I like your plan...go for it!" Project forums may contain specification documents that are dozens of pages long, side by side with tiny documents containing terse comments. Whether you're creating a long, formal document or posting a simple message, you'll benefit from an understanding of Share's document editing capabilities.

In this chapter, I'll cover all aspects of creating documents in forums, including:

- Creating a new document
- Posting the new document to the forum
- Posting anonymously
- Saving drafts
- Using editor features
- Inserting objects into documents
- Creating a thread summary
- Editing existing documents
- Using templates
- Using your word processor instead of Share's built-in editor

Creating a Document in a Forum

Contributing to a forum is about as easy as typing some words. In almost all cases, you create a document in a forum using these four steps:

1. Choose a command that creates a new topic or reply.
2. Give the new document a title.
3. Enter the content of the document by typing or inserting objects or both.
4. Post the new document to the forum.

In Chapter 7, “Finding and Reading Documents,” you were introduced to the forum window. You learned how to navigate inside a forum using the category and thread panes, and how to view documents using the document pane.

Before you can contribute to a forum, you need to use your navigational skills to decide where to place your new document. You need to apply what you learned in Chapter 7 to answer the question, “Where will readers of this forum expect to find this information?”

Choosing a Category

If you are starting a new topic, you’ll need to choose which category it belongs in. If a document seems to fit in more than one category, you have only a few options: you can pick one category and ignore the others; you can post in one category and then create more than one copy of the document in the forum; or you can create a reference document in the other categories that contain a QuickLink to the full document. QuickLinks allow your reader to jump from one document to another. I’ll discuss QuickLinks, perhaps the best solution to this challenge, shortly. Creating a new category is described in Chapter 10, “Moderating Forums.”

When you want to reply to an existing document, you don’t have to worry which category is best. Obviously, you’ll want your document in the same category as the document to which you are replying. But you still face choices. As illustrated in Figure 8.1, you can reply to a topic document or to another reply.

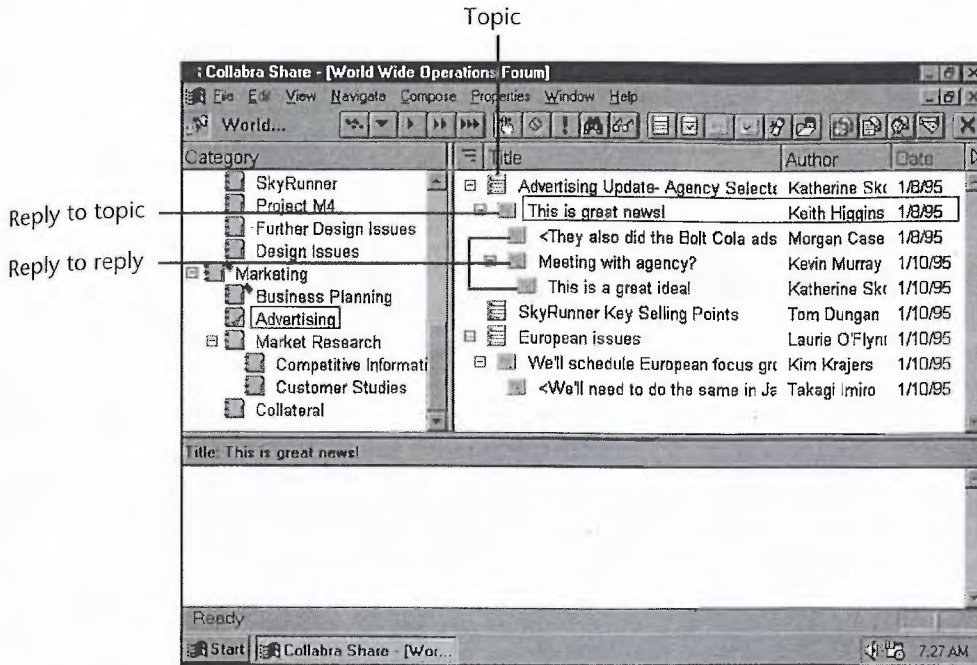


Fig. 8.1
Your new document can be a topic, a reply to a topic, or a reply to a reply.

Replying within Forums

Let's say that you open a forum and press the space bar to skip to the first unread document. It's a reply, and you disagree with it. You want to post a reply of your own, expressing your opinions or even disputing facts. The question is, "What are you replying to?"

If your remarks are directed only toward the reply itself, you should reply to the reply. (In that case, your new document will be indented under the reply.) On the other hand, if you want to weigh in with your opinion on the topic, you'll want to reply to the topic—which will cause your new document to be indented at the same level as the reply that you read in the first place.

One of the services you perform for your readers is taking the trouble to indent your reply properly. All replies to a topic document should be indented one level beneath it. Anything indented more than one level should be a side issue: a discussion about a particular reply rather than about the topic at hand.

Posting Etiquette

Every team represents a particular culture with ideas about proper behavior. Nonetheless, a few general rules regarding electronic communication have emerged in the last decade or so that make working together more pleasant.

Working with Share

First, be nice. Criticism comes across more harshly in text because there is no body language to soften it. Sarcasm often fails completely. And you may eventually regret death threats and other extreme remarks, which remain in the forum with your name on them.

All capital letters, LIKE THIS, are considered online shouting. Share allows you to abuse colors and font sizes in a similar way. You don't want to be loud. Stick to two or three businesslike fonts, use color accents sparingly, and don't blast your readers with a huge font size. (However, you can dazzle your audience with some well-placed graphics. You'll learn how later in the chapter, in the section, "Communicating without Typing.")

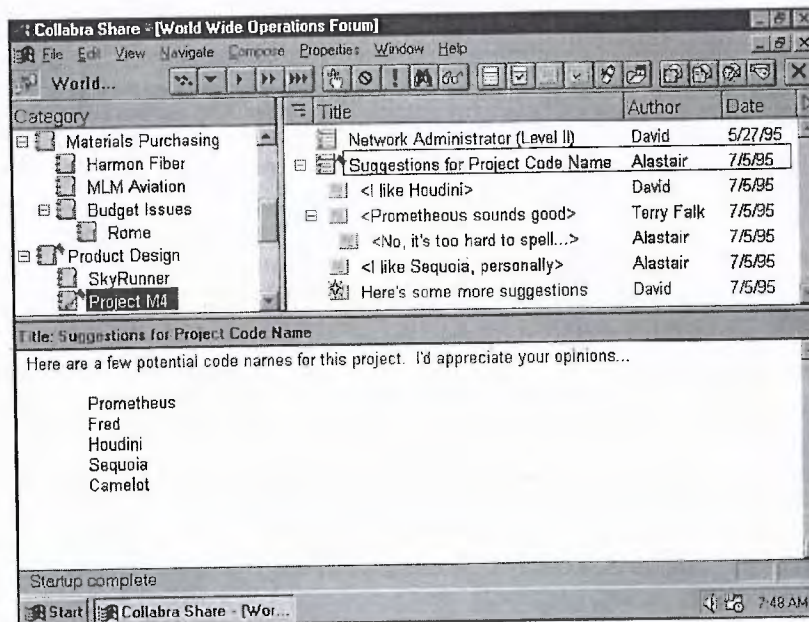
We've already mentioned that it's good form to make sure that your posting is in the right category and indented under the document to which it applies. Try not to cover too much ground in your documents. If you have three ideas, post three documents so that replies can be targeted appropriately.

Note

Sometimes your thoughts fit neatly into the title, and you can leave the rest of the document empty. At Collabra, we invented our own notation for documents in which the title says it all. We began enclosing the title of empty documents in angle brackets, making it obvious that there's no need to click on the document to see more. Figure 8.2 shows how this works. Readers can press T (Navigate, Next Thread with Unread) to mark the entire thread as read.

Fig. 8.2

By using the <angle bracket> notation, simple conversations stay simple.



As you scan the new documents in a forum, you may land on a new topic that asks an obvious question. Someone might post, "Who played Mr. Spock on that old TV show?" and you find yourself itching to reply. Instead, count to ten. Look ahead to see if others have already answered. Check your facts.

Note

Most of the times when I knew the answer instantly, I found that I misunderstood the question. I'm fortunate to work with some very smart people, and I've learned to read things twice (at least) before I dash off a reply.

Your postings in Share over a period of time will say a lot about you to your colleagues. Try to strike a balance: make sure that you are represented in the forum or you'll seem superfluous, but avoid being the most talkative member of the forum—the know-it-all with postings in every category. Let little kindnesses and thoughtful and accurate postings be your Share persona. Your professionalism will be appreciated by people in your organization whom you may never meet.

Understanding the Composition Window

Now that you're familiar with the Library window and the Forum window, it's time to introduce the third and final kind of window in Share: the Composition window. You use the Composition window, shown in Figure 8.3, to create and edit documents.

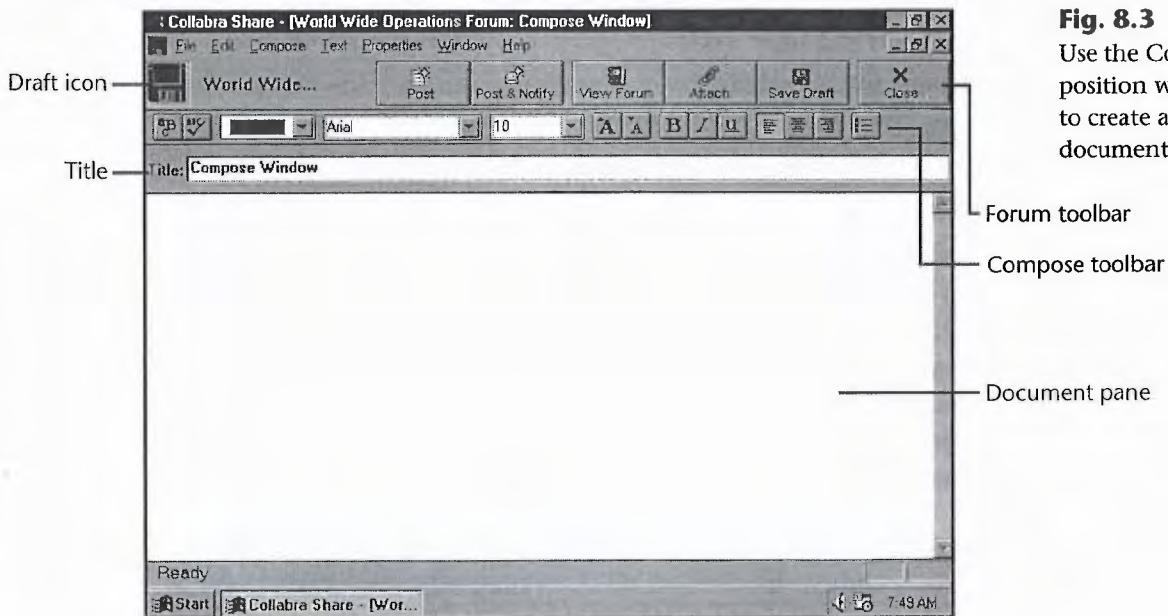


Fig. 8.3
Use the Composition window to create and edit documents.

Working with Share

The Composition window is Share's document editor. You can have several composition windows open at once, and you can arrange and tile them alongside your Library and forum windows. Composition windows appear on the Windows menu.



The Composition window is normally maximized and fills the Share frame window, hiding the other windows behind it. This allows you to focus on the document that you are creating. The Compose, Go to Forum Window command is available in Composition windows to switch to the Forum window associated with the document under construction. This is useful, as you will see, when you want to refer to other forum documents.

Starting a New Thread



To create a new document in Share, simply select a category (or the forum itself, the home position entry in the category pane), and choose the Compose, Start Thread command (Ctrl+N).

A Composition window appears with the blinking caret indicating that text typed will be entered into the Title field. Enter a title (up to 79 characters), and press Enter.

Now the blinking caret is at the upper left of the document portion of the Composition window, and you're ready to enter your text. You'll find the Share editor to be somewhere between a simple editor, like WordPad (or NotePad), and a word processor, like Microsoft Word. If this is your first document in Share, then simply type some text for now.

There are really two kinds of top-level documents in Share: documents (as in a repository) and topic documents, which initiate threads of discussion. Both are created the same way, but if you are starting a new thread, you'll want to anticipate and even encourage replies.

One way to solicit replies is to list numbered alternatives, which makes it easier for your readers to vote. If you have specific questions, consider listing them first so that anyone landing on the document can see what you want without scrolling.

Replying to an Existing Document

New users of Share might be best advised to limit their contributions to replies initially. You have the choice of including the original text in your reply and other options to consider.

When you create a reply, a Composition window appears that is the same as that for topic documents.

Creating a Reply

To reply to the currently selected document, choose the Compose, Replay command (Ctrl+R). You can reply to a topic document or to a reply at any level of indentation. Your new document will appear indented below the document to which you are replying.

This is the simplest way to create a reply and is recommended. You can also reply with options, however. And, in case you don't want your comments to be public, you can reply privately.

Replying with Options

For more choices, select the Compose, Reply with Options command (Ctrl+Shift+R). This command displays the dialog box shown in Figure 8.4.

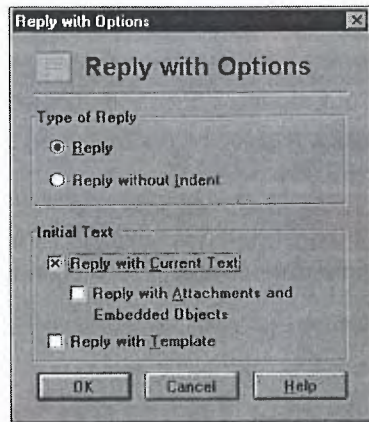


Fig. 8.4
Use the Reply with Options dialog box to create more advanced replies.

You can choose to reply to the currently selected document (Replay), or, if the current selection is itself a reply, you can choose to reply to whatever the current selection was replying to (Replay without Indent).

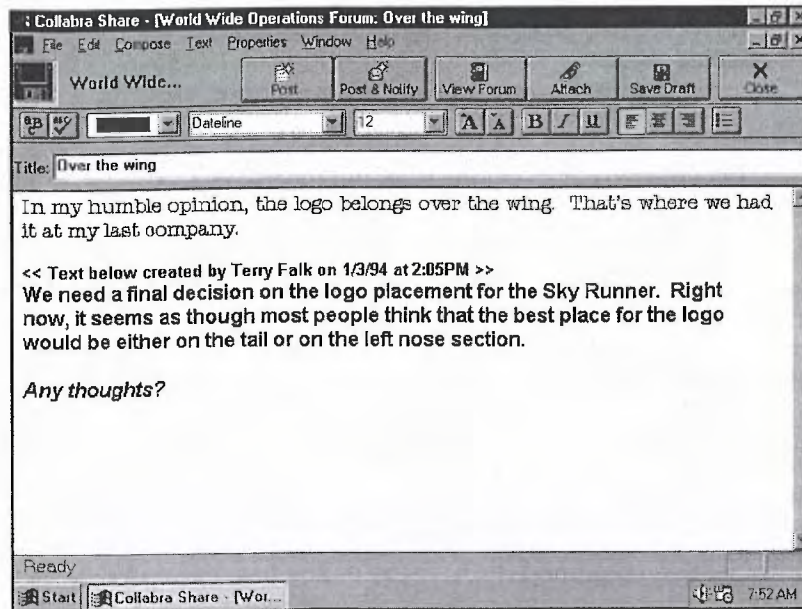
You have choices concerning the initial contents of the reply as well. You can include the text of the currently selected document, for example, even if you are replying without indent. If you include the text, you have the option of including attachments and embedded objects as well. You can also use a template, which is described later in the chapter, under "Using Templates."

Figure 8.5 illustrates a reply in which the original text has been refuted.

Tip
If you're not sure where your reply will end up, switch back to the Forum window after you've entered a title.

Fig. 8.5

You can include the original text with your reply.



Replying Privately

Sometimes, you want to direct your comments to the author of a posting rather than to the group as a whole. To do this using electronic mail, choose the Compose, Reply Privately command.

A mail message is created with the contents of the currently selected document. The mail is automatically addressed to the author of the selected document.

Posting the New Document



Until you post a document, it is only visible to you. To post your new document to the forum for everyone to see, choose the Compose, Post command (Ctrl+S).

Wait! Before you post, make sure that your document is as you want it to appear. Although you can go back and edit your own postings, your document will appear to everyone as soon as you post it.

You have several options to consider. You can check your spelling. You can notify certain people by electronic mail that you have posted, or you can post your document anonymously if that is allowed in the forum. Moreover, you can put off posting by saving the document in draft form and returning to it later.

Your document can be completely empty, but you must give it a title. If you forget, the handy reminder dialog box with an explanation will show up.

Notifying Others by Electronic Mail

You learned in Chapter 7, "Finding and Reading Documents," how to send an electronic mail notification containing a link called SHORTCUT.FML. If you like, you can send such a notification as you post a document.

Use the Compose, Post and Notify command (Ctrl+Shift+S) to post your document and also send a message by mail, as shown in Figure 8.6.

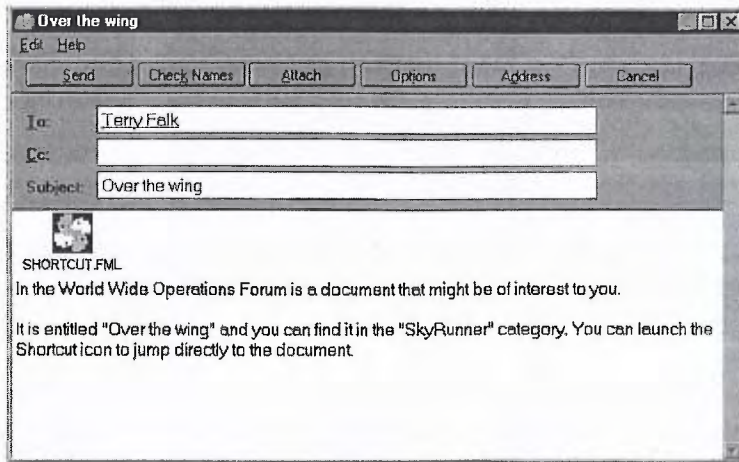


Fig. 8.6
Notify others of your new posting by mail.

Post and notify is particularly useful when you have taken an action item to investigate and post your findings in a forum. As you make your findings available to everyone, you notify those involved with the action item that the task is complete.

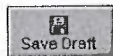
Posting Anonymously

You can leave your name off your new document if the forum allows anonymous contributions. If the Compose, Post Anonymously command is enabled, a forum Moderator has given you this option.



Anonymous contributions are particularly useful for suggestion-box or company-policy forums. Allowing anonymous contributions is discussed in Chapter 10, "Moderating Forums."

Working with Share



Saving to Draft

If you're not ready to post your document to the forum, you can save your work and post it later. Instead of the **Post** command, use the **File, Save As Draft** command. A dialog box will then appear asking if you'd like to continue editing.

Tip

Save your work often as you compose by choosing the **File, Save As Draft** command.

If composing your document is taking more than a few minutes, you should save your work periodically just as you would with a word processor.

You can have several drafts in progress at once. Your drafts are still available the next time you run Share. Opening a draft brings up a **Composition** window, which offers the **Post** command.

You can also print the document that you are composing. Choose the **File, Print** command (Ctrl+P) to print a draft of your document for further editing. (Instead of "Document created by..." the heading says "Document being created by...")



Abandoning a New Document

To cancel a new document, choose the **Compose, Cancel** command (Esc), which brings up the confirmation dialog box asking you if you are sure you want to cancel.

The dialog box encourages you to save your work as a draft. This is the only way to undo a cancel, otherwise the document is deleted. If you choose **Cancel** before you've typed anything, the **Composition** window vanishes without the confirmation dialog box.

Closing the **Composition** window—by pressing Ctrl+F4, choosing **Close** from the system menu, or clicking the Windows 95 **Close** button in the upper-right corner—has the same effect as choosing the **Cancel** command.

Communicating without Typing

In this section, I'll discuss a variety of ways of communicating in Share forums without typing words into the editor. You'll learn how to use symbols, attach data files, embed **QuickLinks** to other Share documents, and include objects created by other Windows applications.

Documents like the one shown in Figure 8.7 are not difficult to create.

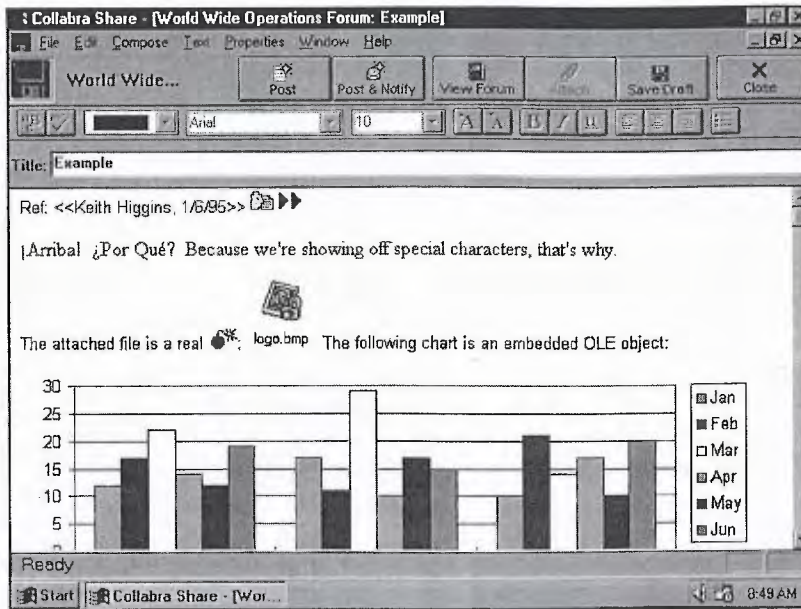
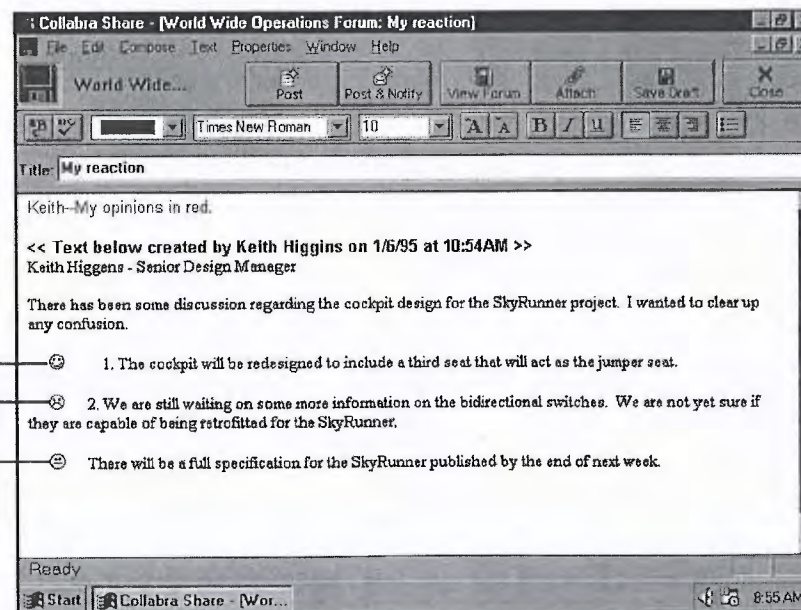


Fig. 8.7
Documents can include material from many different sources.

For example, you might choose the Compose, Reply with Options command to create a reply containing the text of the document to which you are replying. You might illustrate your feelings about various points using *emoticons* rather than a lot of words, as shown in Figure 8.8.



Emoticons

Fig. 8.8
Use emoticons to express your opinion.

Working with Share

Caution

Special fonts, such as Symbol and Wingdings, do not translate well into normal text. If your document is sent by electronic mail, your symbols will be replaced by other characters, and the effect won't work.

Attaching Files

Choose the File, Attach File command to include a file with your document. The contents of the file are copied into the forum, so your document won't be affected by any changes you make to the original.

You can also drag-and-drop files directly from Windows using the following steps:

1. Create a new thread or reply document, and bring up a Composition window in Share.
2. Arrange your screen so that both the Share Composition window and the Explorer (or File Manager) are visible. They can overlap, but part of the Composition window must peek out when the Explorer is front-most.
3. Find the file you want in the Explorer, and click and hold the mouse button down as you drag it over the Share Composition window. Pressing the Shift or Ctrl keys as you do this will create different effects.
4. Release the mouse when the mouse pointer is in the Composition window, and the file will be attached to the new document.

Using QuickLinks

If you refer to any other Share documents in your new document, it is extremely powerful to embed a QuickLink so that your readers can jump to the original. You can quote less, and your corporate knowledge base will begin to resemble the World Wide Web. Even if you aren't referencing other documents directly, consider adding one or more "See Also" links.



You create QuickLinks using either the Clipboard or drag-and-drop. In either case, you'll need to return to the Forum window—or even the Library—to open another forum. From the Composition window, choose the Compose, Go to Forum Window command to switch to the new document's forum window.

To use the Clipboard, click the document you want to reference, and choose Edit, Copy. Return to the Composition window, place the caret where you want the link, and choose Edit, Paste. You can also drag the document from the thread pane to the Composition window.

You can refer to documents in other forums as well as the current forum, and you can have any number of QuickLinks in a document.

Inserting Objects

One of the best ways to make your documents interesting—and even exciting—is to include objects from different sources. You can embed movies, charts, clip art, bitmaps, and many other kinds of objects into your documents because Share supports Microsoft's Object Linking and Embedding (OLE) facility. The kind of object that you can include is only limited to the applications you have installed on your computer.

To include an object from another application in the document that you are creating, choose the Edit, Insert New Object command to display the dialog box shown in Figure 8.9. This dialog box lists the kinds of objects that are available to you with the applications you have installed. Most of the object types shown in the Insert Object dialog box are provided with Microsoft Office.

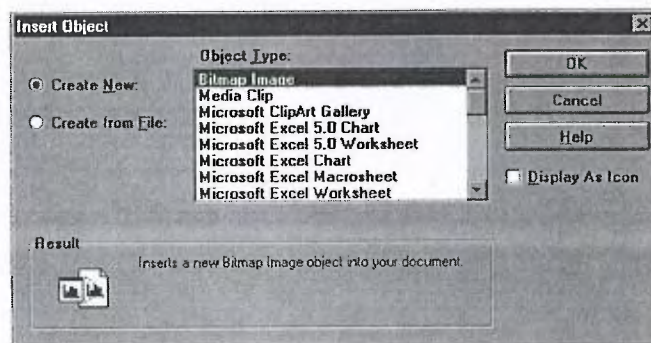


Fig. 8.9

The Insert Object dialog box lists the objects available based on your installed applications.

In this dialog box, your first choice is whether to create a new object using the external application or to embed an existing object that has already been saved to a file. For example, you can choose the Create New option and click Bitmap Image, which will bring up the Paint application and let you create a new bitmap. You can also choose Create from File and select an existing .BMP file when you click Bitmap Image.

Rather than choosing Create from File, you can drag a file in from the Explorer (or File Manager), as described in the section, "Attaching Files."

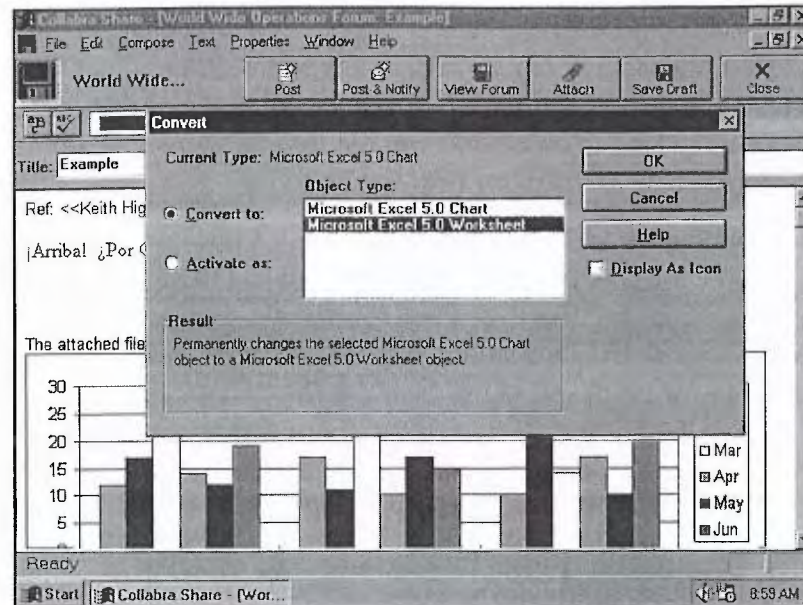
Tip

You can add Insert Object shortcuts to the editor toolbar. See "Invoking Word from the Toolbar," at the end of this chapter.

You can choose to embed the object as an icon, which will make it look like a file attachment. Other than these, your choices vary greatly depending on the type of object you decide to embed. Once you have inserted an object, you can adjust your choices with the Edit, Object command. (The menu command changes its name based on the object selected.)

The Edit, Object command brings up a submenu that varies by object, but usually includes an Open command and a Convert command. The Convert command brings up a dialog box like the one shown in Figure 8.10.

Fig. 8.10
You can convert an existing object from the Composition window.



Creating a Thread Summary



Use the Compose, Summarize Thread command to create a summary like the one shown in Figure 8.11.

You can choose to include links to each document referenced by the summary. You should include links unless you're planning to delete the thread's replies once you summarize them.

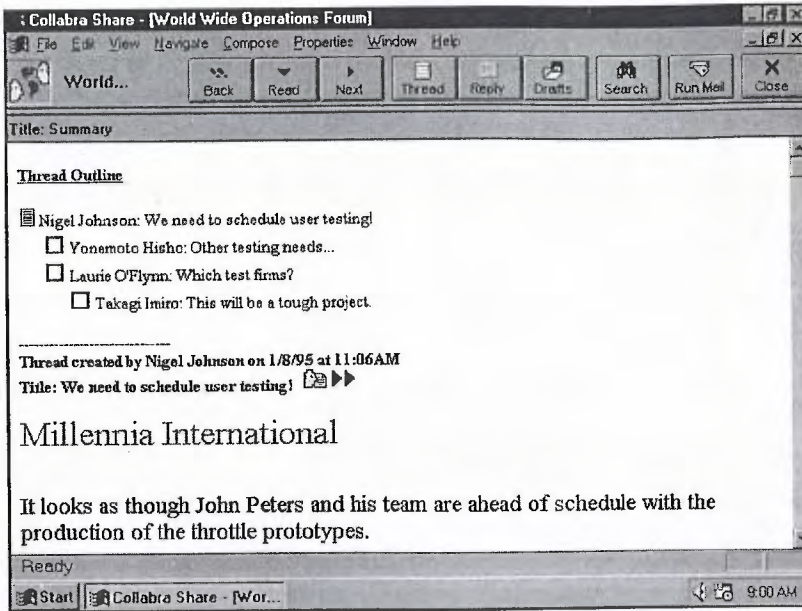


Fig. 8.11
A thread summary.

Editing Existing Documents

In general, Share prefers that you take your time composing your document, saving it as a draft as necessary, and then posting it once, for all to see. Share doesn't want you to go back and change your documents. For example, keeping a log is an excellent use for Share, but put each entry in its own document.

However, consider this scenario. You spend several days writing your trip report and just after you post it to the forum, you suddenly understand a cryptic comment that your report doesn't mention. Or you notice a missing comma that changes your meaning completely. (Spell checkers don't check your meaning.) To avoid looking foolish, you should go back and edit your document.

Share allows only the original author of a document to edit it. Even Moderators can't modify your documents. To return to the Composition window with an existing document, double-click it in the thread pane, or select the document and choose the Compose, Edit Current Document command (Ctrl+E).

If you must edit someone else's document, you can use the Compose, Reply with Options command to reply with original text, or you can create a new document using the following steps:

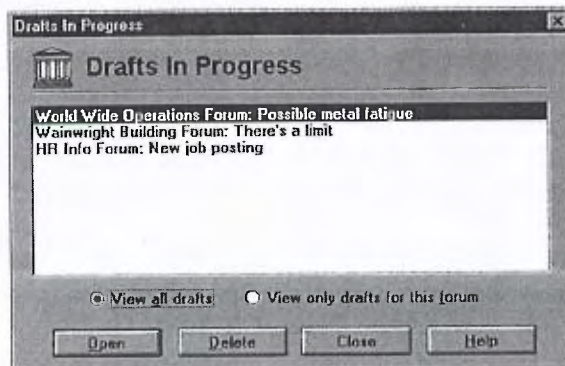
1. Create a new topic or reply in the same place as the original. Give the new document the same title. Choose the Compose, Go to Forum Window command.
2. Select the original document, click in the document pane and choose Edit, Select All (Ctrl+A). Then choose Edit, Copy (Ctrl+C).
3. Return to the Composition window and choose Edit, Paste (Ctrl+V).
4. Post the document with the Compose, Post command (Ctrl+S).
5. If you are satisfied with the new document, delete the original by selecting it and choosing Edit, Delete (Del).

Managing Drafts

You can have several documents in progress, saved as drafts, at once. To return to editing a draft, you can find the draft in the forum and category in which you created it and choose Compose, Edit Current Document (Ctrl+E). There is an easier way, however.

Choose the File, Open Draft command (Ctrl+O), from either the Library or a Forum window, to display the dialog box shown in Figure 8.12.

Fig. 8.12
Manage your drafts with the Open Draft command.



This dialog box lists either the drafts in progress in the current forum, or all the drafts in progress. Notice that the Library icon in the upper-left corner changes to the forum's icon if a single forum is chosen.

To resume editing a draft, opening its forum if necessary, simply select the draft title and click the Open button.

You can also use this dialog box to delete drafts. Select the draft title and click the Delete button. You can't undo this action, so be sure you want to erase the selected draft before clicking Delete.

Using Templates

Share gives you the ability to save outline or form documents that you can use over and over again as the basis for new documents. These prototype documents are called *templates*.

You create a template by starting a new document, entering the boilerplate text and objects, and choosing the **File, Save As Template** command. The dialog box shown in Figure 8.13 appears, asking you whether this is a personal or a public template.

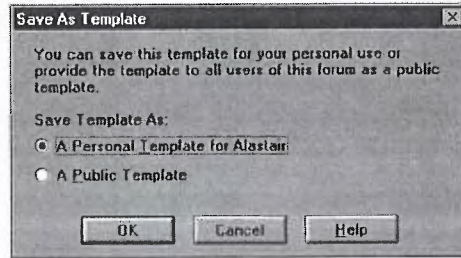


Fig. 8.13
Specify public or personal when you save a document as a template.

The document's title becomes the name of the template. Duplicate template names are allowed, but it is confusing to choose between two templates with the same name.

Once you have saved the document as a template, you are returned to the editor. You can choose to save the document normally as well, save it as a draft, or abandon it.

Basing a New Thread or Reply on a Template

To use a template when you are creating a new topic document, choose the **Compose, Start Thread with Template** command (Ctrl+Shift+N). The dialog box shown in Figure 8.14 appears so that you can select either a personal or a public template.

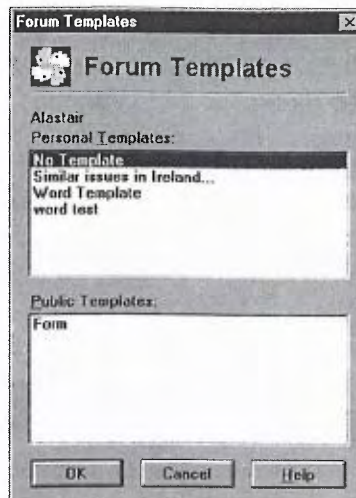


A new, untitled document is created using the template that you select. Instead of an empty document in the Composition window, however, your new document has a copy of the template's contents.

Creating a reply that uses a template is a little harder than creating a topic, because it is a less-common occurrence.

To base a reply on a template, choose the **Compose, Reply with Options** command (Ctrl+Shift+R) and check the **Reply with Template** box. The choose template dialog box shown in Figure 8.14 appears next.

Fig. 8.14
Choose which
template to use.



Deleting a Template

You can't edit a template. However, you can easily create a new document using a template, delete the template, edit the document, and save it as a template again.

To delete a template, choose the **F**ile, **D**el~~e~~te Template command. A dialog box similar to the one shown in Figure 8.14 appears with a **D**el~~e~~te button in place of OK. You can select multiple templates in either the personal or the public box in the Delete Template dialog box.

Using a Word Processor in Share

This section is for those who are comfortable using a word processor, such as Microsoft Word. If you don't ordinarily take advantage of Word's advanced features, the editor in Share is probably more than adequate for your needs.

To close out this chapter, I'll explain how to use Insert Object, OLE 2.0 with in-place activation, and templates to replace Share's built-in editor with Microsoft Word. These techniques are also applicable to other word processors and likewise apply to creating spreadsheet or other external application templates.

All this is possible because Microsoft Word supports the Object Linking and Embedding (OLE) 2.0 standard. OLE 2.0 was invented so that Word and Excel and other Microsoft applications could communicate with each other. Microsoft has made this technology available to other applications and has said that future operating systems will be based to a greater degree on OLE.

But you don't need to worry about OLE to replace Share's editor. If you have Microsoft Word installed and you follow the steps outlined here, you can create Share documents using a full-blown word processor, as shown in Figure 8.15.

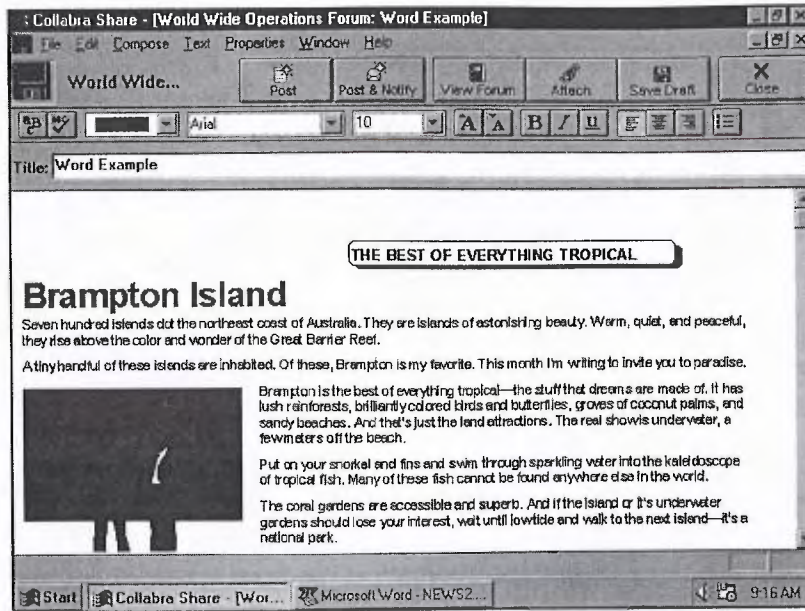


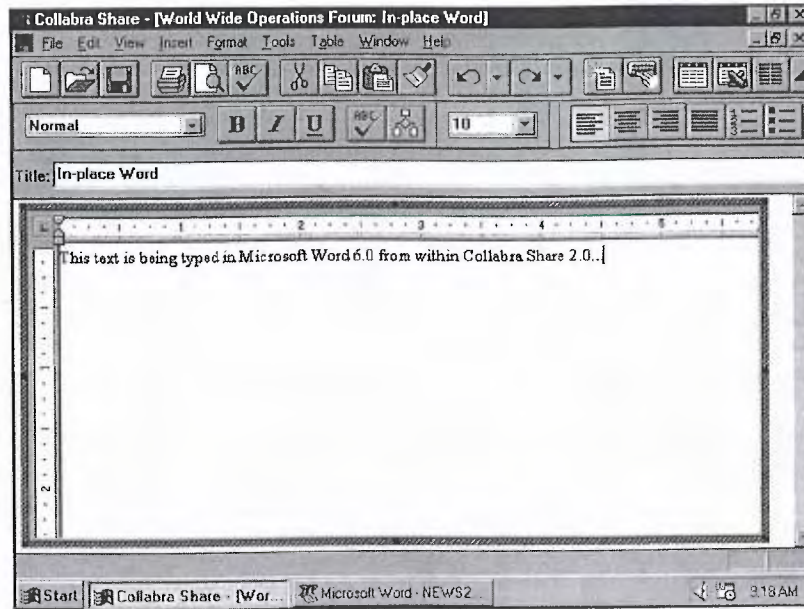
Fig. 8.15
Use Microsoft Word to create word processor-style documents.

Microsoft Word, In-Place

Create a new document, give it a title, and choose the Edit, Insert New Object command. One of the choices in the dialog box that appears should be "Microsoft Word 6.0 Document." Select that, choose Create New, make sure that the Display As Icon box is not checked, and click OK. (Earlier versions of Word don't support in-place activation, so you need Word 6.0.)

The result of the Insert New Object command is a box, one line high, in your Composition window document. Click the black square at the lower-right corner of the box and drag the box to make it larger. Click and drag on the box's border to move the upper-left corner into view, and your display will resemble Figure 8.16. Notice that the toolbar is Word's, not Share's, and that Word has conscripted your menus as well. Your screen may look different from the figure because Word's toolbars are quite customizable.

Fig. 8.16
Microsoft Word is
activated in-place
in Collabra Share.



To dismiss Word and return to Share, press Esc or click outside the Word object's frame. When an OLE application such as Word "takes over" an application such as Share's menus and toolbars, it has been activated *in-place*. In-place activation is a key feature of OLE 2.0.

All of Word's facilities are available when you're editing your Word object. For example, you can create tables, justify text, use the grammar checker and the thesaurus, and specify tabs, including centered and decimal tabs. You can embed fields like date and time. You can run Word Basic macros. In short, you have many more capabilities than Share's editor offers.

Now for the bad news. Word objects have a fixed width. If the document pane isn't wide enough, the right side of the word document will be cut off and document panes don't have horizontal scroll bars. Share's Find command and spell-checker won't work in Word objects.

Embedding Word objects may or may not work for your situation, but you should certainly experiment with it. Just about all I say about Word applies to other OLE 2.0 word processors and applications, such as Microsoft Excel or Shapeware's Visio.

Invoking Word from the Toolbar

Share's support for *custom commands* can make a simple button on the editor toolbar for Microsoft Word or any other OLE-enabled application. If you have

Microsoft Word 6.0, for example, just add the following lines to WINSHARE.INI:

```
[Custom Commands]
Command1=TextBar;InsertObject;Word.Document.6
```

If you already have a Custom Commands section, add the new command to the end.

You can add buttons for any application that appears in the Insert Object dialog box. Use the OLE registration editor to determine the correct class name (such as "Word.Document.6" in the example above). To run the registration editor, use the Run command on the Start menu (or File, Run from the Windows 3.x Program Manager) and enter **REGEDIT /v**. Word's classes are found in:

```
My Computer\HKEY_CLASSES_ROOT\ .DOC
```

Creating a Word Template

To make using Word in Share easier, consider creating a public template consisting of an empty Word object. Here are the steps:

1. Create a new document with the Compose, Start Thread command (Ctrl+N). Give it a title, such as "Word Template."
2. Choose Edit, Insert New Object and select Microsoft Word 6.0 Document. Choose Create New and uncheck Display As Icon.
3. Drag the rectangle's corner to create a large enough writing area, and drag the border to position the rectangle on the page.
4. Make initial choices, such as font, size, color, paragraph formatting, etc.
5. If you like, create and customize a table.
6. Click outside the rectangle to dismiss Word and return to Share.
7. Choose the File, Save As Template command.
8. Press Esc to close the Composition window and answer No to the Save As Draft prompt.

Now, anyone with Microsoft Word can use this template to create a new document.

Using a Word Template

To use the Word template, choose Compose, Start Thread with Template (Ctrl+Shift+N). Double-click inside the invisible word rectangle to invoke Microsoft Word.

When you are satisfied with the new document, press Esc or click outside the rectangle to dismiss Word. Then either post the new document or save it as a draft.

Readers of your document won't immediately realize that it is a Word object unless the right side is truncated. Readers will be able to double-click the object and launch Word, but any changes they make in Word will not affect the document stored in the forum.

From Here...

Congratulations, you are now familiar with both reading and contributing documents in Share. You have seen and used every kind of window: Library, Forum, and Composition. All that remains are the details of creating and moderating forums.

Other chapters that offer additional information include:

- For more details on threads and categories, see Chapter 7, "Finding and Reading Documents."
- For an explanation of how to contribute an entire forum to your group, see Chapter 9, "Creating Forums."
- To learn about features such as Allow Anonymous Contributions, see Chapter 10, "Moderating Forums."

Chapter 9

Creating Forums

9

I have described how to read forums and how to contribute documents to forums. It is now time to discuss creating new forums for your team to use. In this chapter, you'll learn about

- The different kinds of forums
- Creating forums
- The decisions you make when you create a forum
- Establishing categories in a forum

Understanding Forums

There are as many different kinds of forums as there are workgroups. Each forum will have a character all its own because each will contain the information that the group has contributed. It is in the nature of shared forums to contain unpredictable information.

Share makes it easy for you to create a forum with default choices, but it is not very difficult to customize a new forum: there are no important decisions you make when you create a forum that can't be changed later.

The creator of a forum has certain responsibilities. First, the creator is always a Moderator of the forum and the creator's membership and privileges cannot be changed during the life of the forum. Second, users of the new forum will carry on the policies set down at the creation time. The initial categories, as well as choices such as default membership privileges, tend to define the nature of the forum.

Moderators play a significant role in making a forum successful, as you will see when you explore Chapter 10, "Moderating Forums." The users of your



new forum will entrust their information to it. It is your responsibility to ensure that your users' information is optimally organized—not accidentally destroyed or exposed to unauthorized individuals. The following is a description of three different kinds of forums:

- *Discussion.* Some forums capture a discussion about various aspects of a project (or a process). Such forums grow dynamically. Members tend to have Contributor privileges, but there may be many Moderators. Discussion forums often need encryption and password protection, and the automatic deletion of older documents that have become stale.
- *Repository.* Other forums are relatively static repositories of corporate knowledge. They have only a few members who are not readers. The structure of the forum is carefully moderated for ease of use and may have index documents that contain almost nothing but QuickLinks to other documents. A repository forum may maintain past versions of certain documents.
- *Data-feed.* Collabra Share Agents, described in Part III, "Extending Share," can populate forums with documents from a news service, such as First! by Individual, or from selected newsgroups on the Internet. Such forums are extremely dynamic, so limits must be imposed and documents *aged* (automatically deleted) to keep the forum from becoming huge.

Establishing a New Forum

Before you can create a new forum, you must have been granted that privilege by the Administrator when you were added to the Share Registry. Chapter 19, "Managing the Registry," describes how to use the **F**ile, **A**dmin, **U**ser command to change a user's permissions to include User is Permitted to **C**reate Forums. By default, all users in the enterprise can create new forums.

To create a forum and accept the default location, policies, descriptions, and even a default icon, simply give the new forum a title. Each of these forum properties, including the title, can be changed later, but I'll discuss the possibilities here.

Creating the Forum

In addition to giving your new forum a title, you'll want to give it a distinctive icon and a description—and you may not want to locate the new forum in the public forum directory.

You create new forums in the context of the Library window by choosing the **File, New Forum** command (Ctrl+N), which displays the dialog box shown in Figure 9.1.

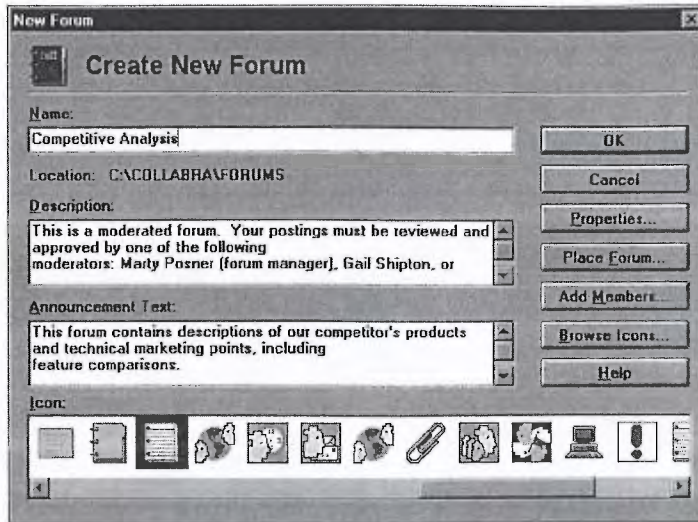


Fig. 9.1
Use the **File, New Forum** command to create a new forum.

Using this dialog box, you must specify a title, and you may choose a different icon, description, and announcement text. Clicking the **Properties** button allows you to change various forum policies, such as encryption or size limits, and to invite users by preregistering them as members. Clicking the **Place Forum** button, described in the section, "Placing the Forum," lets you choose a different folder for the new forum.

Title, Icon, and Default Properties

All forums must have a title. If you don't specify an icon, the Collabra Share logo is used. Notice that the description and announcement texts have been filled in for you with the minimum information that your users will need: the name of the person who created the forum.

If you don't click the **Properties** button to change forum policies, your new forum will receive the default:

- Full-text index
- No password
- No encryption
- No size limits

- No automatic document deletion
- Anonymous posting not allowed
- New users have Contributor privileges
- New users must be approved by the Moderator

Placing the Forum

For compatibility with older Windows systems, each forum has an eight-character name in addition to the full title that you give it. In fact, the eight-character name is derived from the title. If your new forum is titled, "Sky Runner ISO 9000," the forum's eight-character name will be "SKY_RUNN."

If there is already a forum with the same eight-character name, the last three characters are replaced by digits. So if the example above ran into a conflict because there were already several forums with titles starting with "Sky Runner," then your new forum's name might be "SKY_R003."

You may want to assign the eight-character name yourself in order to make the name more or less readable from the Explorer. For example, you might name all of the "Sky Runner..." forums with an "SR" followed by an abbreviation of the forum's use, such as "SR_ISO9k," "SR_SALES," "SR_ENG." On the other hand, you might want to assign names that make it *more* difficult to deduce the forum's content (as an additional security measure). You might call the new forum "34-09(2)."

To choose the eight-character name of your forum, allow Collabra to create the forum and then use the Explorer to rename both the .FM file and the folder (subdirectory) before the forum is added to anyone's Library. The .FM file is read-only, so you'll have to confirm the rename.

New forums are created in the Public Forum Directory by default, but you have control over this as well. You can use the Place Forum dialog box, shown in Figure 9.2, to select a different folder for the new forum.

You might want to create forums in a different folder as a security measure. If you are creating more than one forum in a different folder, it is worthwhile to change your workstation's Public Forum directory temporarily by using the Locations tab of the General Properties sheet, which is displayed by choosing Properties, General. When you have added the forums to your Library, change back to the Public Forum directory that everyone shares.

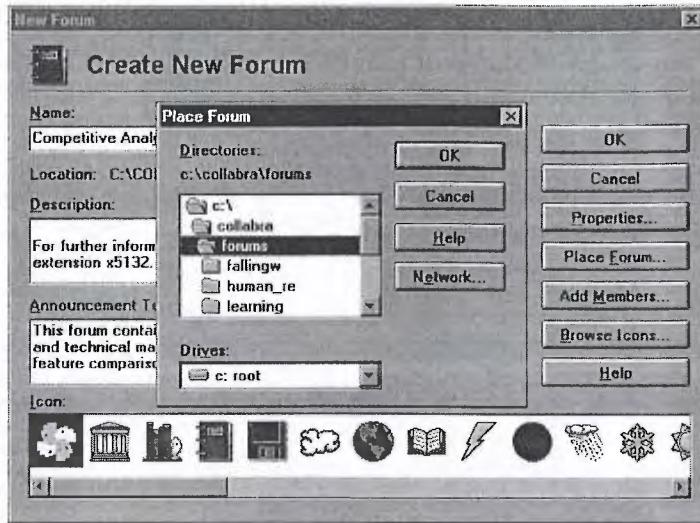


Fig. 9.2
Click the Place Forum button to choose a folder for your forum.

Making the Forum Accessible to Others

When you create a new forum, the others on your team will not immediately be aware of it. They will need to add the new forum to their Libraries before they can access it, and you'll need to notify them that the forum is available.

Any new forums that you create are automatically added to your Library. Other users must explicitly add the new forum to their Libraries. They will use the File, Get Forum command (Ctrl+G) in their Library window context. Your new forum, along with your icon and announcement text, will appear in the dialog box shown in Figure 9.3.

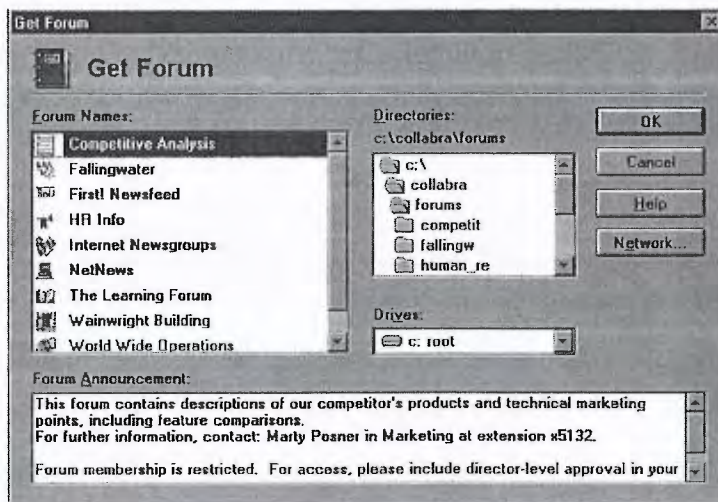


Fig. 9.3
The new forum appears when the Get Forum command is selected.

Working with Share

The new forum can be added to any user's Library, but users are still subject to the membership policy of the forum. If the forum has a closed enrollment policy, for example, they will be prompted to request membership the first time they try to open the forum.

When you create a new forum, Share asks if you would like to send electronic mail notifying others of the forum's existence. You can specify any recipients you like, and your message can explain to them the purpose of the new forum. Also, the message will include a link that will launch your forum for your recipients.

You might decline an initial notification for several reasons, however. You might want to establish categories and add documents before others join the forum, for example, or you might want to rename the forum on disk (as described in the previous section, "Placing the Forum").

You can send a notification at any time by selecting the forum in your Library and choosing the File, Send, Forum Link command.

Managing Membership

As the creator, you are automatically and irrevocably a Moderator of the forum, as I mentioned earlier. One of the Moderator's roles is management of a forum's membership list.

If you chose the default, closed enrollment, you'll need to grant membership as users request it. Whenever you open the new forum, you'll be notified of new membership requests received since the last time you opened it.

To avoid having to approve each request, you might want to change the policy to open enrollment. To do this after the forum is created, select the new forum and choose Properties, Forum. Select the An Anyone Can Join This Forum option on the Access Policy tab.

Even without specifying open enrollment, you can still avoid receiving membership requests by inviting members. You invite members from the Membership List tab of the Properties, Forum dialog box. Click the Add New Members button and select users for preapproved membership.

Membership requests and other Moderator tasks are described in detail in Chapter 10, "Moderating Forums."

Deciding How the Forum Will Appear

Now let's cover the properties of a new forum in more detail, starting with the choices that affect how your forum will appear to others in the group. These properties include the title, icon, announcement text, and forum description.

Titles and Icons

The title appears in everyone's Library, centered under the book icon. Titles can be up to 79 characters long and can include spaces and punctuation, but you're advised to keep your titles short. Good titles include: The Water Cooler, Company Info, Public Relations and Publicity, Sky Runner '96 Project, or Sales, Marketing, and Communications.

The longest of these titles is 35 characters. Long forum titles get chopped off in various window and dialog box headings. Also, don't use the word *Forum* in the title, or you'll see "Sales Forum Forum" on your forum window caption.

The icons that represent these titles appear prominently in your user's Library and act as graphic titles — one less thing for busy people to think about. Choose an icon that users will recognize and associate with your new forum.

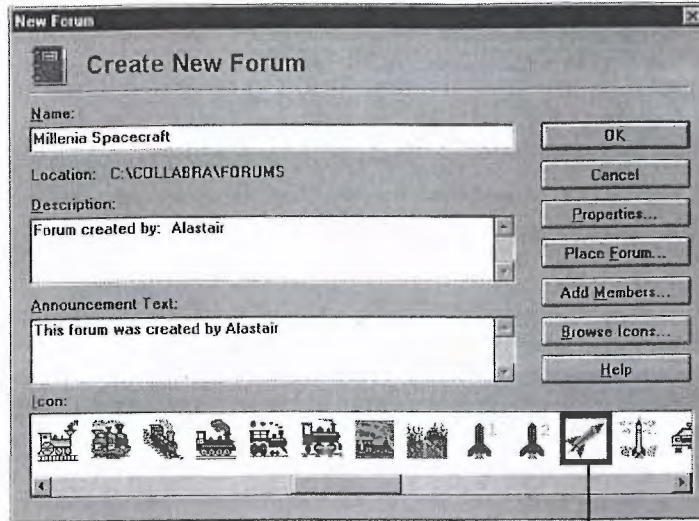
The Create New Forum dialog box displays a panel of 42 icons, but you have a much wider choice than that. If you use the Browse Icons button on the Create New Forum dialog box, or on the Select Forum Icon dialog box from the Properties, Forum Identification tab, you will be able to include icons from any source.

The dialog box shown in Figure 9.4 allows you to extract icons from .ICO files created by an icon editor or from any .EXE application or .DLL library. Collabra optionally includes more than a dozen icon .DLL files when you install, and the Browse Icons dialog box typically starts in the \COLLABRA\BIN\ICONS folder.

Windows includes a file called C:\WINDOWS\MORICONS.DLL that includes dozens of icons. Services such as CompuServe and America Online are excellent sources of creative icons.

Your initial icon choice is important because, although any Moderator can change a forum's icon at any time, its use as a visual cue depends upon consistency.

Fig. 9.4
There are plenty of icons from which to choose.



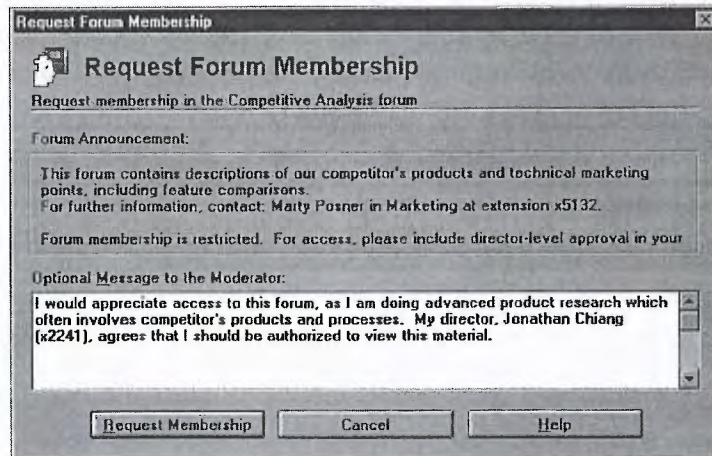
Custom icon from TRANSPOR.DLL

Announcement Text

The forum's announcement text is its calling card to nonmembers. If the forum contains confidential information, it should not be revealed in the announcement. The announcement should explain the purpose of the forum, who should participate, and who should be contacted for more information.

Announcement text is limited to 511 characters of plain text. The display is truncated to the first five lines in the Request Membership dialog box shown in Figure 9.5.

Fig. 9.5
The announcement text appears when users request membership.



Prudence dictates that if a forum is highly sensitive, little or no information should be presented in the announcement. "This forum requires a High Security clearance," might be the entire announcement, for example. Even the name of the forum's creator (the default announcement) is a useful clue for unauthorized users.

You can use the announcement to make ground rules clear. For example:

This forum is open to anyone for general discussion of zoo animals. However, anyone joining this forum agrees not to use the word 'elephant.' Use of this word is grounds for ejection from the forum.

Description

Unlike the announcement text, the description is available only to members of the forum. The description appears in the document pane when the forum is open but no category or document is selected, as shown in Figure 9.6.

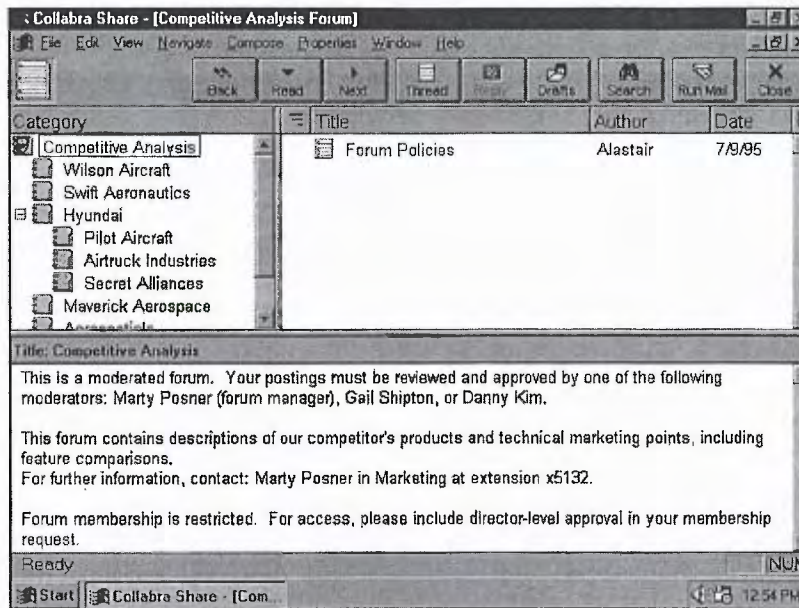


Fig. 9.6
The forum description is visible only to members of the forum.

Use the description, which is limited to 511 characters of plain text like the announcement, to specify the rules to the forum's members. The purpose of the forum, an overview of the categories, and a list of the Moderators and their telephone numbers are all appropriate items for inclusion in the description.

Making Initial Policy Decisions

When you create a forum, you are specifying policies that will guide Share in its automatic administration of your forum. Remember “policy-based administration” from Chapter 1, “Making Your Team More Productive”? Let’s examine the various choices—even though these policies can be changed at any time by any Moderator of the forum and are described in detail in Chapter 10, “Moderating Forums.”

Encryption

All documents created when forum encryption is specified are encrypted using technology licensed from RSA Data Security, Inc., a recognized leader in the field. Documents created when forum encryption is turned off are not encrypted, and turning on encryption does not go back and scramble unencrypted documents. Likewise, turning off encryption does not decrypt documents.

It’s very important to turn on encryption when you create the forum if you will want this security in the future. If you decide to turn on encryption later, you’ll fail to encrypt some number of documents.

Encryption affects the contents of forum data files on the disk. The only noticeable effect of encryption from within Share is that posting and reading large documents is not quite as fast. If your membership policy deliberately excludes certain people, you’ll probably want encryption to keep those people from reading the forum’s data files without using Share.

To request encryption, select the Storage Policy tab of the Forum Properties dialog box and check the Encrypt the contents of new contributions for privacy box.

Password

If the forum contains sensitive information, you should give it a password as well. Members will be asked for the password whenever they open the forum. Passwords can be up to 19 characters long and are not case-sensitive. They can include all keyboard characters, including space and punctuation.

You set a password on your forum on the Access Policy tab of the Forum Properties dialog box. Click the Change Forum Password button to bring up the password dialog box. Enter the password twice: first in the New Password field and again in the Password Confirmation field. Leave the Current Password field alone since new forums have no password initially.

Full-Text Indexing

Full-text indexing, using technology licensed from Verity, Inc., supports finding words and phrases anywhere in a forum. Full text is on by default in new forums and if you turn it off, the Search command will be disabled. If you are willing to give up the Search capability, turning off full-text indexing can save you disk space and improve performance when you post documents.

The full-text index represents as much as a third of the disk space required by a forum, and posting performance is noticeably faster without it. However, Search is one of the most useful facilities in Share, which is why it is always on by default in new forums.

Unlike encryption, turning full-text indexing on after documents have been posted *will* go back and reindex the documents in the forum. You can choose to turn it off initially, then turn it on after many documents have been contributed. The trouble is, reindexing a forum can take some time, during which no one can open or contribute to the forum.

To turn full-text indexing on or off, use the Fulltext Index the Forum to Enable Searching check box on the Storage Policy tab of the Forum Properties dialog box.

Inviting Others

You can spare others from having to request membership in your new forum by preregistering, or "inviting," them when you create it. Regardless of the open or closed enrollment policy or the default member privileges, you, as the forum's creator, can select any user from the Registry and grant them membership in your forum with a particular privilege level (Reader, Contributor, or Moderator).

To invite users, click the Add Members button on the Create New Forum dialog box, or select the Membership List tab of the Forum Properties sheet and click the Add New Members button. If you make a mistake, click the Remove Members button on the Membership List page.

Access Policy

There are two types of enrollment policy: your new forum can be *open*, in which case anyone who adds the forum to his or her Library and opens it automatically becomes a member; or your forum's enrollment can be *closed*, meaning that users must request membership or have been added by a Moderator.

Although the default is closed enrollment, open enrollment requires less Moderator involvement. That is, while you can centralize membership control in one or two designated Moderators, it is better in some sense to distribute the authority among all users by requiring all users to take responsibility for their own membership.

If your forum contains sensitive information, consider open enrollment with a password on the forum. This way, every member of the forum can invite others without having Moderator privileges.

To specify open enrollment, choose the An one Can Join This Forum radio button on the Access Policy tab of the Forum Properties sheet. For closed enrollment, choose the Moderator Must Enroll All Members of This Forum option instead.

If you choose closed enrollment, a Moderator will choose the appropriate privilege level for the users as they are granted membership. In an open enrollment forum, however, new members all have the same privilege level. This privilege level is set by a Moderator on the Access Policy tab of the Forum Properties sheet. The three levels are shown in Table 9.1.

Table 9.1 Member Privilege Levels

Privilege	Explanation
Reader	Members may read this forum.
Contributor	Members may read and contribute to this forum.
Moderator	Members may moderate, read, and contribute to this forum.

Only Moderators can change forum policies, create categories, or delete another member's postings.

You typically set the default to Contributor or Reader and specifically invite users who will share Moderator responsibilities with you. It's good policy to have at least two Moderators per forum so that one is always available.

Note

At Collabra, we have a couple of casual forums with open enrollment in which every member is a Moderator. Any member can decide to reorganize the categories or clean up old postings. It's anarchy or freedom, depending on your point of view. In practice, it has worked well, but this model isn't used on mission-critical forums.

Moderator Policies

The remaining forum policies have less to do with forum creation than with day-to-day forum moderation. Therefore, I will cover them in Chapter 10, "Moderating Forums." These Moderator policies include:

- Aging (automatic) thread deletion
- Limits on the size of the forum or of individual contributions
- Moderated contributions
- Anonymous contributions

The aging and limit policies of a forum are part of the policy-based forum administration feature. A Moderator of the forum can just "set it and forget it." Documents will be automatically pruned from the forum when they are older than a specified number of days or when the forum reaches a certain size. The forum size limit is enforced by deleting the oldest documents.

Moderated contributions means that a Moderator must approve all new documents proposed. This policy increases the Moderator's responsibilities greatly, but it generally results in forums with superior content. When a member contributes a document to a forum, he or she receives the message shown in Figure 9.7. Proposed additions to the forum are shown to the Moderator when he or she opens the forum, and each can be approved or rejected.

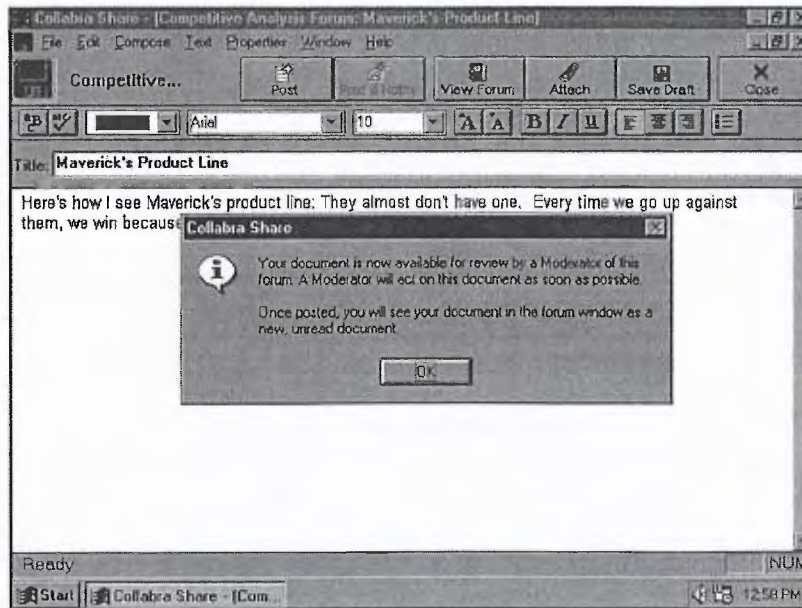


Fig. 9.7
In a moderated forum, your contributions seem to disappear.

Working with Share

Anonymous contributions work like a suggestion box in an organization. To make sure that communications are flowing, it's a good idea to allow people to speak their minds without fear of reprisal (or even accountability). It's a safety valve—a *forum*, so to speak, for frank discussion.

However, the ability to contribute anonymously can be abused. Negative energy probably has no place in a project forum, for example. You should allow project criticism to be expressed in a company or human resources forum, but you don't want inappropriate messages interfering with a working team.

Moderated anonymous postings represent a middle ground—something like letters to the editor. Moderators can screen counterproductive anonymous postings and still allow constructive criticism.

Note

If an anonymous posting shows up in a forum that doesn't allow them, you have such a communications problem that a Moderator has temporarily allowed anonymous postings. Start an open suggestion box forum quickly.

Establishing Categories

New forums have no categories by default. Creating categories is part of creating a forum. Categories form a hierarchical outline of the contents of the forum.

To create categories in your new forum, open the forum and choose the Compose, New Category command (Ctrl+W) to bring up the dialog box shown in Figure 9.8.

The design of this dialog box encourages you to create several categories at once. Enter a title for your new category, position it with respect to the other categories, and click the Create button.

There are four buttons—up, down, left, and right—that position the new category easily and precisely. However, these positional buttons only work *before* you click the Create button. Moving a category once it has been created is a more difficult task. You must copy the category to its new location and delete the original. Therefore position new categories carefully!

Category titles, like document titles, can be up to 79 characters long and can include any printing characters including spaces.

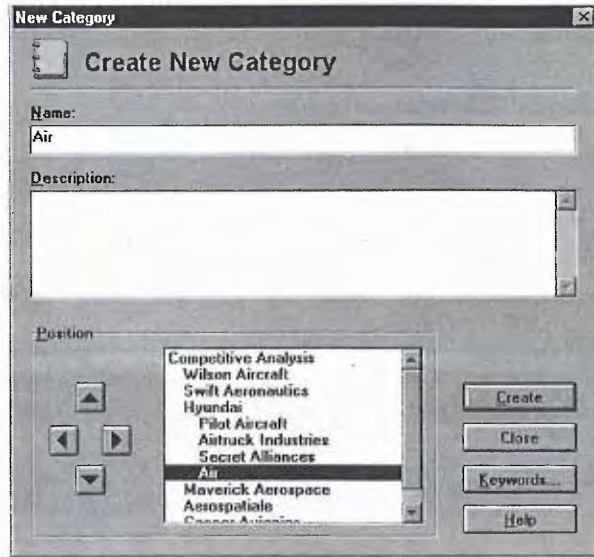


Fig. 9.8
Choose the Compose, New Category command to add a new category.

You can also give a new category a plain text description and keywords when you create it, but these are easily added or edited at any time.

Description of the Category

A category's description appears when the category is selected in the Category pane and no document is selected in the Thread pane, as shown in Figure 9.9. Like the forum description, the category description can be up to 511 characters long.

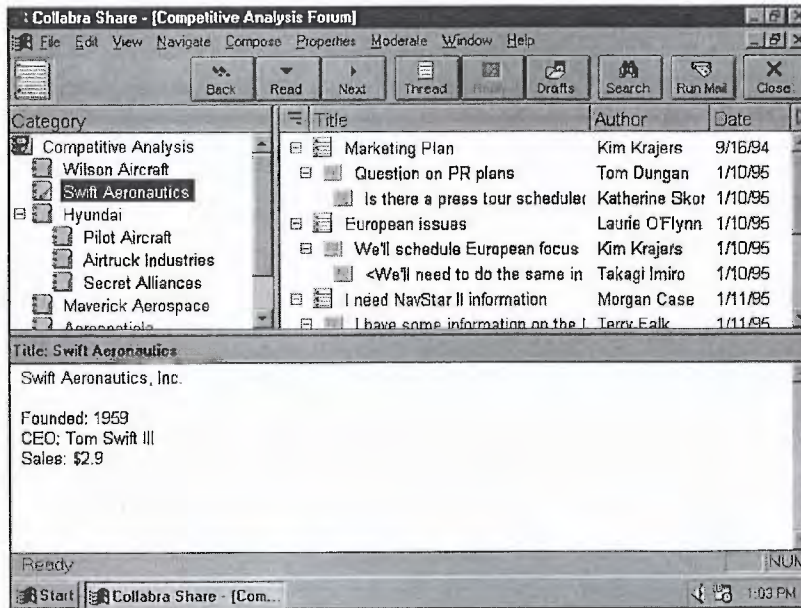


Fig. 9.9
The category description appears when no document is selected.

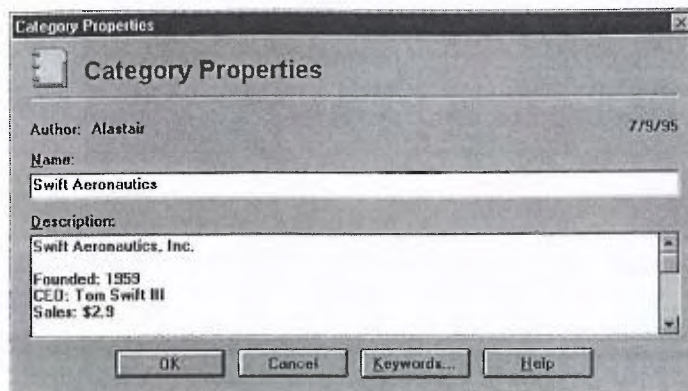
Working with Share

Use the category description to encourage Contributors to choose the best category for their document. In a forum with several Moderators, they might divide the categories between themselves and, in such a case, the description would explain which Moderator controlled a particular category.

To enter or change the description of a category after you've created it, select the category and choose the Properties, Category command (or right-click the category and choose Properties from the Context menu). The dialog box shown in Figure 9.10 appears.

Fig. 9.10

Use the Properties, Category command at any time to change a category's title or description.



Using Keywords

Category keywords are used by the Mail Agent extension to automatically categorize incoming electronic mail. This is described in more detail in Chapter 14, "Using the Mail Agent."

Keywords are a list of words associated with this category and separated by commas. The Mail Agent compares these words to the title and contents of incoming mail, and human Contributors can do the same thing. That is, as the creator of the category, you can use the keywords to communicate extra information to the users of your forum.

To enter keywords, click the Keywords button on either the Create New Forum dialog box or the Category Properties dialog box to bring up the Keywords dialog box shown in Figure 9.11.

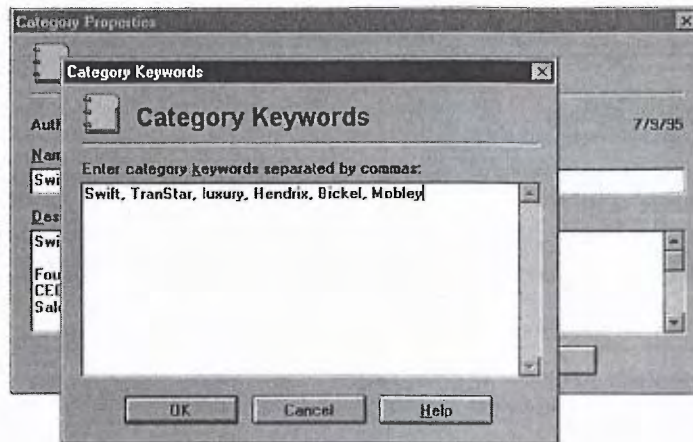


Fig. 9.11
Category keywords help the Mail Agent (and humans) automatically categorize incoming mail.

Reorganizing Categories

Rearranging categories after they have been created is troublesome, as I've already mentioned. You can only copy a category and then delete the original.

Using drag-and-drop to move a category to a new location creates a copy of the category along with its contents and any subcategories. If you drop the category on the forum (root category) at the top of the Category pane, the copy will be added to the end of the category list. If you drop one category on another, the copy becomes a subcategory of the target. If all you want to do is move a top-level category within the list of top-level categories, you'll find that you can't.

Sometimes the only way to position a category just where you want it is to create a new category and copy the old category's contents.

Reorganizing the forum is problematic as well. For example, say that you add several subcategories to a category that has attracted many documents and then move the threads in the original to the appropriate subcategory.

The problem with this sort of routine tidying is that other people may be actively contributing to the forum as you do this. If you're not careful, you can run into what is known as the *lost update* problem. For example, imagine that you copy a long thread to one of your new subcategories. A second later, someone else reads the original thread and posts a reply. Now you delete the original thread, and the new reply is deleted along with it.

The solution is to perform forum maintenance when you're fairly sure that no one is using the forum, such as nights or weekends. If you have the Administrator password, you can choose the File, Admin, Forums command to lock the forum as you make changes.

The Replication Agent compounds this particular problem. With the Replication Agent, you can be changing your site's replica of a forum while someone in another time zone is replying to the thread that you are about to delete.

You can minimize the chance of this problem occurring by creating a thread summary of any threads that you are about to delete, then exporting them to .RTF format. Perform the copy, but wait to do the delete until one or two Agent cycles have occurred. Just before you delete the thread, create a new summary, export it to .RTF and compare it to the summary you created originally to make sure there are no new documents. To create such a record, follow these steps:

1. Select any document in the thread you're preserving.
2. Choose Compose, Summarize Thread and answer No to the question "Would you like to include links to the original documents in your summary?"
3. Give the new summary a title and choose Compose, Post.
4. Select the new summary. It will be the last entry in the thread—a first-level reply.
5. Choose the File, Export File command. Give your .RTF file a name and click OK.

Because .RTF files are text, they can be directly compared.

Creating Common Forum Types

Each forum is as different as its creator and Contributors. You will undoubtedly invent new uses for forums that require different configurations and unusual policy combinations. There are, nonetheless, certain common types of forums, including discussion, repository, and data-feed.

The various forum policy options are summarized in Table 9.2.

Table 9.2 Forum Policy Options

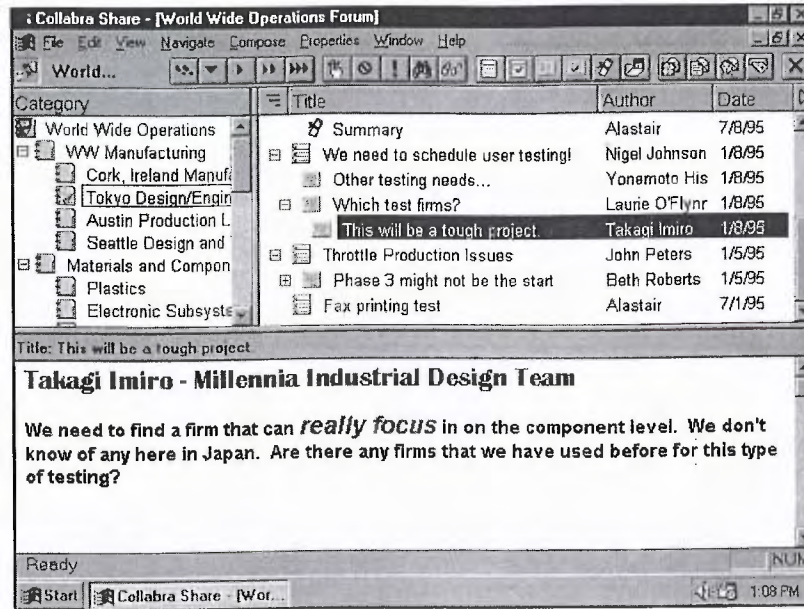
Policy	Setting	Explanation
Fulltext	On	Finds hidden data patterns, specific documents
	Off	Saves disk space, faster posting
Enrollment	Open	Less Moderator involvement
	Closed	Moderator must explicitly approve members
Aging/Limit	<i>n</i> Days	Deletes threads inactive for <i>n</i> days
	Forum Size	Deletes threads to restrict forum size
Security	Size & Days	Deletes threads and restricts size
	Doc Size	Rejects documents that are too large
Anonymous	Open	No special security
	Password	Requires a password for forum access
	Encrypt	Encrypts document contents against snooping
Members	No	Prohibits anonymous postings
	OK	Allows anonymous postings
	Moderated	Anonymous postings require a Moderator's approval
Members	Read-only	Forum is read but not modified by the group
	Contrib	Group reads and writes
	Moderated	Moderator approves all postings
	Moderators	Group moderates its own forum

Creating a Discussion Forum

A discussion forum records different opinions and chronicles the process by which consensus is achieved. This type of forum can reduce the need for meetings and accelerate the learning curve for people who are just joining the group.

The WorldWide Operations sample forum, shown in Figure 9.12, is the place where operational issues are discussed at the mythical Millennia Aerospace company.

Fig. 9.12
A project-
discussion forum.



Notice that there are many categories and subcategories and also many levels of replies. This is a characteristic of discussion forums: subtopics emerge during a discussion.

Typical Discussion Forums

Discussion forums can be organized around projects with categories for functional areas. Conversely, forums can be based on functional areas with categories for various projects.

Project-based forums tend to be more useful for two reasons: First, there is a useful synergy when people from different functional groups share the same forum for their discussion. Searching for a word in your area of expertise, you may be surprised to find a reference in another area altogether. Second, older projects are not as interesting as recent projects. Stale discussions about dead issues simply clutter the forum if it is organized by functional area.

You might have a current events forum in which people post stories from the news and solicit comments about how the enterprise is affected. Or a water cooler forum, in which postings can be about anything, generates responses that help the team discover common ground.

Note

At Collabra, there is a Beta Test Forum with a category for each company testing advance versions of Collabra Share. The categories are moderated by a designated beta advisor and include discussions of every problem or misunderstanding encountered.

Access and Membership Policies

Project forums usually have closed enrollment because not everyone in the company has a need to know the latest about every project. When you create such a forum, you naturally invite the entire project team as Contributors and make the project leaders Moderators.

It is usually not appropriate to allow anonymous postings in a discussion forum because everyone wants to know whose opinions they are reading.

On the other hand, discussion forums are not typically moderated. Such formalism would choke off the flow of information.

Other Policies

Depending on the sensitivity of the discussion, project forums are often protected with passwords and might be encrypted. The issues are trust and a sense of security. You want participants to feel free to express their opinions and know-how, confident that they will be read only by the members of the forum (just as one can gauge the participants at a meeting).

Discussion forums should almost always be full-text indexed. A large part of the value of such forums is the capturing of thoughts that can later be juxtaposed with one another by searching for appropriate words. For example, suppose that "acrylic" comes up in a discussion this week. Searching for "acrylic" might find a months-old posting in a different category that is relevant to the current discussion. Making that connection is called insight and genius when people do it on their own.

You might consider a limit on the size of an individual contribution to avoid huge documents or multimedia attachments. But an aging policy or forum size limit might delete an old document that might be seen to have relevance to a current problem.



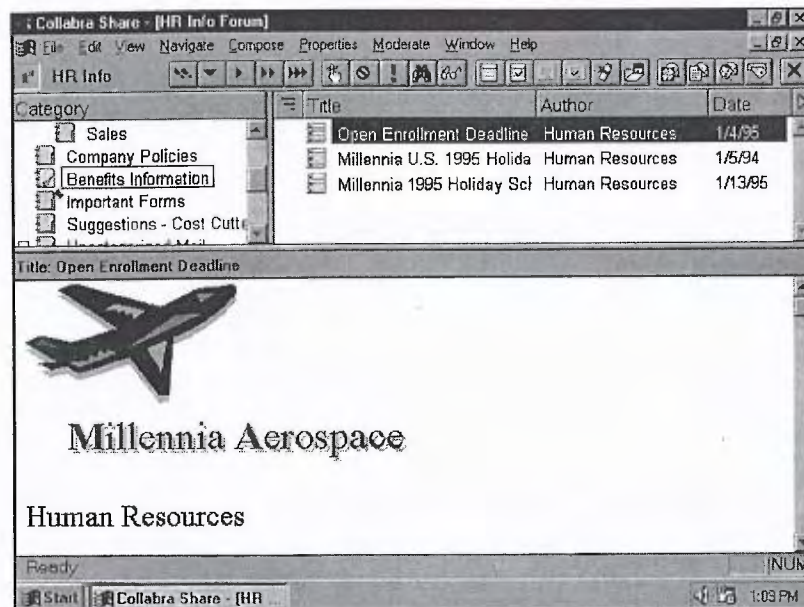
Creating a Repository Forum

A repository forum consists mostly of documents that are created and maintained to provide maximum utility to a large number of people. A central, electronic file cabinet not only makes the documents more easily available, a single repository eliminates redundancy and attendant error. Everyone is “on the same page,” as they say.

Repository forums require much more effort on the part of the Moderators in order to ensure that reading the forum and finding useful information is easier.

The HR Info forum, illustrated in Figure 9.13, represents a document repository. This is the place where Millennia Aerospace’s Human Resources department makes its standard documents, forms, and procedures available to employees.

Fig. 9.13
A document-
repository forum.



Notice that most documents don’t have replies, because most members have only Reader privileges. The documents are placed in the correct categories, so there is less need for tools like full-text indexing to discover hidden patterns.

Typical Repository Forums

An enterprise’s standards documents are likely candidates for a repository forum of their own. Help desk (with a separate document for each problem and its solution), Incident reports, or a log could also be stored in repository forums.

Some repository forums are by their nature read-only. Only certain parties are authorized to post standards documents, for example. Other kinds of repositories grow constantly, such as a log of events, based on input from the entire group. The difference between a repository and a discussion forum is that repositories typically do not encourage replies.

Consider publishing a company newsletter using a Share forum. You can use the Reply Privately command (or moderated contributions) to provide a letters to the editor feature.

Another typical repository is a competitive analysis forum with categories for each of your firm's competitors. Such a forum might be moderated by the Marketing department for use by the Sales department.

Access and Membership Policies

Repository forums can take three approaches to contributions: no contributions, moderated only, or contributions welcome.

Company-wide repository forums typically have open enrollment with only Reader member privileges. Those responsible for the content of the forum have Moderator privileges. Often, "users" are registered who represent roles such as "HR Dept." When authorized staffers need to make changes to such a forum, they log in using the name HR Dept (and the appropriate password). That is the name that appears in the author field as well.

Moderated contributions are appropriate for some repository forums. Reports might be contributed from the field and made available in the forum only after approval, such as a technical journal with high editorial standards, as opposed to a company newsletter. In a moderated forum, replies are like letters to the Moderator—only rarely approved, but always read by the Moderator.

The third alternative is a wide-open policy with only cultural constraints on posting. In such a forum, the Moderator would copy and delete postings to maintain order and would probably create categories for incoming submissions.

In any heavily moderated forum, allowing anonymous contributions is recommended so that everyone feels empowered to criticize. If you are moderating contributions, there's no reason to post anonymous criticism to the forum, but you should act on it. And in the read-only forum case, make sure there's a suggestion box forum close at hand.

Other Policies

Read-only forums that are carefully “published” by a Moderator may not require full-text indexing. The well-chosen category structure and document titles might be enough to help readers find the information they are looking for.

But in repository forums, which log incidents or track other somewhat random data, it can be very valuable to search for words and phrases to pull disparate documents into proximity and to understand underlying patterns.

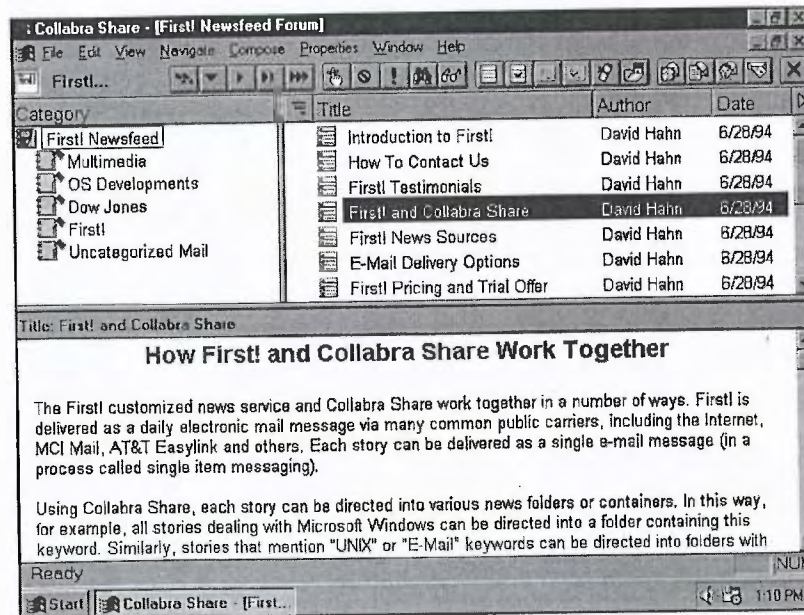
Heavily moderated forums need no aging or limit policy because the constant attention of the Moderator is better than any automatic policy. Repository forums are generally not encrypted or password-protected.

Creating a Data-Feed Forum

Collabra Share Agents make it possible to have forums in which most of the topics come from outside the enterprise. Stock market quotes, business news, Internet newsgroups, and other data sources can be automatically routed to a forum using agents.

The First! Newsfeed forum, shown in Figure 9.14, illustrates a forum fed by a business news wire offered by Individual, Inc. Stories sent by electronic mail are routed to this forum and automatically categorized by the Collabra Share Mail Agent (described in Chapter 14, “Using the Mail Agent”).

Fig. 9.14
A data-feed forum.



Data-feed forums inform the group like a daily newspaper and have the advantage of capturing any debate that the information might spark.

Typical Data-Feed Forums

The two most typical data-feed forums are an electronic mail news service and selected Internet newsgroups.

Collabra Share includes a sample forum based on news articles. Several service bureaus are offering just this sort of personal newspaper in which a custom interest profile is used to route relevant articles by electronic mail. The news sources that these firms scan might be news wires, business news, sports, entertainment, or some industry-specific sources. Services exist that scan press releases issued by software firms, for example.

The Collabra Internet Newsgroup Agent, discussed in Chapter 16, "Linking with Internet Newsgroups," populates a forum based on traffic in selected newsgroups such as comp.groupware or rec.arts.disney.

Access and Membership Policies

Data-feed forums can be read-only, but their value increases if the group is encouraged to comment on what they've read. Therefore data-feed forums typically have open enrollment with a default member privilege of Contributor.

Since contributions in a data-feed forum are predominantly automatic postings from a Collabra agent, data-feed forums require the least Moderator involvement of the three kinds of forums that I have discussed. The Moderator sets up category keywords and an aging policy (described next) and stands back.

If the incoming data or the subsequent discussions might involve sensitive information, you might want to close enrollment or institute a forum password, but that's usually not required. If a public data-feed forum inspires an insight that should only be shared with a certain group, contribute the insight to a closed forum and include a QuickLink back to the data-feed forum.

In any case, anonymous postings should be allowed on data-feed forums. The whole point of bringing in data from outside the enterprise is to inspire creativity and incite action within the group. Anonymous postings, often containing ideas that are too incendiary or outrageous for their authors to claim credit for, have the same effect.

Other Policies

Data-feed forums would not be possible without Share's automatic aging and size limits. Internet newsgroups, in particular, have been described as a "fire hose" of data. The Internet Newsgroup Agent displays a warning message if the target forum has no aging policy.

Share has two mechanisms for automatically deleting old threads. First, you can specify that threads older than n days should be routinely deleted. Second, you can specify that the forum should grow no larger than m megabytes. When a contribution is posted that pushes the overall forum size over the limit, the oldest threads are deleted.

I recommend the policy of aging threads older than a certain number of days, particularly for data-feed forums. Limiting by forum size can mean that useful information is discarded simply because a large document is contributed. Because documents are aged whole threads at a time, a recent reply will keep an old topic alive just as you would want. Only the topics that no one has commented on for n days are discarded.

Rather than limiting the forum size, you can limit the size of individual contributions and reject those that are larger than x bytes. If you average a certain number of postings per day based on your agent's schedule and you age documents after a certain number of days, then limiting the size of each contribution is an effective way of limiting the overall forum size.

And it almost goes without saying that data-feed forums should be full-text indexed so that buried references to important concepts can be found easily.

From Here...

You have learned how to read and contribute documents to forums and, in this chapter, I have discussed how to create forums as well. You now know everything about using the Collabra Share application except how to be a forum Moderator, which is the subject of the next chapter.

For further information about some of the topics discussed in this chapter, see:

- Adding documents to your new forum is the subject of Chapter 8, "Contributing to Forums."
- Forum policies, such as aging and open enrollment, are discussed further in Chapter 10, "Moderating Forums."

- Data-feed forums are described in general in Chapter 11, "Extending Your Reach," and specifically in Chapter 14, "Using the Mail Agent," and Chapter 16, "Linking with Internet Newsgroups."
- Granting forum creation privileges is described in Chapter 19, "Managing the Registry."
- Locking the forum to reorganize categories is explained in Chapter 20, "Using Administration Tools."



Chapter 10

Moderating Forums

10

You've learned how to extract information from forums efficiently. You've learned how to contribute information yourself. You have even learned how to create forums for your group. The only aspect of Collabra Share left to discuss is the day-to-day management of the forums for which you are responsible. The rest of this book deals with Collabra Extensions and system-wide administration.

Forums enable group communication, they don't organize or manage it. Entropy is at work. The quality of the information in a forum is usually determined by how much effort is expended to make it useful. To some extent, the authors of a forum share responsibility for the quality of the content. But, by and large, a forum's Moderators own the problem of making a forum make sense.

This chapter explores the role of the Moderator in a forum and covers the following aspects:

- Description of the Moderator
- Arranging categories and documents
- Managing contributed documents
- Controlling membership in forums
- Changing forum policies

Understanding the Moderator's Role

A forum Reader has little responsibility to the group; Readers can't affect what others see. Contributors, on the other hand, create the information that



is the forum's reason for existence. However, the Contributors' responsibilities begin and end with the documents that they create. A system Administrator, responsible for enterprise-wide forum replication and connectivity to outside data sources, often has no effect on a forum's content.

This leaves the Moderator, who must fill in the gap and take responsibility for the forum's content as a whole. In repository forums (read-only knowledge bases), the Moderator is a publisher. In discussion databases, the Moderator is a facilitator, keeping things organized and maximizing the utility of the process.

The creator of a forum is naturally its first Moderator. Every forum should have at least two Moderators, if only to increase the likelihood that someone will be on duty at all times.

A forum's Moderators are logically its champions. They speak for the forum and they promote its use. Moderators need not be particularly technical; they are often simply the heaviest users of a particular forum. Collabra Share's approach is unusual in that Moderators bridge the gap between the IS department administrators and the end users. Moderators are hands-on, and yet they off-load, or distribute, some responsibility for the management of the system.

The Moderator's role, then, is to encourage participation, optimize the forum content by keeping it organized, and manage forum membership. A forum can have as many Moderators as you like in order to share the burden.

Organizing Information with Threads and Categories

The Moderator is responsible for organizing the information in a forum. This can include moving documents to more appropriate categories, arranging the hierarchy of categories, ending threads of discussion, linking related documents, and inventing new categories.

Your goal as Moderator is to provide a logical set of file folders such that clerks with new information know where it belongs and busy executives can find it later. This is an outdated metaphor: you don't often find clerks or rigid class distinctions in business anymore. But forums do have logical file folders called *categories*.

Creating Categories

Adding new categories was described in Chapter 9, "Creating Forums," but I'll review the subject here briefly.

Only Moderators can create and delete categories. To create a new category, choose the Compose, New Category command (Ctrl+W) to bring up the dialog box shown in Figure 10.1.

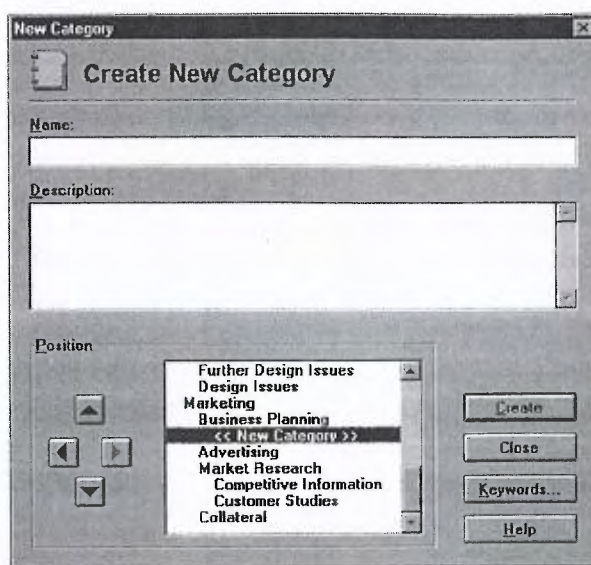


Fig. 10.1

Use the Compose, New Category command to add categories to your forum.

Notice that you can position the new category anywhere in the existing hierarchy of categories *before* you create it. Place it carefully: once you press the Create button, your category becomes very difficult to move.

Creating a Subcategory

Typically, you create subcategories, after the fact, to organize overstuffed main categories. When you notice that postings in a particular category warrant their own subcategory, you take the following action:

1. Create the new category so that it is indented under the category you're trying to organize.
2. Copy the appropriate documents into the new category in chronological order (oldest first). If you select all the documents and drag-and-drop them, they'll be copied in the correct order.
3. Delete the old documents in the original category.

Be careful, as you learned in Chapter 9, "Creating Forums," that there are no new replies deleted in Step 3 that weren't copied in Step 2.

Combining Categories

On the other hand, you might decide that several categories can be combined. The process is almost the same as that for creating a subcategory:

1. Create the new category.
2. Copy the contents of the old categories to the new categories in an appropriate order.
3. Delete the old categories.

Before performing Step 3, you must ensure that nothing new has been added to the original categories.

Moving and Deleting

If someone posts a topic document in the wrong category, you may want to move it. Remember that you're really copying and deleting, not moving. The copy will appear as a new document, even to its author, and you run the risk of someone replying in the old location during the process. If you're not careful, you could delete the latest information on the subject.

As Moderator, you have the authority to remove any document or category from the forum. In practice, the automatic removal of old documents by the system accounts for most deletions.

If a document is just not appropriate, you can delete it. You may want to archive it first (choosing the File, Export File command), and notify its author by electronic mail (choosing Compose, Reply Privately).

Ending Discussion Threads

As the facilitator might in a meeting, a forum Moderator can end a particular discussion and suggest that the group move on.

One of the best ways to accomplish this is to create a reply to the original topic that summarizes the debate succinctly. You should emphasize the issues that were decided and the next steps to be taken, but you want to make sure that everyone's opinion is presented in some fashion.

The Compose, Summarize Thread command prepares just such a document for you. All you need to do is add your comments to the top of the new document that contains resolved items, open issues, and next steps. Figure 10.2

illustrates a typical summary document. In this example, Nigel created a topic and Yonemoto and Laurie replied. Laurie answered Nigel's question with another question, which caused Takagi to worry about the project's difficulty. The summary packages this discussion concisely.

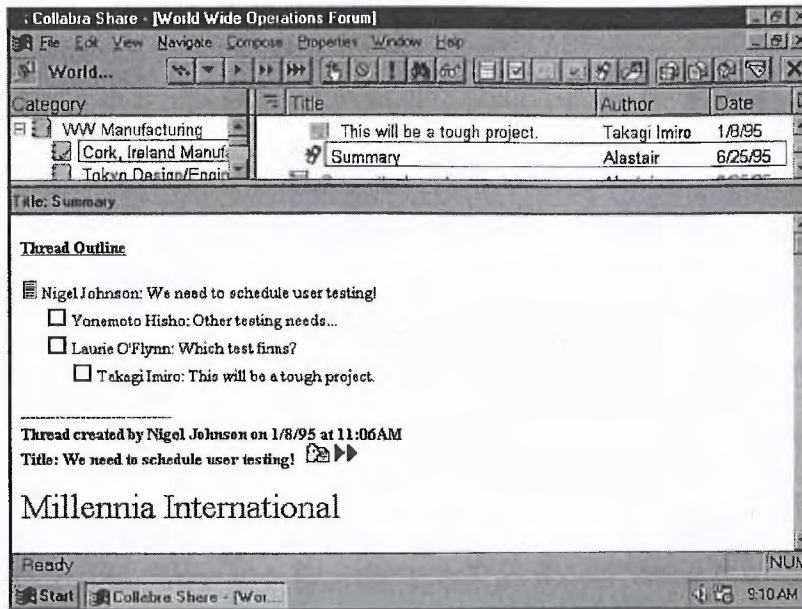


Fig. 10.2
Use the Compose, Summarize Thread command to create a summary document.

As Moderator, you can also set up discussions with an end in sight. For example, you might post a topic document asking for everyone's opinion on a particular subject and specifying a deadline for contributions. Depending on the situation, you might summarize the replies in a new document and delete the old thread completely.

Using QuickLinks

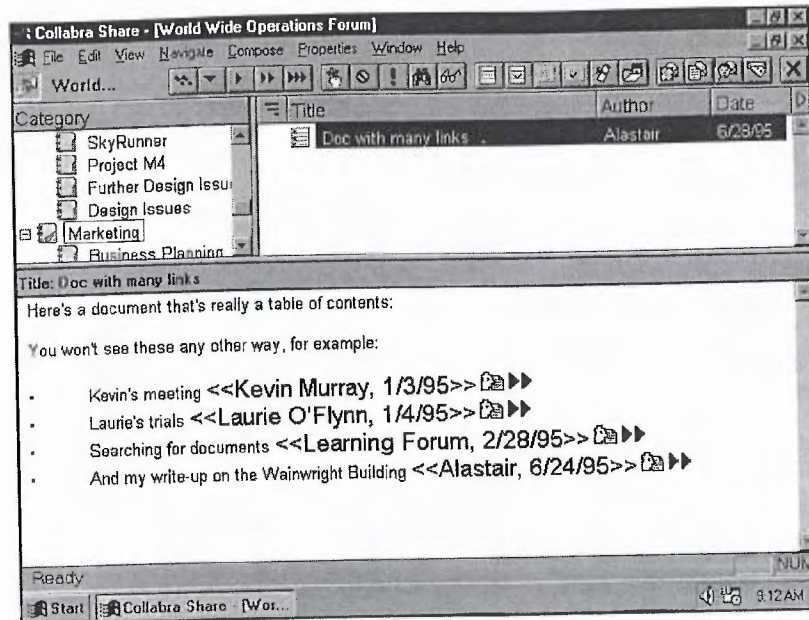
Contributors use QuickLinks to refer to a previous posting or two. But Moderators can create documents, like the one shown in Figure 10.3, that consist of an array of links and act like a table of contents. This example, with the title, "Doc with many links," is a service to the users of this forum, directing them to other documents, some of which are not even in this forum.

Robert Pirsig, in *Zen and the Art of Motorcycle Maintenance*, writes that there are many ways to classify the parts of a motorcycle: you can separate the metal parts from the rubber and plastic ones, or you can consider the drive train apart from the frame, the wheels, and the seat, and so on. "There are many ways to wield the knife," he says, "as you cut a subject into components." Your categories represent your best breakdown of the subject of your forum,

but there will naturally be alternative ways of looking at the information. You can use QuickLinks to create alternative categories.

Fig. 10.3

Use QuickLinks to create alternative tables of contents.



Particularly in repository forums—where such effort is justified by their write-once, read-many nature—you can even create a hierarchy of link documents such that a top-level document presents links to documents containing links to documents containing links. Finally, a link takes readers to a real document, and they can use the Navigate, Backtrack command to return to the tree of link documents.

Managing Forum Contributions

Now that I've discussed the ways in which you, as Moderator, can organize the documents in a forum, let's talk about proactive measures. You have several techniques at your disposal for encouraging your group to contribute the kind of documents that you want.

Communicating Forum Policy

Some forums are more informal than others. As the Moderator, you need to be crystal clear to potential Contributors as to what you expect from them. In some forums, it might be okay to reply to the product specification document by asking if anyone on the team has extra tickets to Sunday's big game. In other forums, a Moderator might delete such a reply as if it were a weed in a bed of roses.

Forum etiquette should be expressed as well—especially if violating the rules can result in a user’s expulsion from the forum’s membership list. Passionate, sometimes personal, attacks called *flames* are appropriate in some venues. (Just as in some offices, everyone yells, while in others, everyone calls each other Mr. and Ms. in very quiet tones.)

The Moderator’s main message to Contributors is likely to be an explanation of the forum’s *gestalt*, defined as a structure, configuration, or pattern, which constitutes a functional unit with properties not derivable by the summation of its parts. Ideally, your stated intentions for how this forum will be used and your category structure will leave no doubt in the minds of the team what, how, and in which category to contribute information. You, as Moderator, are responsible for clearly communicating how the team should use the forum.

Your first point of contact with new users of your forum is the Forum Announcement text, which is displayed by the Get Forum command. When your user opens the forum for the first time, the Forum Description is visible. This is where you should impart an understanding of the category structure and intention of the forum.

There are two ways that you can make it easy for a Contributor to find the right category: make the category names unequivocal and provide a description for each category, as shown in Figure 10.4.

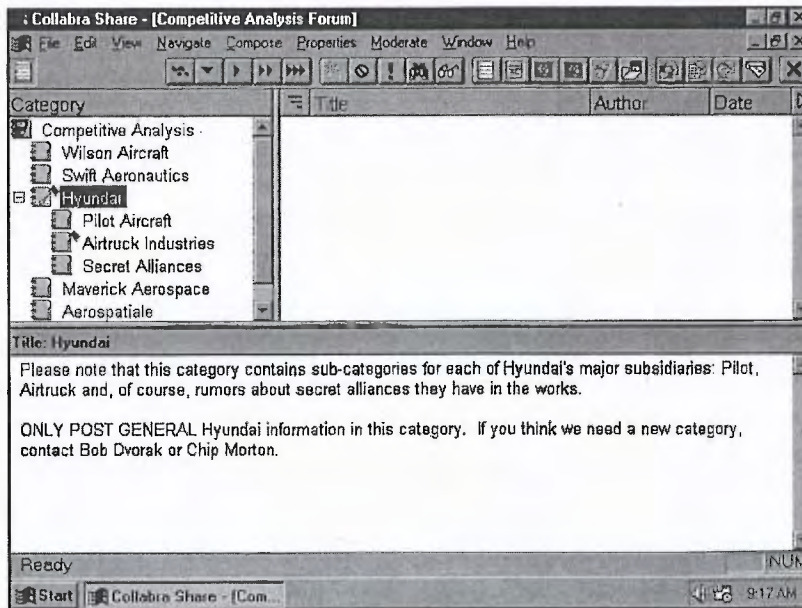


Fig. 10.4 Provide a description for each category as an aid to Contributors.

As the forum grows, the documents you nurture and those that you move or delete will tend to express your ideas about the organization of the forum as well.

Creating Public Templates

If a forum has only certain kinds of possible contributions, using a consistent format can encourage completeness from your authors and a coordinated look to the forum.

Public templates are a great way to suggest order. If, for example, every thread's topic document uses the same form, it becomes easier to compare two postings directly.

Composing a Template

To create a new public template, simply open a Composition window by choosing the Compose, Start New Thread command (Ctrl+N). Enter the template name in the Title field. You can base your template on an existing template (public or personal) using the Compose, Start Thread with Template command.

Create your template by specifying fonts and styles, inserting a company logo, and entering routine text. A template can include anything that a forum document can. You might include prompts like a form, such as

Name:

Telephone:

You might provide boilerplate text and let your users enter an "X" next to the paragraphs that apply.

When the template looks right, choose the File, Save As Template command. You'll see the dialog box shown in Figure 10.5 asking whether the new template is a personal or public template. You might want to save it as personal while you're testing, but it must be public for other members of the forum to use it or even know that it exists.

When the template has been saved, you are returned to the Composition window in case you also want to save the document normally. If you don't, dismiss the window by pressing the Esc key. A dialog box appears asking if you want to save the document as a draft; reply No because you have already saved it as a template.



Fig. 10.5
Make sure your template is public so that others can use it.

Using a Template

Forum Contributors use your templates by choosing one by name from the dialog box that appears when they choose the Compose, Start Thread with Template command (Ctrl+Shift+N). Instead of a blank Composition window, they'll see your template as they start editing.

Templates are almost always used for topic documents and not for replies, but you're not limited to topics. To create a reply using a template, choose the Compose, Reply with Options command, and check the Reply with Template box at the bottom of the dialog box that appears. When you click OK, the list of templates appears. For more information about templates, refer to Chapter 8, "Contributing to Forums."

Deleting a Template

If you need to remove a public template, choose the File, Delete Template command to bring up the dialog box shown in Figure 10.6.



Fig. 10.6
Use the File, Delete Template command to clean up old templates.

Working with Share

There is no way to modify or rename a template other than by deleting it and saving a new one in its place. Remember that templates are saved with forums. You can't, for example, copy a template from one forum to another. You can, however, post the template as a document, copy it to another forum, and save the document as a template in that forum.

Moderating Contributions

The way to ensure that all postings in your forum are thoughtful, concise, accurate, and properly categorized is to approve each document yourself. It takes much more of your time as Moderator—and you become a bottleneck—but it produces the most orderly forums.

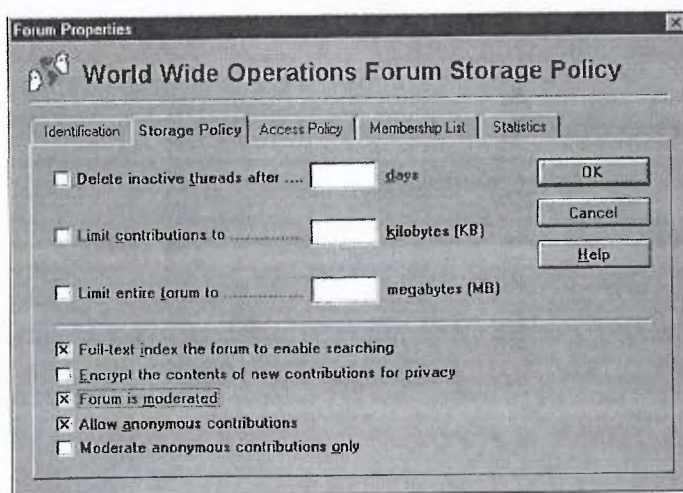
When a forum is moderated, all contributions are held until a Moderator approves or rejects them. If you don't agree with the author's placement of the new contribution, you can copy and delete it after you approve it. If you reject a document, you can explain to the would-be Contributor what you would find acceptable. It really is as if you were the publisher of an exclusive journal.

You can also choose to moderate only anonymous contributions. This is a very different situation. Anonymous contributions are more rare, and you can't explain your rejection, so you end up either approving the posting or occasionally posting yourself and paraphrasing the original.

Choosing Moderation

To make a forum a moderated forum, you choose the Properties, Forum command, select the Storage Policy tab, as shown in Figure 10.7, and check the Forum is Moderated box. Unchecking the box turns the feature off.

Fig. 10.7
Choose to moderate contributions on the forum's Storage Policy page.



To moderate only anonymous contributions, you must first check the Allow Anonymous Contributions box, then the Moderate Anonymous Contributions Only box. If you choose not to moderate them, it is a separate decision whether to disallow anonymous contributions entirely.

Managing Contributions

When you open a moderated forum, you'll receive a notification if there are any contributions pending your approval. You can choose to view the pending documents now, or you can view them later. To see the pending contributions, choose the Moderate, Pending Documents command.

To view documents that have been rejected by a Moderator (perhaps not by you), choose the Moderate, Returned Documents command. When you are viewing returned documents, you can see the Moderator's comments by selecting a document and choosing the Moderate, View Return Notice command.

You can't approve a rejected contribution, but you can delete it along with any comments from the Moderator. This is fairly antisocial behavior because the document disappears without a trace as far as the Contributor is concerned. You're the Moderator; you know what's best.

Accepting or Rejecting a Contribution

When you are viewing pending contributions, as shown in Figure 10.8, you have four options with respect to each document: you can take no action and leave the document pending, approve it, reject it, or even delete it.

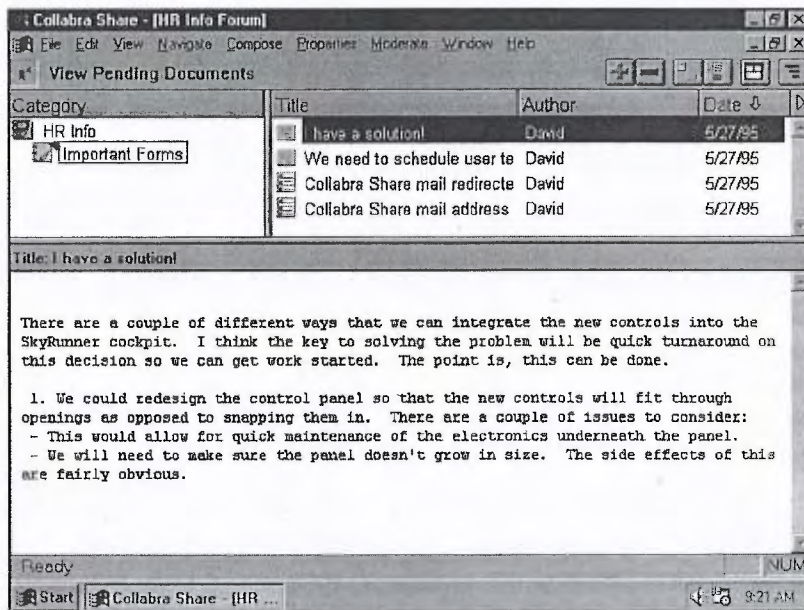


Fig. 10.8
View pending documents and decide their fates.

Working with Share



To approve or reject documents, select them and choose Moderate, Post or Moderate, or Return to Author. Deleting pending documents rather than rejecting them is, as I just said, antisocial, but it's your prerogative as Moderator.

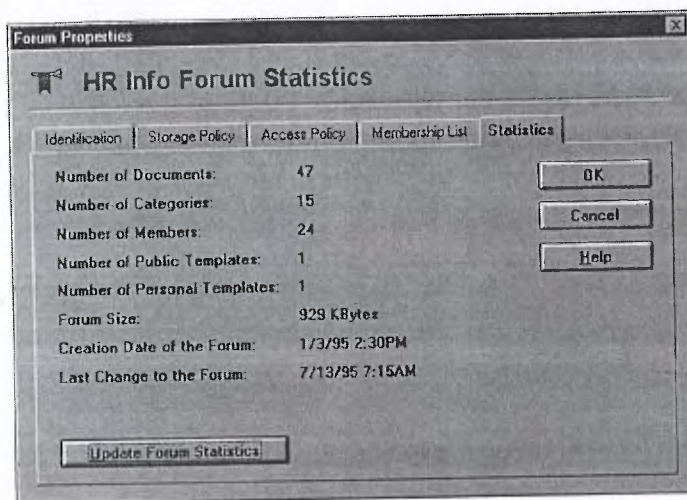
Gathering Forum Statistics

You can watch your forum grow by periodically gathering statistics, such as the number of documents and members that the forum has attracted. Statistics, such as the number of documents posted per week, can be useful for persuading others of a forum's effectiveness.

You might chart the posting volume and determine that storage limits will soon be necessary. The number of categories might be an indicator that a forum needs to be split into two. As Moderator, you'll find plenty of uses for forum statistics.

To gather these numbers, choose the Properties, Forum command and select the Statistics tab. Click the Uppdate Forum Statistics button to calculate the values and fill in the form, as shown in Figure 10.9.

Fig. 10.9
Track forum statistics to understand how your forum is being used.



The forum size shown is somewhat approximate. For example, a forum reported to require 994K actually used 1067K (about 7% more) according to the Windows Explorer. Neither of these numbers takes cluster size into account. As explained in the *Share Administrator's Guide*, because forums use many individual files, a server's minimum disk space per file can be significant.

Controlling Forum Membership

As Moderator, you control the forum's membership. You have alternatives ranging from tight, central control over the members in your forum to a more open, management-by-exception approach.

In this section, I'll cover all aspects of managing the list of people authorized to access your forum. Your primary tool for viewing and acting upon the membership list of the forum is the Membership List tab of the sheet displayed by choosing the Properties, Forum command (see Fig. 10.10).

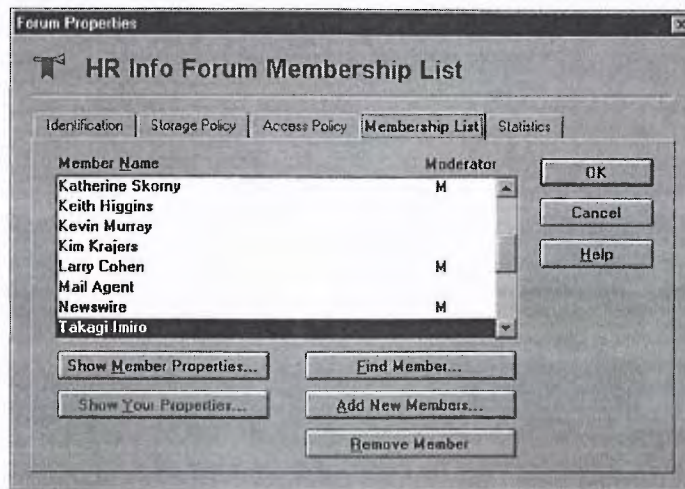


Fig. 10.10
You moderate the forum's membership list.

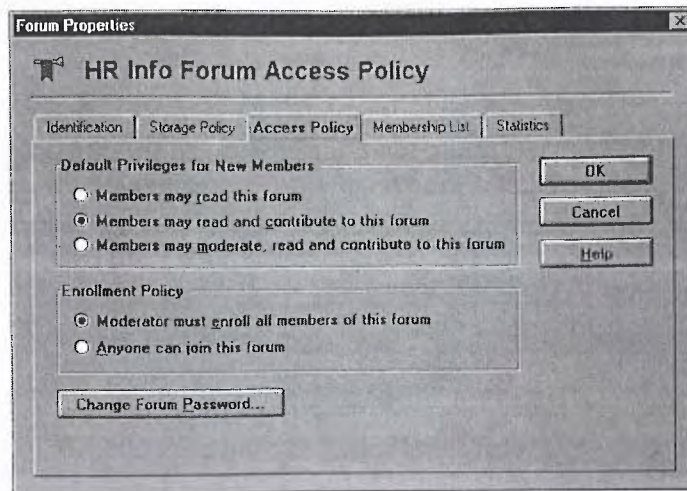
Setting Enrollment Policy

By default, forums have a closed enrollment policy, which means that a Moderator must approve all members. There are two ways to add members to a forum. First, a Moderator can choose names from the list of registered users and *invite* them. If a user hasn't been invited, he must request membership and wait for a Moderator's approval, which is the second way members are added to a forum. Both mechanisms are discussed later in this section.

Open enrollment forums, on the other hand, accept anyone as a member as soon as they open the forum for the first time. Open enrollment has an advantage: it takes less Moderator time, but you still have control of the forum's membership list. For example, you can delete members who you wouldn't have invited. However, in an open enrollment forum, they can simply rejoin. One solution is an open enrollment policy with a forum password. Then if you want to throw a member out, simply delete that member and change the password.

To set a forum's enrollment policy, select the Access Policy tab of the Forum Properties sheet, as shown in Figure 10.11.

Fig. 10.11
A forum's access policy determines how new members are added.



To specify closed enrollment, choose the Moderator Must Enroll All Members of This Forum radio button. To choose open enrollment, select the Anyone Can Join This Forum radio button instead.

Choosing Member Privilege Level

Members of a forum enjoy one of three privilege levels:

- Reader
- Contributor
- Moderator

This is one of Share's "keep it simple" features; the access privileges of most network products require advanced degrees to understand. Readers can only read a forum's documents. Contributors can read and post, and they can modify and delete their own documents, but no one else's. Moderators are the only members allowed to create categories and delete any document, category, or member.

In closed enrollment forums, you specify the member's privilege level explicitly when you approve their membership requests. In an open enrollment forum or when a member is invited, new members receive the default privilege level you established in the Forum Properties sheet (refer to Fig. 10.11).

You can view or change any member's privilege level at any time by selecting the member in the Membership List (refer to Fig. 10.10) and clicking the **Show Member Properties** button. The dialog box shown in Figure 10.12 appears, and you can specify a different privilege level and click OK.

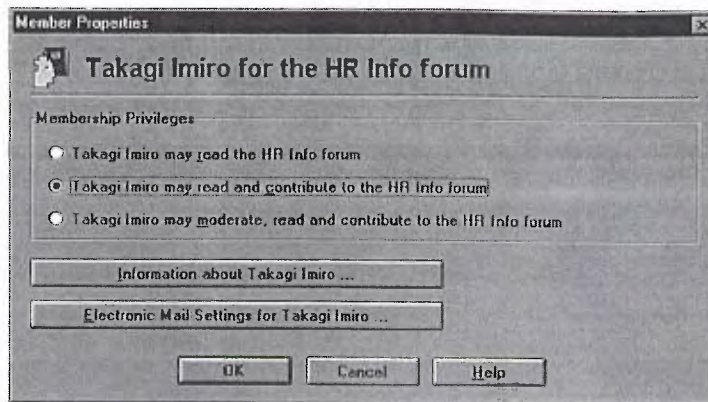


Fig. 10.12
You can change any member's privilege level (except your own).

Changes to a member's privilege level don't take effect until the member next opens the forum.

Share makes a distinction between *users* and *members*. Users are the people in your enterprise. Members are those users that have access to a particular forum. All members are users, but not all users are members. Users have no inherent privileges. A user can be a member of several forums and have different privileges in each forum.

Allowing Anonymous Contributions

You decide whether you'll allow anonymous contributions in your forum. As I said in Chapter 9, "Creating Forums," it is good to allow people to post anonymously somewhere as an indicator that communication isn't being stifled. However, it is not appropriate in more formal repository forums, and it may not be helpful in a dynamic project forum either.

Consider creating a Suggestion Box forum just for employee feedback. You'd certainly want to allow anonymous contributions there.

To enable anonymous contributions, choose the Storage Policy tab of the Forum Properties sheet (refer to Fig. 10.7), and check the Allow **A**nonymous Contributions box.

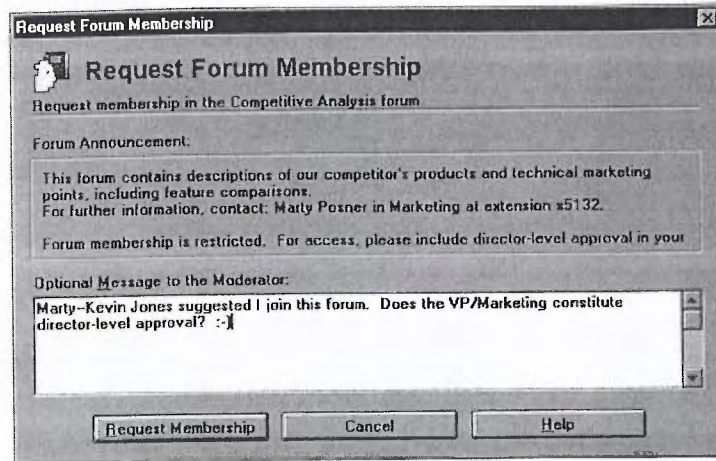
Managing Membership Requests

If you choose a closed enrollment policy for your forum, you'll see any pending membership requests each time you open the forum.

From users' perspectives, they hear of your forum and read its Announcement in the Get Forum dialog box, and they decide to add it to their Libraries. It appears with a yellow question mark. When they try to open the forum, the dialog box shown in Figure 10.13 appears.

Fig. 10.13

Users must request membership in closed enrollment forums.



If the forum's Announcement was explicit in explaining why the forum is closed and what the requirements of membership are, then the users can explain their qualifications in some detail in the box provided. Savvy users will request (and justify) a particular privilege level, knowing that the Moderator will specify their privilege explicitly.

When you next open the forum, the Forum Membership Request dialog box appears informing you of pending membership requests. Unlike pending contributions, there is no command to view membership requests. You can dismiss this dialog box by clicking the **C**lose button, but you won't see it again until the next time you open this forum.

Granting or Denying Membership

Click on a name to view that user's membership request message in the lower box, as shown in Figure 10.14. You can click the **S**how User Properties button to display information such as job title and telephone number.

Once you select one or more users, you can reject their requests by clicking the **D**eny Membership Request button. If you decide to give the users access

to your forum, choose a privilege level first and then click the Grant Membership Request button.

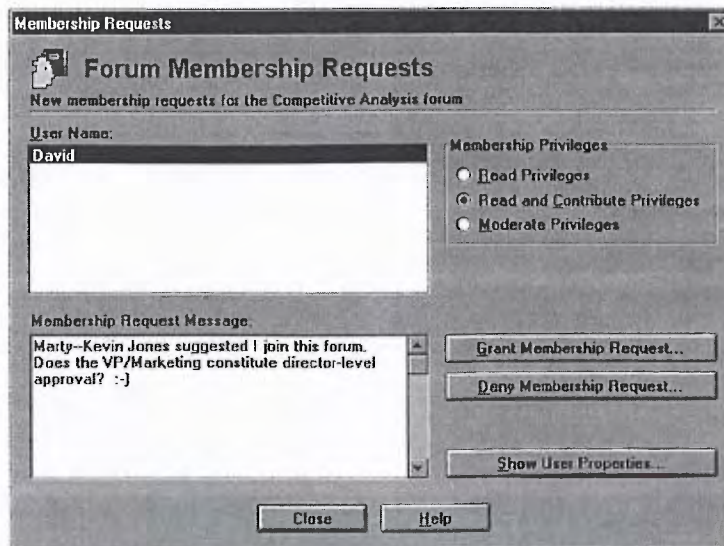


Fig. 10.14
Viewing a particular membership request.

When you deny or grant requests, you are encouraged to add a note of explanation. In the case of a rejection, you might explain why and under what circumstances you might change your mind. When you grant a request, you have an opportunity to make it conditional: "You can come in, but I want to see two really good postings a week." If the forum has a password, you can use your note as a means of sharing it with your new members.

Inviting Members

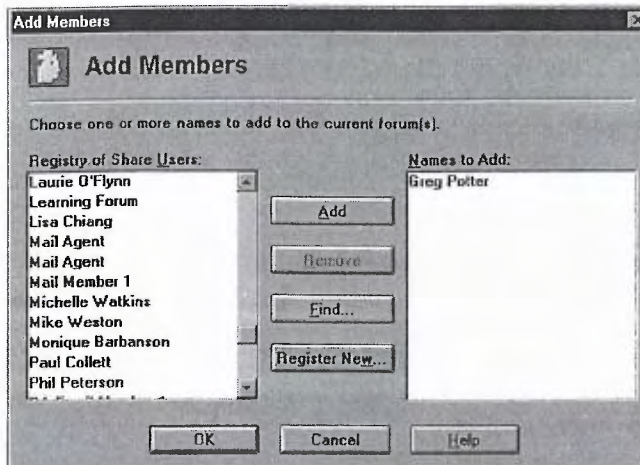
When you select and add an unsuspecting user to your forum's membership list, you have invited that user. You can invite users whether a forum has closed or open enrollment.

To invite a user, choose the Membership List tab of the sheet displayed by the Properties, Forum command (Alt+Enter). Make sure the user isn't already a member (using the Find Member button, if necessary) and click the Add Member button to display the dialog box shown in Figure 10.15.

Members are added to your forum with the privileges specified on the Access Policy tab of the Forum Properties sheet. In a closed enrollment forum, these default privileges only affect those whom you invite. With open enrollment, however, the default privileges are assigned to every user who opens the forum.

Fig. 10.15

Use the **Add Member** button on the **Membership List** tab of the **Forum Properties** sheet to invite users to your forum.



Imagine that you have an open enrollment forum with Contributor privileges by default. You want a particular user who has not yet opened this forum to be your co-Moderator. When you invite this user, she will have Contributor privileges as if she had opened the forum like anyone else. You could change the default before you invited her, but that would allow others to join as Moderators. The correct solution is to invite her as a Contributor and then change her privileges to Moderator.

For another concrete example, say that there was one user in your department whom you did not trust with Contributor privileges. Because of the way forum membership works, if you invite that user and change his privileges to Reader, it won't matter that anyone can join with Contributor privileges. Once a member has joined, there is no going out and coming in again unless you, as Moderator, remove his Reader membership.

Removing Members

You have the ability to revoke any user's membership at any time that the user is not logged on to the forum. (You can't revoke your own membership or that of the forum's creator, however.)

In an open enrollment forum, reducing a member's privilege to Reader or changing the forum password is more effective than removing the member because the same user will become a member again just by opening the forum.

In a closed enrollment forum, however, deleting a member requires the user to make a new request for membership to rejoin the forum. Make sure your co-Moderators understand why you removed this individual.

To remove a member, choose the Membership List tab of the Forum Properties sheet, as shown in Figure 10.16. Select the member and click the Remove Member button.

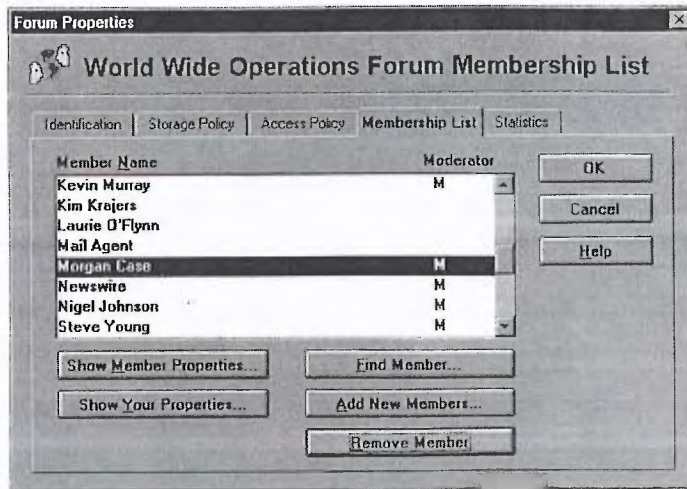


Fig. 10.16
Remove members from a forum if you must.

Because Share uses electronic mail for authentication, if a user—a terminated employee, for example—is deleted from the mail directory, the user is effectively out of Share as well. (If the user had a password, the user's name and password could be used with the /nomail option, but this is remote.) There is usually no hurry to remove such members from every forum or to withdraw the user's registration. For information on unregistering users, see Chapter 19, "Managing the Registry."

Changing Forum Policies

You can modify various forum policies including forum properties, such as name, icon and password, aging policy, limits, encryption, and full-text indexing. These policies were established when the forum was created, but only forum placement can't be changed.

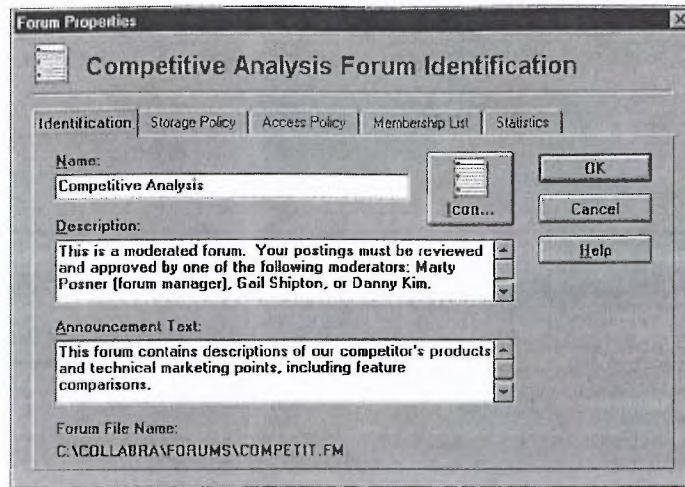
Identity

You can change a forum's name, announcement text, and the icon associated with it. This will change how the forum appears in everyone's Library the next time he or she runs Share.

If you want to send an urgent message to all your members, you can change the forum title temporarily. "DON'T USE" is an eye-catching title, for example.

To change your forum's appearance to others, select the Identification tab of the Forum Properties sheet, as shown in Figure 10.17.

Fig. 10.17
You can change the properties that identify your forum.



Password

You can give a forum a password at any time. By default, forums are created without password protection. As I've said whenever passwords have come up, you should choose a password that is longer than six characters, is not a dictionary word or someone's name and that includes punctuation characters or numbers. Passwords can be up to 19 characters long and are not case-sensitive.

To change the forum password (or give it a password for the first time), choose the Access Policy tab of the Forum Properties sheet, and click the Change Forum Password button to bring up the Change Password dialog box.

You must enter the current password once and the new password twice. The second time is just to confirm that your fingers didn't slip the first time.

Share's password dialog box is similar to that found in many other products, but they are all confusing. For example, if you type the old password and press Enter instead of Tab, you have just turned off password protection. If you reopen the forum, return to this dialog box, and type the old password again, you'll be told that it's wrong (because the forum now has no password). Meanwhile, others might be opening the forum without having to specify a password.

Difficulties notwithstanding, if you choose to password-protect your forum, you should change the password periodically and notify your members by mail or telephone.

Aging Policy

Unless you want your forum to grow and gather documents infinitely, you'll need some sort of policy for deleting old documents. Share's *policy-based administration* handles a lot of the drudgery of moderating a forum. Share will automatically delete old threads using the policy that you specify.

There are two kinds of aging policy. You can have Share automatically delete threads that are older than a certain number of days, or you can have it delete the oldest threads when a new contribution extends a forum beyond a particular size limit. The age of a thread is determined by the most recent posting to it. That is, replying to an ancient thread makes it new again.

To specify an aging policy, choose the Storage Policy tab of the Forum Properties sheet shown in Figure 10.18.

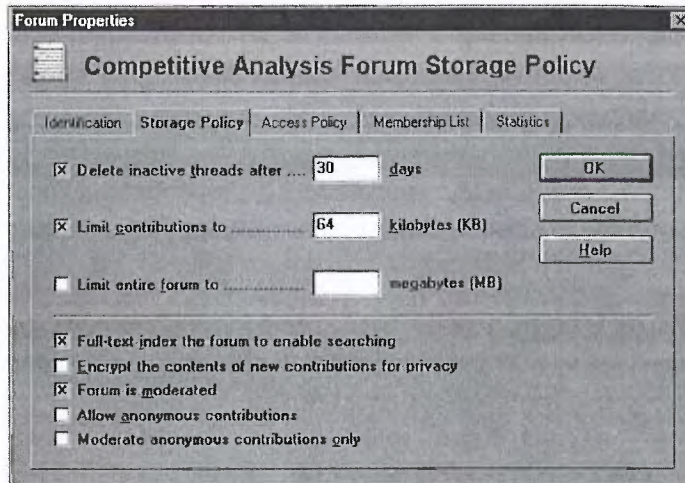


Fig. 10.18
Specify aging by number of days or overall forum size.

Note that if you specify 30-day aging and no one opens the forum on the 30th day, your document will still be around on the 31st until someone opens the forum. If many documents are slated for deletion on a particular day, everyone opening the forum will delete only one or two documents each; otherwise, it would take forever to open the forum. Any agents accessing the forum will always perform all necessary aging.

If you specify aging by forum size, there are weird conditions that can occur. For example, if you have only one thread in the forum and your latest reply to this thread pushes the forum over the limit, nothing will be deleted because there is no point in deleting your current contribution. But if you then post a tiny document that is not a reply, the first thread will be deleted

completely, including the minutes-old reply, because the tiny new document seemed to exceed the overall forum size, and there was only one thread to be deleted.

Limiting Contributions

Although it is located between the two aging policy options on the Storage Policy tab of the Forum Properties sheet, the contribution limit option is really neither a storage nor an aging policy. Instead, it is a means of automatically rejecting new contributions before they are stored in the forum.

If you specify that contributions should be limited to, say, 64K, you are not requesting automatic deletion of other documents. You are disallowing anyone's ability to post a contribution larger than 64K, including attachments, to this forum. Limiting contribution size is a means of forcing your Contributors to be concise. On the other hand, if you limit forum size, you are allowing large new postings and deleting old threads to make room. You can use these options in parallel.

Other Options

Your other options as Moderator include *full-text indexing* and *encryption*. You can turn either off or on as often as you like. They behave differently, however.

Full-text indexing is on by default when a new forum is created. You want to "set it and forget it" so that the index is available when you suddenly want to search for a word in a haystack of documents. If you're positively sure that you won't miss the Search feature, you can turn off full-text indexing. This will save you as much as a third of your forum's disk space, and it will make contributing new documents slightly faster as well.

If you turn on full-text indexing again—by choosing the Full-Text Index the Forum to Enable Searching option on the Storage Policy tab of the Forum Properties sheet—Share will scan every document in the forum and rebuild the full-text index from scratch. This means that the index will be current, and it's a good way to correct any search glitches, but it can take significant time, as Share will warn.

Encryption, on the other hand, is off by default in a newly created forum. If you contribute documents before you turn it on, they will remain unencrypted. Turning on encryption—by choosing the Encrypt the Content of New Contributions for Privacy option—only affects documents that are posted subsequently. Like full-text indexing, turning off encryption speeds up posting new documents.

From Here...

This concludes Part II, "Working with Share." You should now understand how to use the Share application to create and moderate forums and be able to explain to your group how to read and contribute. In Part III, "Extending Share," you'll learn about Agents and the Agent Manager application.

The following chapters provide more information about moderating forums:

- For a discussion of templates, see Chapter 8, "Contributing to Forums."
- For a description of the initial forum policies, see Chapter 9, "Creating Forums."
- For a discussion of your member's mail properties, see Chapter 14, "Using the Mail Agent."
- For a further discussion of the distinction between users and members, see Chapter 19, "Managing the Registry."
- To compare the role of the Administrator to that of the Moderator, see Chapter 20, "Using Administration Tools."

Part III

Extending Share

- 11 Extending Your Reach
- 12 Connecting Remotely
- 13 Managing Agents
- 14 Using the Mail Agent
- 15 Replicating Forums
- 16 Linking with Internet Newsgroups
- 17 Synchronizing with Lotus Notes

Category	Title	Author
World Wide Operations	We need to schedule user test	Nigel Johnson
WW Manufacturing	Other testing needs ..	Yonemoto Hiroko
Cork, Ireland Mar	Which test firms?	Louise C Flynn
Tokyo Design/En	This will be a tough project.	Takagi Imro
Austin Production	Summary	Alastair
Seattle Design ar	Some attachments	Alastair
Materials and Comp	Word Example	Alastair
Plastics		

Title: This will be a tough project.
Takagi Imro - Millennia Industrial Design Team
 We need to focus on the component level that we have used b

Select Forum Icon

Icons:

Buttons: Browse Icons, Original List, OK, Cancel, Help

Window Search

- Cascade
- Tile Horizontal
- Tile Vertical
- Arrange Icons
- 1 Library
- 2 HR Info Forum

Wainwright Building

Collabra Share 2.0

Collabra Share Login without E-Mail

Welcome to Collabra Share

In order to start Collabra Share, you need to login to Share. Please enter your Share user name and Share password below.

User Name: Alastair

Password: ****

Chapter 11

Extending Your Reach

Collabra Share is more than just the familiar three-paned Forum window that is described in Part II, "Working with Share." So far, you have learned to use Share to browse existing forums and documents, to contribute your own documents, and to create new forums. You even learned the responsibilities of a forum Moderator. This knowledge will help you use Share to collaborate with everyone on your local area network (LAN). But...will that be enough?

You can't limit your collaboration to only your neighbors on the LAN; you want access to the expertise and experience throughout your organization. Imagine getting a call from your company's branch office thousands of miles away. "I read your proposal," the caller says. "I have some information to add." You never know whose insight will tip the balance. A brilliant solution may be suggested by someone who has little involvement with the problem. You cannot risk excluding anyone from your virtual network of collaborators.

In this chapter, you learn to

- Examine your existing network and determine the extent of your virtual team
- Leverage your electronic mail infrastructure as a backbone for extending Share beyond your LAN
- Synchronize replicas of your forums on different LANs
- Understand Collabra's notion of an *agent*
- Use the Agent Manager application to schedule agents
- Consider the Client/Server Edition with respect to remote workstation access



Extending Share to Everyone

Collabra Share can be extended to include everyone in your organization. You can establish systems that enable you to collaborate with various users:

- Telecommuters working at home
- Field representatives on the road
- Mainframe and users with legacy electronic mail such as Profs
- Anyone in your organization on a LAN that connects with your LAN to create a WAN
- People outside your WAN who can send you electronic mail
- Worldwide users of thousands of Internet newsgroups
- Users of Lotus Notes

Ubiquity Is Important

Collaborative tools such as Share are the telephones of the new age of business processes. The phone on your desk instantly links you with everyone in your organization. By entering a few more numbers, you can be in touch with almost anyone on the planet. Voice mail, mobile cellular phones, and other improvements make the telephone network even more valuable.

Electronic mail is not far behind the telephone, either in terms of its global reach or wireless and other enhancements. Many people are set up to be notified by a pager that new mail has arrived for them. Several solutions exist that apply intelligent filters on incoming mail before it can clutter your inbox. Personal digital assistants combine these facilities and others in a portable package.

The rate of change and process improvement has long been observed to be accelerating. Cellular phones and fax machines caught on slowly at first, compared to the more recent contagion of Internet access. Once a technology is proven, its widespread adoption becomes hard to control. When groupware such as Collabra Share improves your team's communication processes and leverages group information on your LAN, you will want to extend it to everyone in your enterprise.

The collection of people using Share to collaborate needs a label. We use the word *enterprise* because existing words, such as *organization* or *company*, do not apply to all cases. An enterprise might be a part of a company, such as

the planning and sales operations of a firm that deliberately chooses not to integrate production. Alternatively, an enterprise can involve a consortium of companies. The term implies that everyone is linked electronically somehow, forming some kind of WAN. As shown in Figure 11.1, you can use the Internet to form *virtual corporations*.

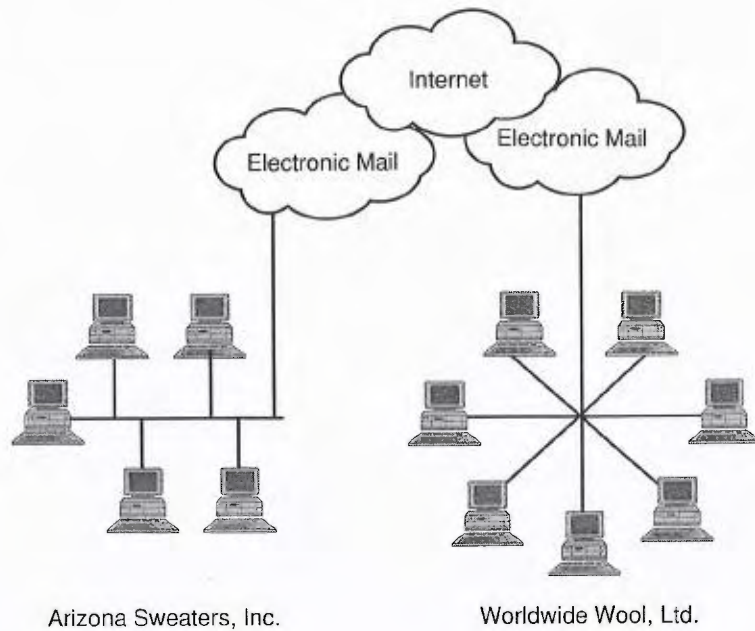


Fig. 11.1
An enterprise communicates on a WAN.

A WAN supports point-to-point communication by electronic mail throughout the enterprise. A WAN can be as simple as two or three LAN segments joined by bridges, or as complex as a true “network,” in which the path a message takes to reach its destination is unspecified and is determined by the intelligent network itself. The Internet represents an extremely sophisticated, worldwide WAN, capable of hosting a variety of services (including the World Wide Web).

Everyone in the enterprise needs Share, and your team needs everyone. All projects benefit from the availability of a “second pair of eyes,” a perhaps disinterested expert from another discipline who can make connections or see flaws that the team members are too close to recognize. Recall from Chapter 1 that “everyone participates” was one of the design principles guiding the design of Collabra Share.

Reducing communications confusion is another reason for including everyone as you plan to extend Share across the enterprise. There was a time when



your choices boiled down to a memo or a phone call. An executive debated “putting it in writing.” That debate continues, but with an expanding array of options, a bigger concern is getting your recipient’s attention. Do you dial your recipient’s car telephone and interrupt him or her, or do you dial your recipient’s office number and leave voice mail? Will your recipient see your message if you send electronic mail? Your answer depends on your knowledge of how your recipient likes to work.

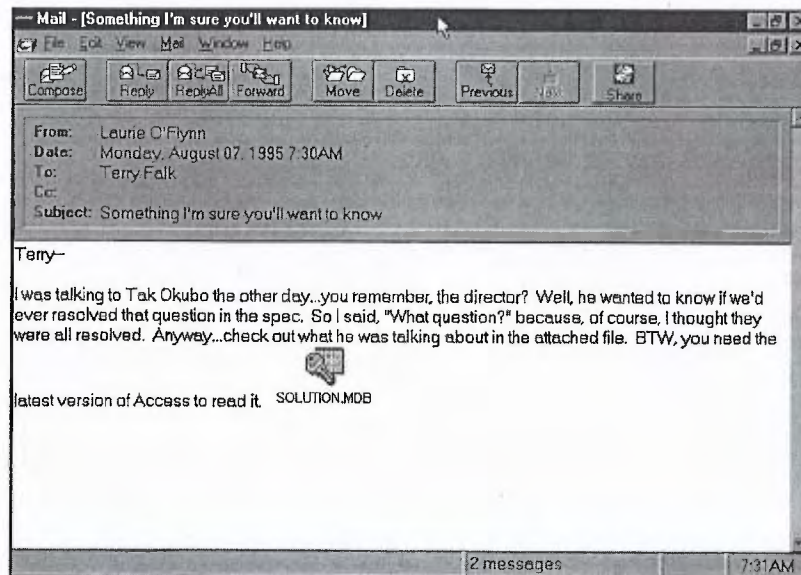
When you are communicating with a disparate team, the choices become more difficult because there are many possible work-styles. In a multichannel world, on which channel do you transmit to be sure of getting through? When you are sending a one-to-many message, your time is important. You do not want to be forced to send the message by electronic mail to some and by voice mail to others.

Collaboration in the Context of Electronic Mail

Extending the reach of Collabra Share means adding facilities for including everyone that is accessible to you by electronic mail today. Electronic mail is probably ubiquitous in your organization, and everyone who has mail could benefit from access to Collabra Share forums.

You can attach data files to your electronic mail to exchange information with others who are not on your LAN. You can share files directly with your group if you’re all on the same LAN, however, and that’s more efficient than “teaser” mail in which the name of an attached file is your only clue to its contents. Most mail programs make it easy to send teaser mail (like that shown in Figure 11.2) and difficult to send the file’s contents.

Fig. 11.2
“Teaser” mail
hides the actual
message inside an
attachment.



You've already learned how Share lets you include data from other applications, along with rich text, in your postings. You don't need to hide the information in an attached file.

Forum Synchronization

Collabra Share Extensions synchronize data in forums with the following kinds of external databases:

- Other forums on other sites on the WAN
- Electronic-mail post offices
- Internet newsgroups
- Lotus Notes databases

Everyone in the enterprise needs Collabra Share so they can exchange information in forums, but forums can't usually be shared across a WAN. The solution is maintaining a *replica* of a forum at each site on the WAN. Share can synchronize a web of replicas of a forum so that users everywhere on the WAN can participate.

Of course, there are many people who use systems that are only capable of textual electronic mail. Share supports them, as well, with its ability to extract text from formatted documents and to use textual heading data to maintain threaded conversations in an otherwise-flat mail environment. Internet newsgroups are an example of such a text-only system.

If your organization uses another kind of database, you can still use Share to make that data available to everyone. The executive staff can use Lotus Notes, for example, while the less expensive Collabra Share links the staff to the rest of the company. Share has tools that enable you to synchronize changes in forums with changes in a Lotus Notes database.

The mechanism that Collabra Share uses to link and synchronize forums with external data is called an agent because it acts on your behalf while working in the background.

If you wanted to share data files like a spreadsheet or a document with someone on another LAN, you would send it by mail. You would need to agree on some rules to make sure any changes you might make wouldn't conflict. Electronic mail is a basis for sharing information between applications like Share as well as between human beings. This is what the phrase "Share leverages your existing electronic mail" means. Your investment connecting everyone in your organization pays off. Everyone on your mail system can now...Share.

Tip

The term, agent, usually implies more intelligence about searching for information as well as smart filtering. Collabra agents are more like *gateways* because they don't search or filter.

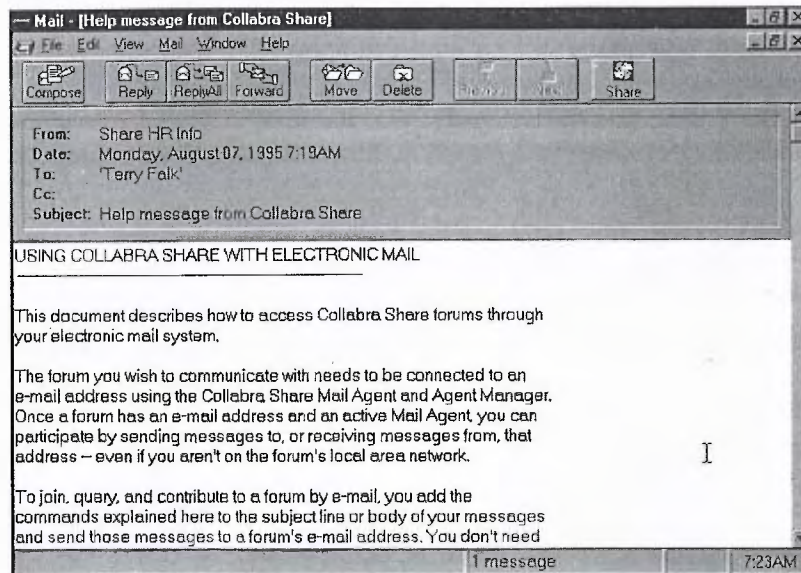


Using Electronic Mail to Broaden Participation

You already know that you can send mail, documents or notification of documents from within Share. One way to include team members who don't use Share is to use the **F**ile, **S**end, **C**urrent **D**ocument command when you read new postings in a forum. Every time you read a new document, you fire it off to your remote correspondent. For more information about sending mail from inside Share, see Chapter 7, "Finding and Reading Documents."

Instead of sending someone new documents manually, Share enables you to automate this participation using the Mail Agent, which is described in Chapter 14, "Using the Mail Agent." You specify, in the forum, whether you want the whole document or just the title, author, and other heading information sent. If you send whole documents, you can choose to include attachments or not. The result, as shown in Figure 11.3, is that new documents posted to the forums you specify are automatically copied as mail to the recipients, who are managed as electronic-mail members of those forums.

Fig. 11.3
Ask the Mail Agent to help you automatically receive a message such as this one.



Used this way, Share acts as a *listserver* program, enabling you to broadcast to a potentially wide audience simply by posting to a forum. A listserver program manages a subscription list and sends specified documents to everyone on the list. Such programs are common on the Internet, where they enable subscribers to receive a periodic mailing from Scott Adams, the creator of the

"Dilbert" cartoon strip, or technical information from Microsoft Corporation, or thousands of other topics.

You can also use the Mail Agent to capture replies from your electronic-mail correspondents and automatically post them to the forum. In fact, the mail correctly appears as a reply, preserving the thread of discussion. Figure 11.4 illustrates a reply from an electronic-mail user in mail. Figure 11.5 illustrates a reply as it appears in a Share forum. By sending as well as receiving from electronic-mail members, the forum is effectively extended to include a wider network of participants.

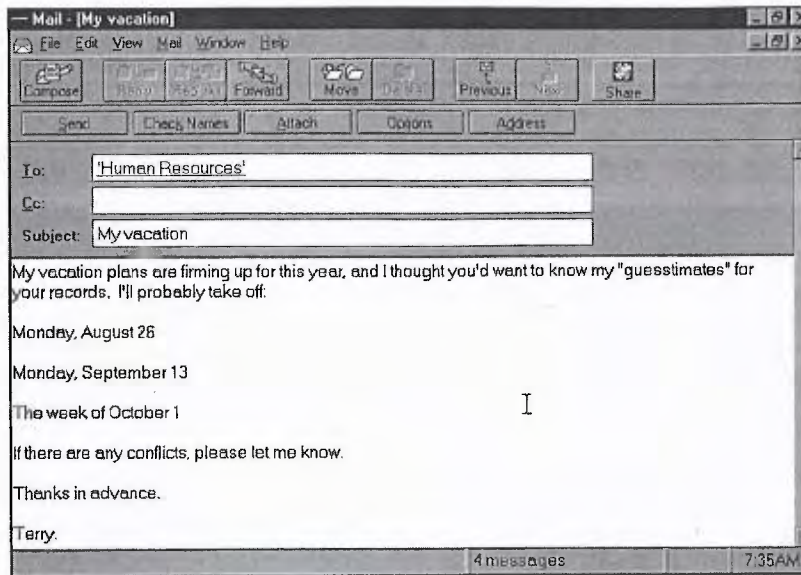


Fig. 11.4

This is your mail.

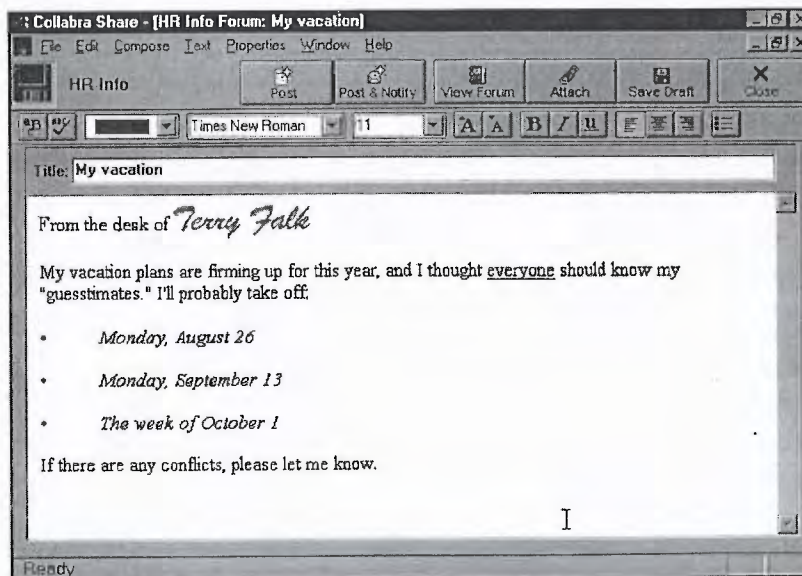


Fig. 11.5

This is your mail in a forum.

There are a variety of reasons for including people as electronic-mail members of a forum. For example:

- You have a recipient who does not yet have Share installed.
- You want to include users of Share who aren't on your LAN.
- You want to broadcast to a list of mail addresses.
- You need a collection point for data from users who aren't on your LAN (such as correspondents on the Internet) and who don't have Share.

Collaborating by Telephone

The modem/electronic mail connection means that telecommuters who receive mail at home can participate in discussions within forums and the field representative can access mail by dialing in from a motel or a client's office.

Share can make telecommuting viable by providing a "virtual water cooler" around which the telecommuters can chat about subjects only casually associated with company business. Studies show that this kind of communication helps make telecommuting work, and also that connectedness on this level makes for a more bonded team and can lead to insights that help the company directly.

Using Forums while on the Road

The lonely electronic-mail member in the field, however, has a different set of needs. Chances are that field communications will be in burst mode, with urgent postings to the common forum asking for specific answers, or jotted notes such as "Ben at Variance Technology tells me that our competitor is offering components below cost." Getting answers while you are on the road is as important as keeping everyone informed of progress even before you return.

Share's electronic mail linkage also includes a powerful feature that is specifically designed to help the member in the field. The Share Mail Agent understands a special language that enables an electronic mail member to proactively list headings or perform full-text searches by mail and then extract specific documents.

You learned earlier in the chapter that you could specify that a particular recipient receive only headings rather than whole postings. Obviously, headings only would be very frustrating if there were no way to retrieve the text of specific documents. When the Mail Agent sends a document description

(heading only), it includes a document identifier. By replying to the heading mail and using the //Get command, the user can request that the Mail Agent send the full document by return mail.

In fact, the Mail Agent understands several commands like //Get, all of which are described in more detail in Chapter 14, "Using the Mail Agent." The //Contribute command enables an electronic mail member to start a new thread in a particular category. The //Outline command requests that a list of all categories be sent by return mail. The most useful command to someone in the field, however, is probably the //Search command, which performs a full-text search in the forum. The results of the query are sent by return mail, as shown in Figure 11.6.

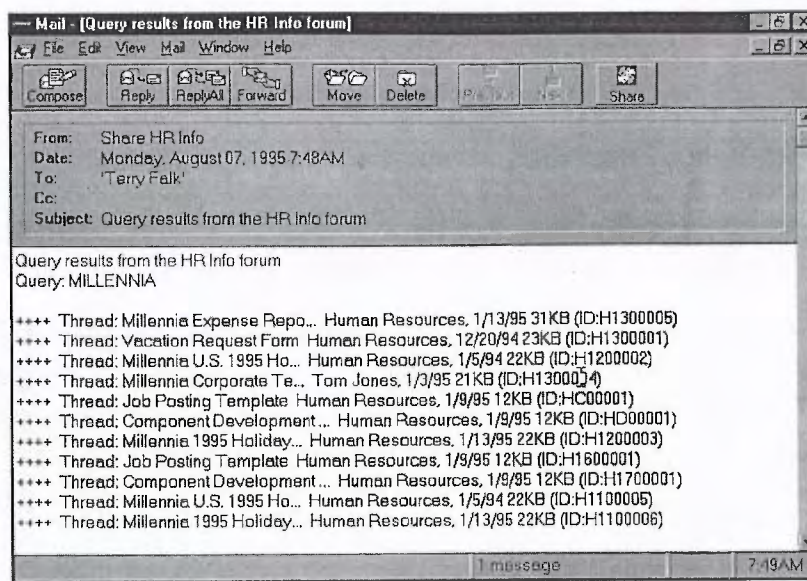


Fig. 11.6
Use the //Search command to find relevant data in a forum by remote control.

The //Search command returns the headings for documents that match specified criteria. A field representative can use //Search to call up relevant competitive information before the next day's meetings, for example. Any mail user can retrieve archived human resources policy documents from a repository forum simply by searching for particular titles or keywords.

If you have a performance-challenged computer or a low-bandwidth connection to your LAN, you can use mail to get only what you need from a forum. Your company might keep megabytes of data available in a forum, for example, but you might only need to read documents that contain a particular word. You can use the //Search and //Get commands to retrieve only the most relevant documents.



Synchronizing Forums with Electronic Mail

Electronic mail is a way to include people who are connected to your LAN by modem or Internet gateway, but let's consider users of Share on another LAN. Although they can set up a forum just like yours, they cannot access your forum because they cannot easily share files across the LAN-to-LAN connection.

Note

In theory, you could maintain two copies of the same forum. If you and someone on the other LAN conspired, you could, in theory, send all new postings in your forum to a mailbox on the other LAN, which could then be posted to the copy of the forum on that side. Any new postings there would be sent to you the same way. You and your conspirator could resolve conflicts easily—but keeping things synchronized would take a lot of time. You could use the Mail Agent to automate the operation; however, avoid the infinite loop. An infinite loop sends a new document to the other forum where it is returned (looking like a new document) and is added again to the other side. This action will continue infinitely.

You would have to make sure that forum policy matters stayed synchronized as well. Another problem would be synchronizing the deletion of documents. If someone on your side replied to a document that had just been deleted on the other LAN, you would have only two options: un-delete or restore the document or delete the new reply.

In practice, manually synchronizing two copies of a forum would take too much work, even using the Mail Agent. It is painful to consider doing this with several forums across a number of copies. Fortunately, however, Collabra offers the sophisticated *Replication Agent* to handle this task.

Synchronizing Forum Replicas

Sharing files between LANs is problematic. One never says “impossible” where technology is concerned—for example, high-speed ATM LAN connections are becoming available, blurring the distinction between a LAN and a WAN. You could invest in new infrastructure to better support file sharing on your WAN—or perhaps to route remote procedure calls (RPCs) to the Collabra Share Server—but you already have an electronic-mail infrastructure (and that, it turns out, is all you need).

Practically speaking, your best solution for sharing forums between two LANs today is the Replication Agent, sometimes fondly dubbed the *replicator*. The Replication Agent pounces on new documents posted to a forum and sends

them, using your wide-area electronic mail, to other Replication Agents on other LANs.

One Replication Agent can be connected to many others, but Collabra recommends a *hub-and-spoke topology* in which only one of the Replication Agents has more than one connection. This way, changes made at one site are never more than two electronic-mail links from all the others.

The Replication Agent (described more fully in Chapter 15, "Replicating Forums") handles a wide variety of situations, including deleting documents and changing forum policies; it also handles so-called *collisions* in which a new document is a reply to a deleted document. The Replication Agent also smooths out bumps in a less-than-perfect mail network; it does not require that mail messages be received in the same order they were sent, for example.

The Replication Agent uses electronic mail, as illustrated in Figure 11.7. Each Replication Agent needs a mail account (a *mailbox*) on each side of the connection. Unlike the Mail Agent, which requires a mail account for each forum, the Replication Agent can multiplex all forums on a single channel.

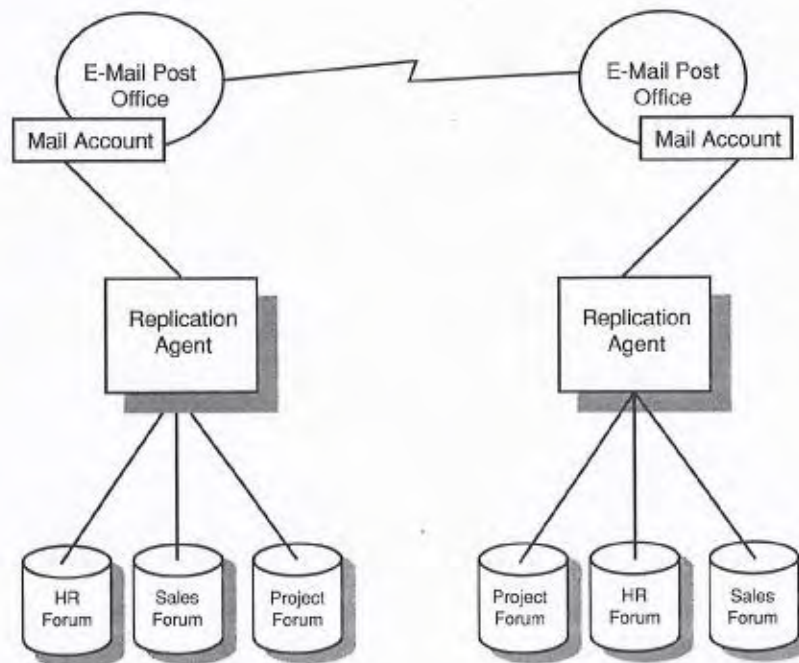


Fig. 11.7
The Replication Agent uses a single mail account at each site.

Both the Mail and Replication Agents are examples of agents, applications that are scheduled to run periodically and which link the contents of a forum with some other kind of database. Four types of agents are discussed in more detail, one by one, in the next section.

Using Agents

You can think of agents as plumbing that connects your forums to other data repositories, such as an electronic mailbox, a Lotus Notes database, and an Internet newsgroup. If something new is added to the forum, the agent sends a copy to the external database. If something is added to the database, the agent makes sure it is posted to the forum.

There are four Collabra Share Extension agents:

- The Mail Agent
- The Agent for Lotus Notes
- The Internet Newsgroup Agent
- The Replication Agent

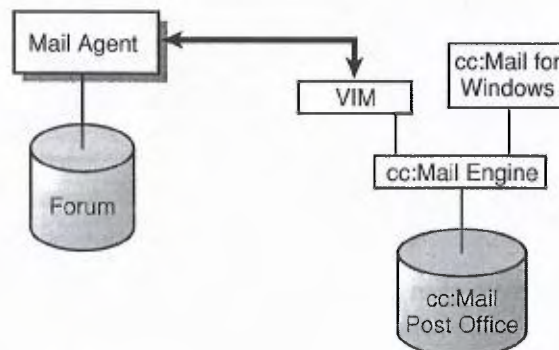
The Mail Agent

The Mail Agent, shown in Figure 11.8, connects a forum to a mailbox using one of three standard interfaces:

- Common Mail Calls (CMC)
- Vendor-Independent Messaging (VIM)
- Mail Application Program Interface (MAPI)

As you learned earlier in the chapter, you can set up the Mail Agent (on a member-by-member basis if desired) to support single or bi-directional transfers: it can send and receive, only broadcast, or only accept documents. For more information about the Mail Agent, see Chapter 14, "Using the Mail Agent."

Fig. 11.8
The Mail Agent (VIM) connects a forum to a mailbox (in this case, a cc:Mail mailbox).



In addition, the Mail Agent can interpret incoming commands, even when inbound messages are not to be posted to the forum. These commands include such capabilities as listing categories, performing full-text searches, and directing the categorization of new threads.

The Agent for Lotus Notes

The Agent for Lotus Notes, described in Chapter 17, "Synchronizing with Lotus Notes," synchronizes a forum with a Lotus Notes database (see Fig. 11.9). There are similarities between a forum and what Lotus Notes calls a "discussion database" but the Notes Agent can work with other kinds of databases as well; it gives you complete control over the mapping of fields between the two systems. For example, the *title* field in a forum often maps to a *subject* field in Notes, but it could easily map to a field called *headline* or one called *abstract*.

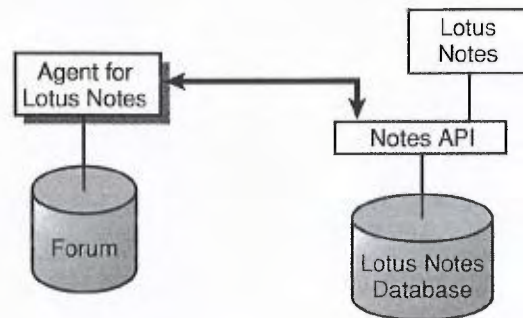
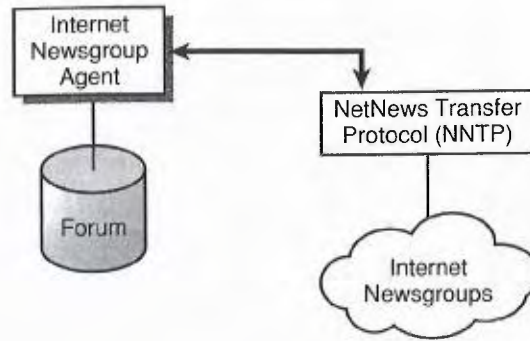


Fig. 11.9
The agent for Lotus Notes synchronizes a forum with a Lotus Notes database.

The Internet Newsgroup Agent

The Internet Newsgroup Agent (see Fig. 11.10) enables you to use Collabra Share's intuitive interface, with its powerful information overload-fighting tools, to browse information from the thousands of newsgroups on the Internet. Unlike primitive newsreaders, the Internet Newsgroup Agent displays documents as threaded discussions and supports commands such as Next Unread, Ignore, and Full-Text Search. You can also reply to the Internet or privately to an individual poster. Companies that use newsgroups in-house will benefit from the Internet Newsgroup Agent as well. For more information about the Internet Newsgroup Agent, see Chapter 16, "Linking with Internet Newsgroups."

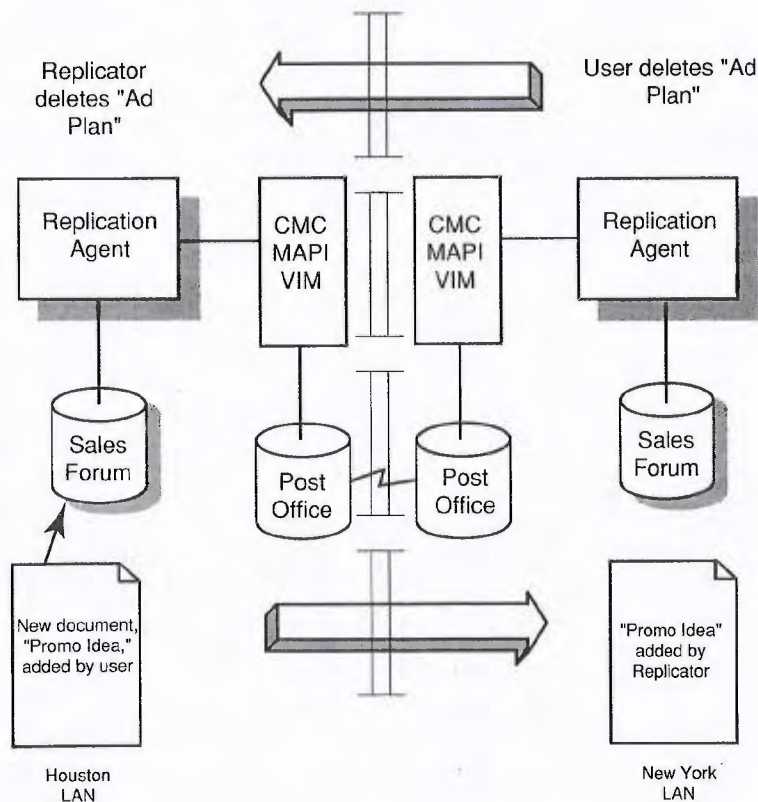
Fig. 11.10
The Internet Newsgroup Agent links your forum to the world.



The Replication Agent

Unlike the other agents, the Replication Agent requires at least two agents in order to work. As you can see in Figure 11.11, the Replication Agent resembles the Mail Agent on each end of the connection but some of what the Replication Agent sends by mail is nontextual, binary data. Unlike a router or gateway program, two Replication Agents can operate on very different schedules because of the electronic mail system. Collabra calls this “store and forward replication,” and it is such a powerful concept that it may be patentable. For more information about the Replication Agent, see Chapter 15, “Replicating Forums.”

Fig. 11.11
The Replication Agent synchronizes forums on different LANs.



Two Replication Agents periodically exchange messages to make sure that they are in sync. If one site falls too far behind, the two Replication Agents may decide to switch to *reconciliation* mode and resend most of the forum to catch up. The Replication Agent is a much more sophisticated facility than the other agents in this regard. Most of the agents support various flow controls, as well, to avoid clogging a mail network's arteries. Some systems may have a bottleneck gateway, for example, that handles many small messages but comes to a halt when a large one arrives. You can tune Collabra's agents to work around bottlenecks in your network. For more information about scheduling agents, see Chapter 13, "Managing Agents."

Agents are just application programs that you run periodically to check for new documents or events to process. You run agents on a dedicated machine such as a network file server.

Note

If you have several file servers on your network, run your agents on the same server as your forums. Unlike human users, agents read the contents of a forum more or less continuously, so the difference between the speed of the network and the speed of reading from the local hard disk will be even more pronounced.

You cannot run agents as stand-alone programs, however. They need to be configured separately for each forum and for each external database. If every agent stood by itself, each would have to include the logic for scheduling itself to run. The Agent Manager, the program that executes agents on the schedule you set up, is discussed in the next section.

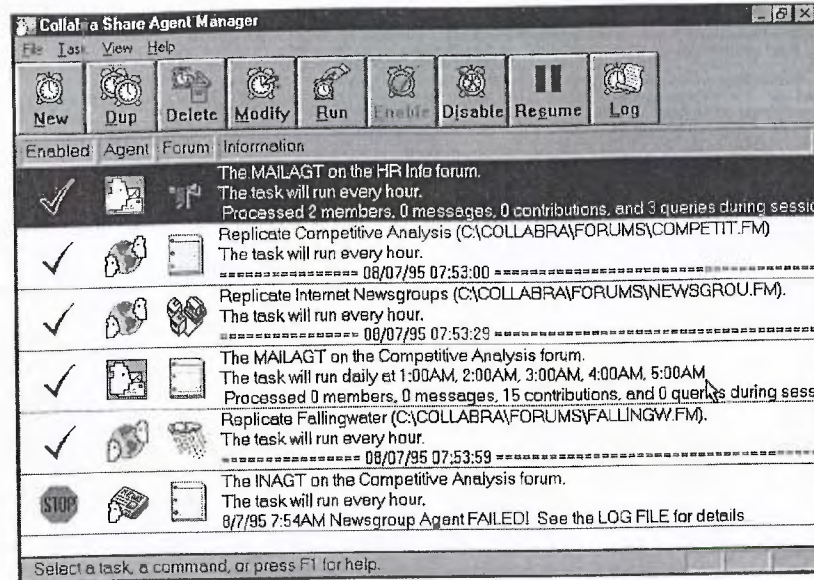
Managing Agents

The Agent Manager enables you to configure and schedule your agents. As illustrated in Figure 11.12, the Agent Manager enables you to control the connections between a forum and an agent.

The Agent Manager can link the same forum to many agents and can link a particular agent to many forums. In some cases, you might connect a forum to the same agent more than once. For example, you can synchronize a single forum with two Notes databases, each with different configuration options. Alternatively, the hub Replication Agent might be configured with a separate connection for each replica of each forum.



Fig. 11.12
The Agent Manager manages connections between forums and agents.



Scheduling Agents

A *task* is a connection between a forum and an agent. The Agent Manager executes one agent task at a time, according to the schedule you specify.

An agent can run continuously (round-robin with other scheduled tasks), at a specified interval (such as every nine hours), or one or more times daily. You leave the Agent Manager running, usually minimized as an icon on the Windows desktop, and it does the rest. If all your agents run in the middle of the night, the Agent Manager on the desktop will not be noticeable during the day. Windows can continue to multitask—handling print jobs, for example—even when agents are running.

Setting Up Agents

When you establish a connection between a forum and an agent, the Agent Manager leads you through a series of setup dialog boxes that are specific to the agent. Figure 11.13 illustrates setting up a task connecting the Mail Agent with a news forum as an example.

You can configure the Replication Agent using Share's *policy-based replication* feature to communicate automatically with the Agent Manager on remote sites. Policy-based replication makes it possible to initiate and administer replication on a forum without manually establishing a new task on each site. The Agent Manager handles the details by communicating directly with the Agent Manager on the remote site.

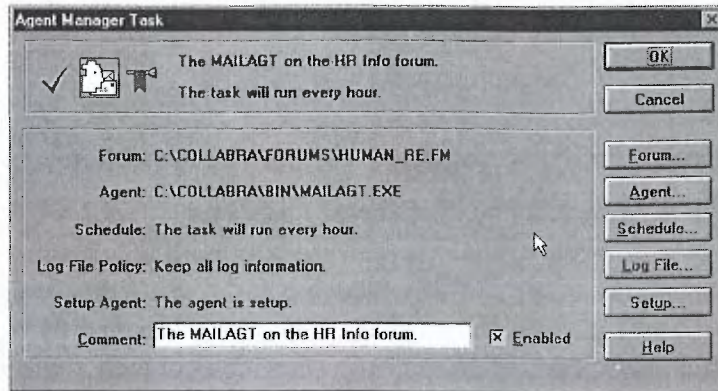


Fig. 11.13
Use the Agent Manager to configure each individual agent.

Considering the Client/Server Edition

You have learned that it is possible to connect Share users on different LANs using the Replication Agent, and to embrace users who are only connected to your LAN by electronic mail, such as field personnel and telecommuters. You can also access forums—without being permanently wired to the LAN—by establishing a remote connection with the Collabra Share Server.

First, consider the advantages and disadvantages of both the file-sharing approach and a client/server architecture.

File Sharing

File sharing is simpler to set up and to administer, even across a WAN. The disadvantage is remote access from home or on the road. Remote solutions with file sharing include both electronic mail and products that enable you to dial-in to your LAN. Electronic mail is textual and you lose Share's interface, but it is a proven solution that, again, is simple to set up. Dial-in access to your LAN is probably not a good solution because 28 kbps (or even 56K) is just too sluggish. The Share interface would be agonizingly slow over such a dilatory connection. (Imagine: only 360 words a second—a quarter million characters a minute—on the wire. It would take only two seconds to transmit three pages of this book, but that's very slow compared to network speed.)

Client/Server

The client/server architecture, in contrast, offers a practical, remote-dial-in solution. This approach reduces traffic between computers to a minimum. Instead of reading and writing files directly, only *remote procedure call* (RPC) commands are sent by way of the modem. Because it minimizes traffic "over



the wire," the client/server approach supports more simultaneous users than file sharing. Because actual access to the forum is centralized at the server, it also offers better security and control. The only drawback is that establishing and maintaining a client/server installation is somewhat more complicated.

Mixing File Sharing and Client/Server

Collabra is one of the few software vendors to offer both file-sharing and client/server versions. You can mix file-sharing and client/server access to your forums within the same enterprise. This combination enables you to configure your use of Share to leverage the advantages of each approach. You can choose to install a single server for remote callers and replicate the server's forums to another site where LAN users access it directly.

From Here...

In this chapter, you learned that Share's flexible architecture makes it easy to extend your forums far beyond your LAN. You learned you can maintain forum replicas on other LANs and invite anyone in your mail directory to participate in a forum. You also learned that the Client/Server Edition supports dial-in remote access to forums.

Now that you have learned about the ways in which Share can be extended beyond the LAN, you are ready to tackle remote dial-in, the Agent Manager, and the four agents in depth.

- For more information about policy-based replication, see Chapter 2, "Planning a Company-wide Configuration."
- To learn how to dial-in to the Collabra Share server, see Chapter 12, "Connecting Remotely."
- For a complete description of the Agent Manager, see Chapter 13, "Managing Agents."
- For more information about synchronizing with your electronic-mail directory, see Chapter 19, "Managing the Registry."

Chapter 12

Connecting Remotely

12

As you extend your reach beyond a single LAN to include everyone in your enterprise, you may discover that some individuals are not directly accessible. Facilities for remote access to workgroup networks are becoming more and more popular, enabling business travelers and work-at-home telecommuters to drop in on the LAN as needed. This trend will continue. Existing telephone lines can be used to connect two computers and the familiar telephone network is gradually being supplanted by an even higher-bandwidth data network.

This chapter describes various methods for connecting to your forums over telephone lines using the familiar Share interface. It turns out that it is more than a little difficult to set up, but once that task is done, you'll find it tremendously useful to extend your network to home and the road.

In this chapter, you learn about

- The technology that makes remote access possible (without going into too much detail). You need to know where the modem fits in to be able to configure the connection.
- Various kinds of modems
- The installation of three different software packages that support dial-in access to a LAN
- Establishing your first remote connection
- Installing the other side of the connection on your LAN
- The security issues surrounding making your network available to anyone with a modem



The ability to use Collabra Share remotely from home, a hotel, or a client's office is extremely useful in light of Share's goal that "everyone participates." Business scenarios are easy to imagine. A salesman checks into his hotel, connects the laptop to the home office, and posts a document asking about the next day's meeting. He uses a search command to find relevant documents that are already in the forum. Within a few hours, other people from around the company have replied to his request, and he is now armed with his entire team's knowledge as he goes into the client meeting.

One way to access a forum remotely is to use electronic mail. The Mail Agent, described in Chapter 14, "Using the Mail Agent," allows you to post documents, perform searches, and receive replies, simply by setting up a remote version of mail and synchronizing your inbox. But using electronic mail to access a forum is a like riding the bus instead of having your own car; you can get where you want to go, but the bus can't offer the same freedom and control that a car can.

There are several products that enable you to connect to your network from home, such as Symantec's PC Anywhere or Microcom's Carbon Copy. While easier to install than the three remote access products we'll describe in this chapter, they are unacceptable for use with Share. The problem is that a connection like PC Anywhere, even over a 56 kbps ISDN line, is frustratingly slow when using an application like Collabra Share. The file-sharing version of Share moves too much data back and forth on the wire. Remote access, in fact, is one reason that the Collabra Share Server was developed. Microsoft's Remote Access Service (RAS), which comes with Windows NT, is specifically optimized for the Share Server's Remote Procedure Call (RPC) interface. A few minutes spent trying to use the file-sharing version of Share over a PC Anywhere connection will convince you that a more specialized solution is required.

Understanding the Technology

Configuring computers to communicate is unfortunately a difficult and often frustrating task, particularly with older DOS-based operating systems that have limited "real" memory. Rather than educate each remote user, many companies will find it more efficient to have the IS (Information Systems) staff install both ends of the remote connectivity solution. It is possible for an end user to install the hardware and software described in this chapter, and the information presented here should help, but it is an arduous task best left to the professionals.

You need to have a minimal understanding of how your LAN works in order to connect modems to it. To those of you who have so far avoided learning the first thing about how a network works, this section is brief and as high-level as possible.

At a very high level, the basic idea is that every computer on the network contains a Network Interface Card (NIC). A wire connects each of these cards together and the software running on each computer sends and receives data using these cards.

It is useful to think of this process in terms of conceptual layers. The bottom layer is the physical connection of NICs and wires. The layer above this packages information to be sent on the wire. The layer above that understands more about the meaning of the information and less about the physical hardware, and so on. Network people talk to each other in terms of seven agreed-upon layers, called the Open Systems Interconnection (OSI) protocol stack. Figure 12.1 illustrates how Share uses this stack to access remote files.

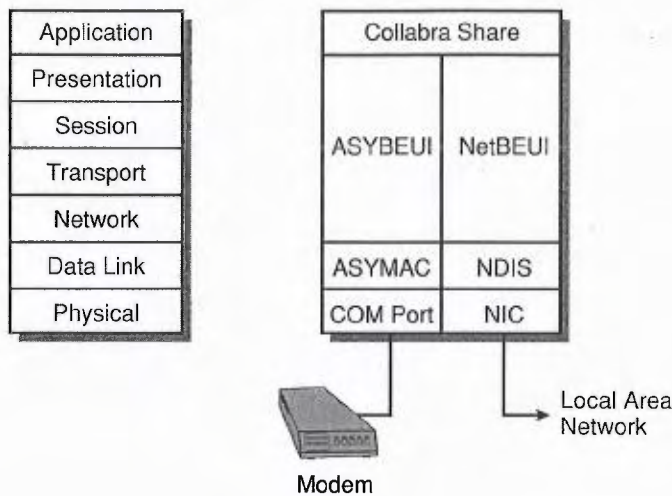


Fig. 12.1
How Share relates to the OSI protocol stack.

For the purposes of this discussion, the stack can be simplified further into four layers: the network card (Physical), the driver (Data Link), the NetBIOS (Network, Transport, and Session) and the operating system (Presentation, Application). Collabra Share is conceptually on top of this stack: it makes requests of the operating system but assumes no responsibility for the implementation details.

Share asks the operating system to open, read, and write disk files without regard for the actual computer to which the disk resource is attached. Typically, it's the job of Novell NetWare or Windows for Workgroups to fool applications like Share into thinking that drive M: is just another local hard disk when it's actually a thousand miles away.

A *protocol* is a series of dance steps that both partners agree upon so that they can move forward and back without stepping on each other's feet. Just as there are many different dances, many kinds of protocol can accomplish the network's role. The Transport and Network layers are implemented by SPX/IPX on NetWare and TCP/IP on UNIX machines. The reason for dividing the task into layers is to allow each layer to be implemented using different protocols. The interfaces between layers are protocols and a seven-layer solution is called a *protocol stack*.

If you want to connect to your office's network from the Motel 6 in Poughkeepsie, why should you care about a stack of dance protocols? Because the layers make it fairly easy for you to substitute a modem for a Network Interface Card at the Physical layer, replace a couple of other software layers to communicate with the modem as if it were a disk drive, and Share still thinks M: is a local hard disk.

A computer can run more than one protocol stack at a time. This allows your network file server to talk to other local servers using, say, a *NetBIOS Enhanced User Interface* (NetBEUI, pronounced *net-boo-ey*) protocol and also have a modem protocol stack that allows you to dial-in. You can use a modem connection to one server to access data on another server.

Three software products that offer protocol stacks to replace a Network Interface Card with a modem are discussed in the upcoming section "Preparing to Dial-In." Microsoft RAS (Remote Access Service) is included with the Windows NT operating system and Windows for Workgroups, Version 3.11 or greater. Engineers at Collabra prefer ShivaRemote, because it doesn't need as much conventional memory. NetWare Connect is also described. Any of these three, when properly installed and configured, make your modem act like a Network Interface Card.

The problem with replacing the Transport layer of the protocol stack with a modem is that your modem is an extremely slow Network Interface Card. Let's consider a real-world example.

Everything is relative with regard to the apparent speed of computers. Your laptop portable runs about as fast as a desktop computer at the office, and when you run Collabra Share on your laptop in the Poughkeepsie motel room it will execute just as quickly as running Share on your desktop computer, except when it needs to access data files over the telephone line. Your modem is at least ten times slower than your network. You'll notice that actions on your computer that take more than a half second to respond, such as bringing up the Open File dialog box, seem sluggish. Check your watch and you'll see that a whole second seems slow at computer speeds. Now count slowly to ten—that's how long it might take before you see the Open File dialog box. If saving a huge file takes six seconds on the network, imagine waiting an entire minute when you're connected by modem.

So, simply connecting to the network is not enough. You need the Client/Server Edition of Collabra Share because it uses Remote Procedure Calls (RPC) to minimize network traffic and perform as much work as possible on the server side. Microsoft claims that RAS is specifically optimized for client-server applications. Even so, dialing-in will still seem lethargic to those used to network access. How could telephone access be faster than your network?

Connecting by Modem

The primary piece of hardware that lets you dial-in to your LAN remotely is the modem. In this section, the following are discussed:

- Modems
- Telephone lines
- Connecting a modem to the network
- Connecting a modem to your computer

Understanding Modems

Your first step in preparing to dial-in to Share remotely is to connect a modem to your computer. Modem stands for *modulator/demodulator*. Modulation is the conversion of digital signals to, in this case, audible sounds. Compatible modems at both ends (so that modulated data is correctly demodulated) enable you to send computer data over ordinary telephone lines.



Most Windows computers these days use Hayes-compatible modems, which support commands like ATDT and ATH. Certain modems are capable of negotiating data transfer speeds with each other when a connection is initiated. One modem may be able to transfer data at a rate of 28.8 kbps; however, because the other modem can only transfer data at a rate of 14.4 kbps, the connection is made at a rate of 14.4 kbps.

Modems are measured by their data transfer rate in terms of bits per second or kilobits (thousand) per second (kbps). A short time ago, 14.4 kbps was the high end; today, it's 28.8 kbps with 57.6 kbps probably not too far away.

Using Telephone Lines for Data

One limiting factor on modem speed is the design and construction of the so-called information superhighway. In this context, this means the telephone network, which is slowly being upgraded to provide higher quality connections throughout the system. It is not hard to imagine an entirely new global data network supplanting existing voice lines in the next ten or twenty years as computer communication becomes as vital to society as the telephone is today. Products like Collabra Share that connect individuals into teams will drive the move toward a better infrastructure.

One end of the telephone line quality spectrum is represented by the Integrated Services Digital Network, or ISDN. It comes in two varieties: Basic Rate Interface, which runs at 64 kbps (or 128 kbps if only two machines are involved) and Primary Rate Interface, which uses multi-channel fiber-optic cables that support up to 1.544 mbps. ISDN is available for home use in some cities, but it requires a fairly expensive piece of hardware called a *router*.

The other end of the quality spectrum is the older X.25 protocol used by a packet-switched public data network. X.25 is ideal for communicating over unreliable telephone systems, such as in some third-world countries. Due to error-checking at every point in the system, its maximum speed is limited to 64 kbps, however.

Between these extremes, your company can purchase a dedicated T-1 line, which provides a higher quality point-to-point connection suitable for higher bandwidths. All of these special phone lines cost money, of course, in proportion to their speed and quality. Rather than investing in a dedicated T-1 line, many firms use so-called "fractional T-1" connections between LANs.

If you're calling from the motel or the client's office, of course, you don't have any of these options. There are a variety of modems that you might connect to your computer: internal or external, various speeds and features,

and fax modems, which can be used to send facsimiles in addition to their use as modems. Almost any modem will allow you to connect remotely. The minimum speed requirement is 14,400 bits per second (and preferably 28,800 V.34).

Connecting a Modem to Your Network

If your server doesn't have a modem connected to it yet, you have a few more expensive options. A standard PC modem enables one caller at a time to connect with the server. Many companies simply connect a pool of six or ten ordinary modems to a phone switch that routes incoming calls to an available line. Other alternatives include complex modems purposely designed for this use. Your IS department will be familiar with options for connecting modems to the network.

Security is an important consideration when you connect a modem to your server, because it allows anyone to dial-in and, therefore, invites tampering. Security is discussed in more detail in the "Understanding Security Issues" section, later in this chapter. Fancier modems offer a first line of defense, such as automatic encryption, so that only a similar modem at the other end can translate the encrypted data.

Connecting a Modem to Your Computer

Internal modems install inside the computer while external modems connect to a serial port. Both are accessed using one of four serial communication devices: COM1, COM2, COM3, or COM4 (see Table 12.1).

Table 12.1 Typical COM Port Addresses and Interrupt Values (MCA = Micro Channel Architecture)

	Port	IRQ
COM1	03F8	4
COM2	02F8	3
COM3	03E8	4
COM4	02E8	3
COM3 (MCA)	3220	3
COM4 (MCA)	3228	3



You need to ensure that your modem is working correctly before proceeding to install remote access software and trying to dial-in to your server.

Use the Terminal program that comes with Windows to test the modem:

1. Choose the Settings, Communications command to bring up the communications dialog box.
2. In the dialog box, make sure that Terminal is configured for your modem's COM port, speed (baud rate), parity (none), data bits (8), stop bits (1), and Xon/Xoff flow control.
3. At the main screen, type **ATE1M1V1** and press Enter. This tells the modem to Echo what you type, turn on the speaker, and be verbose in its output. The modem should display OK on the main screen.
4. Type **ATDT** and press Enter. You should hear a dial tone from the modem.
5. Type **ATH** to hang up (**ATZ** resets the modem).

To test your computer's communications ability further, you might want to dial 1-800-346-3247, which will connect you (as of this writing) with the CompuServe service for locating the closest access number for your area:

1. Choose Settings, Phone to enter the number ("1-800-FIND-CIS" will work).
2. Choose Phone, Dial to make the call. Once you are connected, pressing Enter should display a "Host:" prompt.
3. Type **PHONES** and press Enter.
4. Choose the Phone, Hangup command when you're done.

If your modem doesn't work in the Terminal program, try turning off 32-bit file access (using the 386 Enhanced section of Control Panel). Check your SYSTEM.INI file (using the SysEdit application or an editor) to make sure that the line **COMM.DRV=COMM.DRV** appears in the [boot] section. Make sure you have a valid COMM.DRV file in the WINDOWS\SYSTEM directory. If you're still having difficulty, you might want to request *Windows 3.1 and Serial Communications*, Microsoft Application Note WW0654, by calling 1-800-936-4200 (U.S. and Canada only).

Once you know that your modem works, you're ready to install the client-side dial-in software.

Preparing to Dial-In

Before you can communicate with the server at the office, you need to install and configure software in your laptop or home computer. Remember that a protocol stack of software connects a computer to the network, going from Collabra Share at the top down to the physical Network Interface Card (NIC) at the bottom (refer to Fig. 12.1). In this section, you install a protocol stack in your remote computer that makes your modem appear (to Share) to be an NIC. There are three software products available that work with Share to accomplish this virtual network:

- Microsoft RAS
- ShivaRemote
- NetWare Connect

There may soon be other products because dialing-in remotely is becoming a popular thing in an age of wireless communications and telecommuting. Share imposes few, if any, special requirements on the connection beyond RPC support. These three products are recommended because they seem to work well with the Share Server's implementation of RPC. If another solution that supports RPC appears, don't hesitate to try it with Share.

Note

Follow the latest installation instructions for the particular product you choose, of course. Keep in mind that you are loading drivers and other software that will probably run in low memory and be sure to test your other applications after you install and reboot. It may take some tweaking to get your computer comfortable with the new software that's lurking.

Microsoft RAS (Remote Access Service)

Your Windows NT or Windows for Workgroups distribution disks may include an application called RASStart, which guides you through the installation of RAS. If you must copy the files manually, put the following files in your WINDOWS directory:

ASYMAC.DOS
ASYBEUI.EXE
VCOMMIO.D.EXE



WANTSR.EXE
 RASADMIN.EXE
 RASDIAL.EXE
 RASHELP.EXE
 RASPHONE.EXE

ASYMAC is the COM port device driver (ASynchronous Modem Access Control) at the Data Link layer in the OSI stack, just above the physical modem. It should be installed in CONFIG.SYS, just after the line that installs PROTMAN.DOS:

```
device=c:\windows\asymac.dos
```

ASYBEUI and its components sit above the protocol manager and replace NETBEUI for this stack. It should be installed in AUTOEXEC.BAT, just before the NET START line:

```
c:\windows\asybeui.exe
```

The other components are installed just after NET START:

```
c:\windows\vcommiod.exe  

c:\windows\wantsr.exe
```

Your PROTOCOL.INI file should have an entries for:

```
netcard=ms$asymac,1,MS$ASYMAC  

transport=ms$asybeui,MS$ASYBEUI  

lanal=ms$asymac,1,ms$asybeui [or lana2, lana3, etc.]
```

And the protocol should be defined as follows:

```
[ms$asymac]  

drivername=asymac$  
  

[ms$asybeui]  

drivername=asybeui$  

lanabase=1 [or 2, 3, etc.]  

bindings="ms$asymac"  

sessions=12  

ncbs=25
```

Specify the next higher LANA number if you are using multiple protocols. Your SYSTEM.INI file should contain these two lines in the [386Enh] section:

```
V86ModeLANAs=1 [or 2, 3, etc.]  

MaintainServerList=No
```

The last line keeps your remote computer from being assigned extra work by the network system.

As you can see, this is tricky business. If your IS department has guidelines for installing remote access software, follow them. Let your network administrator make these changes for you if possible, so that all remote computers will be configured in the same way:

Make the applications, RASDIAL, RASPHONE, and any other RAS utilities icons on the Windows desktop. If your computer is used mostly to dial-in, once everything is working perfectly you might want to put RASPHONE in the Startup group so that it loads automatically whenever you run Windows.

Caution

Remember that your situation may be substantially different; you might have a later version than RAS 1.1a, or your system administrator may issue different files and another recipe for installation. This section simply gives you an overview of RAS installation.

Whenever you add drivers to CONFIG.SYS or programs like ASYBEUI to AUTOEXEC.BAT, you must reboot the computer for the changes to take effect. The most recent versions of DOS and Windows allow you to step through CONFIG.SYS by pressing a particular key as DOS starts up. This is very useful when you're debugging a new configuration, because drivers often display vital information as they load. If your new driver says `ASYMAC.DOC not found...driver not loaded` it is easy to overlook as the system zooms ahead to perform the steps that follow and the screen scrolls. Often, error messages suggest what to do to fix the problem, so stepping through CONFIG.SYS and AUTOEXEC.BAT, and reading carefully, should be your first action if troubleshooting is necessary.

Once you've installed the files, modified the system configuration, and successfully rebooted your system, make sure that your existing applications are still working. You've just grabbed some low memory, so test other things that use low memory, such as large DOS programs, printing, and so forth. Check that your modem still works as it did in the previous section. When everything is working correctly, you're ready to run the client software and establish a connection.

ShivaRemote

The Shiva Corporation of Burlington, Massachusetts (1-800-458-3550) sells a product called ShivaRemote that has quickly become the remote access solution of choice at Collabra, primarily because it uses less conventional memory on the client than RAS.



Because you will be ultimately connecting with a Windows NT server, you probably want to install the Network Driver Interface Specification (NDIS) drivers rather than ODI (Open Data-Link Interface) drivers, which are used to connect to NetWare servers. ShivaRemote is designed to communicate directly with one of Shiva's LanRover family of remote access servers.

Installing ShivaRemote is a simple matter of running the Setup program from within Windows. Shiva works with Windows 3.1, Windows for Workgroups 3.11, and Windows 95. If it detects Windows for Workgroups, it will ask for your permission to modify certain system files.

The Setup program presents a list of modems. Find your modem in the list, or choose "Hayes compatible" if your specific model or manufacturer isn't listed. (If your modem isn't Hayes-compatible, it probably won't work for remote access.) Specify the NetBEUI/LLC protocol when prompted.

Your next step is to inform the operating system. If you're using Windows for Workgroups, follow these steps:

1. Run the Network Setup application in the Program Manager's Network group.
2. Click the Networks button and choose the Install Microsoft Windows Network option, then click OK.
3. Click the Drivers button and choose Add Adapter.
4. Install the ShivaRemote 3.1 dial-in driver, which you'll find on the Shiva floppy disk. When the driver is installed, it displays its supported protocols:

```
ShivaRemote 3.5 dial-in driver (ODI/NDIS3)
Microsoft NetBEUI
IPX/SPX Compatible Transport with NetBIOS
```

You must specifically select the IPX/SPX line and click the Remove button because IPX/SPX is not supported by Shiva.

5. Click the Setup button in the dialog box and specify Driver Type NDIS.

Windows 95 makes installing drivers like this considerably easier. Simply open the Start menu and choose Settings, Control Panel. Choose the Network applet and click the Add button to install the driver.

1. To add Client, choose Microsoft from the list of manufacturers and select the Client for Microsoft Networks.

2. To add Adapter, click the **H**ave Disk button and insert the Shiva floppy disk to install "ShivaRemote 3.1 dial-in driver."
3. To add Protocol, choose Microsoft from the list of manufacturers and select NetBEUI from the list of protocols.

The Setup program creates a ShivaRemote program group and fills it with icons for the ShivaRemote Connect application, a Quick Hang Up application, and icons for several readme files, which contain the latest information from the manufacturer.

Caution

This section on ShivaRemote installation is merely an overview, which highlights the differences between NDIS and ODI, NetBEUI and IPX/SPX, and so on. Follow the instructions and recommendations that come with your version of ShivaRemote.

Whenever you add drivers to CONFIG.SYS, you must reboot the computer for the changes to take effect. The most recent versions of DOS and Windows enable you to step through CONFIG.SYS by pressing a particular key as DOS starts up. If you experience a problem, try watching your drivers load. Often, reading the error message carefully will suggest what to do to fix the problem.

ShivaRemote requires you to modify the system configuration. Once you've successfully rebooted your system, make sure that your existing applications are still working. Test other applications that use low memory, such as printing, and check that your modem still works. When everything on the workstation is functional, you're ready to run the client software and establish a connection with the Shiva LanRover.

NetWare Connect

Novell of Provo, Utah (1-800-453-1267), the network giant, naturally has its own software for providing remote access to your LAN. It's called *NetWare Connect*, and it provides (among other things) a *Remote Node Service* (RNS) and a *NASI Connection Service* (NCS). (NASI stands for NetWare Asynchronous Services Interface.)

In particular, the utility you need is called *NetWare Remote Node* (NRN). When you install NetWare Connect on your server, it creates a directory called:

```
SYS:SYSTEM\NRN
```



To install on a client, you simply copy the files in this directory to the remote computer. You also probably want to copy ordinary NetWare utilities, such as:

LOGIN.EXE

SLIST.EXE

MAP.EXE

ATTACH.EXE

The NCS can be tested with the supplied NASI.EXE program or NASI-compatible applications, such as *PC Anywhere for Windows* from Symantec or *Carbon Copy* from Microcom.

NetWare Connect runs on DOS, not Windows, but you can create a shortcut or program icon for DIALCON, the Novell Dial utility; in Windows 95, choose File, New, Shortcut in the Explorer.

Note

Use the latest documentation available to install NetWare Connect in a way that's compatible with your specific situation. NetWare Connect is a lower-level facility than RAS or Shiva, and therefore, the advice of a NetWare administrator is particularly valuable.

Once you've installed NetWare Connect, make sure that your system, including the modem, is functional. When everything, including NetWare Connect, is working, you're ready to establish a connection with your server.

Establishing Connection Information

Once your modem and remote workstation software are installed, you're ready to test your connection to the server. Running Collabra Share is simple once the remote connection facility is working.

You will need some information, such as the phone number, from your system administrator in order to dial-in to the server. In some cases, for security reasons, a particular phone number will be assigned to you and the server will be set up to call your computer back. We'll discuss the specifics of RAS, Shiva, and NetWare Connect separately.

Managing the RAS Phone Book

The first time you run RAS, your RAS phone book will be empty and you will be prompted to make an entry. You do this by entering the server's phone number in the dialog box that appears. Enter a name and a few descriptive words to accompany the phone number. Click the Advanced button to make sure that your port and device (probably Modem) are correctly configured.

If you use more than one server configuration, you first run RAS and then choose the name from the list of configurations that is presented.

Note

If you receive Error 615: The port was not found, it might mean that the phone book and the current RAS configuration don't agree. If you have changed your modem, for example, be sure to reconfigure RAS. If that doesn't work, try removing the phone book entry and adding it again.

Using ShivaRemote Connection Files

The ShivaRemote Connect program prompts you to create a connection file. You specify a descriptive title up to 64 characters long, your dial-in name and password, and the phone number of the server in the connection dialog box. Passwords are not saved to the connection file, so you'll need to enter this information every time you run this connection.

Click the Options button in the Connection dialog box to display the advanced dialog box in which you can specify the NetBEUI/LLC protocol.

Unlike RAS, connection files for multiple servers are not presented in a list. You choose your connection file from the Explorer (or Program Manager). Connection files have the extension .SR. To make an Explorer shortcut (or Program Manager icon) for your connection file, open the file in ShivaRemote Connect and choose the File, Make Icon command.

Managing Connections with NetWare Connect

The DIALCON program remembers connection information, as well. Select Manage Collection from the DIALCON main menu. The panel that appears allows you to specify the NET.CFG path, serial driver, telephone number, NetWare user name, and password.



Or, you can specify options on the command line, for example:

```
DIALCON /o=d /td=1,8005551212 /u=adallas /p=password
```

The options are:

/o	Mode of operation (d=dial, h=hang up, for example)
/td	Telephone number to dial
/u	NetWare user name
/p	NetWare password

Connecting to the Server

Before you install the Collabra Share Client, test that your remote access software is functional. Make sure the server is prepared to receive incoming calls and that the remote access software is running. (See the section titled “Configuring the Server for Access,” later in this chapter, for information about setting up remote access connectivity on the LAN.)

Testing Your Remote Access Software

When you are ready to attempt a server connection, click the Connect button in ShivaRemote Connect or click OK in the RAS connection dialog box. You should hear the modem dial and establish communication with the server and you may be asked to authenticate yourself by supplying your user name and password. If you find that you are connected but not logged in, log in manually.

It's an exciting feeling to make a connection between computers for the first time—congratulations! Poke around and make sure that your server account has sufficient privileges for you to execute applications on the Windows NT server.

One of the best ways to test the remote connection is to use the Explorer (or File Manager) to view server and local files. You know you've achieved LAN-equivalent access if you can drag files from your local computer and successfully drop them (copy them) on the server.

Note

If you experience difficulties using the remote access software, assure yourself that the modem itself is working. Then check the port and other hardware configuration in the remote access software. Reboot your computer and watch carefully as the driver and other components of the protocol stack initialize to make sure none of them have any complaints.

If you're getting no answer from the server, or you're not able to log in, chances are your problem involves the server. If so, you'll need your network administrator's help.

Using the Collabra Share Client

Just as you tested your modem using the Terminal program, test your remote access software using the specific methods described in the documentation that came with it. You should be able to dial-in to your server and the server's files should be accessible from your remote computer. (For information on setting up the server, refer to "Configuring Your Server for Access," later in this chapter.) There is little point in installing Collabra Share until this connection has been accomplished.

Installing the Client side of the Client/Server Edition is practically the same as installing the file-sharing version. You simply run the Setup program as described in Chapter 3, "Setting Up Collabra Share." The difference between the file-sharing version of Share and the Client/Server Edition is that, on the client computer, the FORUMDB.DLL component, which manages the collaborative object store, is replaced by an RPC communications module.

Getting everything set up and working smoothly can be difficult because there are so many variables. Your phone lines, your modem, the server's modem, the protocol stacks at each end, and the myriad configuration options, not just of the software involved but of other aspects of the system, particularly electronic mail, that may impact the remote access software. The good news is that Share's use of the underlying system is quite simple by comparison. If your remote access software is known to work, the chances of a mysterious problem showing up in the Share client are slim.



Note

Whenever you have a problem with remote use of Share, either as you install it or later, remember to test the modem, then the remote software and, when you know they're working, then investigate Share's configuration. Of course, like the "broken" television that only needs to be plugged in, the first thing to check is the server itself. If the system has worked in the past, make sure that the Collabra Share Forum Service is up and running on the server.

Configuring the Server for Access

Before you can dial-in from your remote computer, you need similar software (or LanRover hardware in the case of Shiva) on the Windows NT server side. In theory, you can dial-in to any computer that has access to the Windows NT home of the Collabra Share Server, but in practice you should probably dial directly into the same machine. Your performance will be better if you don't need to make an extra network "hop."

Windows NT includes Microsoft RAS (Remote Access Service), but it is not installed by default. You (or the NT administrator) set up RAS using the Control Panel:

1. Open the Control Panel.
2. Choose the Network applet and click the Networks button.
3. Click the Add Software button in the dialog box that appears and choose the Remote Access Service from the list.

You'll need your original NT installation disks. If you installed NT from a CD-ROM, you'll need it again; if you used floppies, you'll be prompted for the correct disk. There are various self-explanatory options, including specifying various protocols, requiring encrypted authentication, and so forth. The key question, from a security standpoint, is whether remote clients will have access to the entire network or merely this computer. If you chose to install on the machine on which the Share Server runs, you are free to limit callers to this one computer.

Note

If you get the message The Windows NT network software must be installed before installing Remote Access it likely means that the NetBEUI protocol is either not installed, or it is but the Network applet in the Control Panel hasn't been informed. If you have replaced NetBEUI with some other protocol, such as TCP/IP, the message that you have no network software may be a head-scratcher. It's just NT's way of saying that you need NetBEUI.

When the installation is complete, you will have a new RAS program group, which includes the RAS Admin program that you must run to authorize any dial-in users.

Each user identity on the system is presented in the Remote Access Permissions dialog box. You can grant dial-in privileges to everyone at once by clicking the **Grant All** button, or you can click on a single user at a time and check the **Grant dialin** permission to user box.

Caution

If you click the **Grant All** button, you should specifically revoke the dial-in privilege from the Guest account. Allowing "guests" to access your server is a security breach waiting to happen. This issue is discussed in the next section, "Understanding Security Issues."

Tip

You can't begin to use RAS until you reboot the computer, but you can choose to restart at some point in the future to avoid a service interruption during a busy time.

Putting a LanRover remote access server on your network is a little more involved, naturally, and a software installation process similar to RAS must be followed for NetWare Connect. Refer to the product documentation to install and test whether the server-side software is working. If not, your incoming calls to the server's network modem may go unanswered.

Make sure that the Collabra Share Forum Server is running. Refer to Chapter 3, "Setting Up Collabra Share," for a description of how to use the Windows NT Control Panel to establish the Forum Server service.

Understanding Security Issues

Many of us read about "crackers," malicious hackers who try to penetrate computer systems to steal information or perpetrate electronic vandalism.



You think to yourself, "It can't happen to me." Fortunately, unlike many other calamities of life, it really *can't* happen to you unless you allow strangers to dial-in to your network.

Setting up a modem on your server that answers the phone when anyone calls leaves your network vulnerable to attack. You need to take all prudent precautions. Don't go overboard, but don't treat the potential for intrusion lightly.

For one thing, don't let the telephone company assign your modem a phone number that's only a few digits away from your main number. For example, Collabra's main number is (415) 940-6400 and the fax is 940-6440. However, the server number is *completely* different, like 833-0232 (numbers changed to protect the innocent). Something like 940-6450 would be too obvious. Be sure to keep your dial-in numbers confidential, unless you're sure your log-in procedures can't be cracked.

Crackers run software overnight that dials a range of phone numbers looking for computers; the software can tell the difference between people, fax machines, and your computer. If your server has a silent modem that is quiet until the log-in process is correctly initiated by the caller, you'll frustrate the cracker's attempt to guess your phone number.

The telephone lines themselves can be tapped. Many companies make sure the lines are encased in concrete or similarly protected. This is yet another good reason for fiber-optic cable—a tap can be detected electronically. The best protection against line tapping is probably using modem pairs that encrypt everything you put on the public telephone network. Of course, your LAN has the same vulnerability to tapping.

High-security installations make sure they know who is dialing-in by insisting on calling back a preset number for each log-in account. RAS and Shiva, for example, support this facility. It works fine for telecommuters dialing-in from home, but it makes things difficult for business travelers. Since the callback facility was already available, the vendors decided to stand security on its head and provide the ability for business travelers to specify a callback telephone number when they log-in. This is nice because now crackers as well as traveling businesspeople can have the company pick up the telephone bill.

If your organization is security-conscious already, you are likely to have professionals worrying about these issues with you. Your network's administrators are the best qualified to help you choose a remote access solution, to install it on the server, and establish policies regarding its use. If you're on your own, try to err on the side of caution.

From Here...

Remote access to your server enables many more people to use Collabra Share directly. You can involve clients, field personnel, and telecommuters in your virtual meetings and you can make it easier for everyone in your enterprise to share information. It's not always easy to set up, thanks to the myriad of hardware and network options, but you'll be glad you did.

Agents, background tasks that scan forums and synchronize them with external databases and your enterprise's electronic mail network, are another way to involve a wider audience. The next chapter, "Managing Agents," describes the scheduling and configuration program called the Agent Manager, which is included with each of the four kinds of agents sold by Collabra.

- For planning considerations when extending Share to everyone in the enterprise, refer to Chapter 2, "Planning a Company-wide Configuration."
- For more information about installing Share's Client/Server Edition, see Chapter 3, "Setting Up Collabra Share."
- For more ideas about how to include everyone in your enterprise, see Chapter 11, "Extending Your Reach."



Part IV

Managing Share

Category: World Wide Operation, WW Manufacturing, Cork, Ireland Mar, Tokyo Design/En, Austin Production, Seattle Design ar, Materials and Comp, Plastics

Title	Author
We need to schedule user test	Nigel Johnson
Other testing needs..	Yoonmelo High
Which test firms?	Laune O'Flynn
This will be a tough project	Takagi Intro
Summary	Alastair
Some attachments	Alastair
Word Example	Alastair

Title: This will be a tough project.
Takagi Intro - Millennia Industrial Design Team
 We need to focus on the component level that we have used

Manage Hotlists

Delete, Rename, Create

Icons: [Icons] [Browse Icons...] [Original List]

OK, Cancel, Help

- 18 Fine-tuning Workstation Options
- 19 Managing the Registry
- 20 Using Administration Tools

Title	Author	Date
Maverick's Product Line	David	7/24/95
BeachMail Proposal	Keith Higgins	7/24/95
I agree	Kim Krajers	7/24/95
No, it won't work	Laune O'Flynn	7/24/95
<I can't see it>	Terry Falk	7/24/95

I had this a long time ago. It didn't work then and I don't see anything different reference, hmm? <<Kim Krajers, 9/16/94>> Kim basically said it isn't year.

Window Search

Cascade, Tile Horizontal, Tile Vertical, Arrange Icons

1 Library, 2 HR Info Forum

Using Collabra Share 2.0

Fallingwater, First Newsfeed, HR Info, Inter Newsgr, Wainwright Building, World Wide

Open Forum, Enter, Cut, Copy, Remove Icon, Properties

Collabra Share Login without E-Mail

Welcome to Collabra Share

In order to start Collabra Share, you need to login to Share. Please enter your Share user name and Share password below.

User Name: Alastair

Password: ****

Chapter 18

Fine-tuning Workstation Options

IV

Managing Share

Collabra Share was designed to require a minimum of administration. Once installed, the system tends to manage itself. New users can begin participating simply by connecting to the network and running the end-user Setup program in the Collabra directory on the Net. Even managing synchronization between several local area networks (LANs) has been made easy using policy-based replication.

One way to make something easier to use is to limit the possible choices. Collabra Share keeps things simple from its Setup program to WinShare properties to the pushbutton Agent Manager. The Collabra system—Share, the Agent Manager, and the agents—has a few more options than it lets on; this chapter describes how to find and tune them to your advantage.

This chapter also covers how Collabra fits into a workstation environment. You learn about

- Supported hardware and software platforms
- Collabra system components and architecture
- Deciding between local or network operation
- What's in the standard Collabra directories
- Dedicating a workstation to agents
- Using and changing the public forum directory
- Understanding the full-text engine
- Viewing entries in WINSHARE.INI, the WinShare configuration file

This is the place for Moderators, administrators, and Information Systems (IS) professionals to take a graduate course in understanding how Collabra Share works on a workstation. This chapter helps you make your system optimal.

Understanding Platform Requirements

Collabra Share works on a wide variety of hardware and software platforms. It's particularly a Windows application—Microsoft Windows 3.1, Windows for Workgroups 3.11, or Windows NT—but that will change. A version for the Macintosh has been announced, and other platforms may follow.

As you can see from the illustrations in this book, Share is perfectly content running on Windows 95. However, a “real” Windows 95 version that runs in 32-bit mode (that is, a version on which Microsoft will permit a Windows 95 sticker) is likely before too long.

Minimum Hardware

The computer hardware that can run Share varies between the file sharing Workgroup Edition and the Client/Server Edition of the product. In general, Share is a Windows-based application that requires a computer capable of running Windows without difficulty. Any computer that can run Windows, a mail application, and a word processor can be used to run Share.

Workgroup Edition

A workstation running the file-sharing Workgroup Edition requires at least an Intel 386 processor, but a 486 is recommended and a Pentium would be best. You need at least 4M of memory, with 8M preferred and at least 8M of hard disk space free.

The network server on which you install Share and maintain the public forum directory should be a 486 processor running at 66 MHz (or better). This machine should have at least 8M of memory and you should reserve 12M of hard disk, not counting your forums.

Forums vary widely in size depending on usage, of course, but typical Share installations can use 50 to 100M of file-server disk space for forums.

Client/Server Edition

The workstation running the client part of the Client/Server Edition can be supported by an Intel 386 processor, but again, a 486 is recommended and

you need at least 4M of memory, but 8M is preferred. The client takes less disk space than the file-sharing version on the workstation: allowing only about seven megabytes.

The server portion of a client/server installation, however, requires a machine with some serious computing horsepower. The minimum system supported is a Pentium processor running at 90 MHz. You can run the Share server if the server computer has only 32M of memory, but 64M are recommended and 128M of memory is said to be "optimal." The server lacks a user interface—it consists only of the forum database server—therefore it only requires 1M of hard disk space, not counting forums.

To take advantage of the Client/Server Edition's built-in support for remote dial-in, you'll need additional hardware. You'll need to connect one or more modems or a dial-in router, such as a Shiva LanRover, to the server. For more information on remote dial-in, see Chapter 12, "Connecting Remotely."

Calculating Forum Disk Requirements

Every document, category, member or other similar object in a forum is stored on disk as an individual file. For discussion databases, you might assume that every posting would be 1 kilobyte (K) or less of text. In which case, a 2K disk file would hold it and the object's header information. Including the full-text indexes, a 1K document will take about 3K on the disk. Three hundred new, small postings a month translate to about 1 megabyte (M) of hard disk per month. (Remember, you can specify that old documents should be automatically deleted to recover disk space, as described in Chapter 10, "Moderating Forums.")

Older operating systems, like versions of Windows and Windows for Workgroups that are based on DOS, have an extra wrinkle called a *cluster factor*, which is a minimum allocation size for disk files; it varies based on the size of the hard disk. Disks with a capacity of 250 to 500M have a cluster size of 8K. Larger disks, up to a gigabyte, have a cluster size of 16K. This means that each 2K disk file is actually taking up 8K or even 16K.

Newer operating systems mitigate this problem somewhat. Novell NetWare 3.12 uses 4K clusters and NetWare 4.x supports *block suballocation* by default, which completely eliminates this overhead. (However, if you have turned off block suballocation, the problem is somewhat worse than it is with DOS.) OS/2's High-Performance File System (HPFS) has a 1K minimum file size, and the Windows NT File System (NTFS) varies from 512 bytes to 4K.

Note

Share forums use separate files for each object to simplify administration. When you delete a separate file, the operating system immediately makes the disk space available to all users. The design alternative, a single file containing many documents, might require a periodic purge or reclaim operation that Collabra Share avoids.

Determine your network server's cluster size before you estimate how much of your hard disk to devote to Share forums and how aggressive an aging policy to specify.

Supported Software Platforms

On this hardware, Collabra Share works on a variety of network operating systems or a combination of operating systems (Windows is, technically, an "operating environment") and specific network support. In addition, Collabra supports most Mail Application Programming Interface (MAPI) or VIM-compliant electronic mail systems.

Operating Systems

As mentioned earlier, Collabra Share runs on Microsoft Windows 3.1, Windows for Workgroups 3.11, Windows 95, and Windows NT. It does not run on plain DOS, and probably never will. Support for the Macintosh platform has been announced, and a UNIX version would be a logical addition at some point. Collabra supports many networks, including Novell NetWare 3.x or 4.x, Microsoft LAN Manager 2.2, and Banyan Vines 5.52.

Note

NetWare users need client software Version 3.03 or later because Collabra Share files use a convention called UNC, described in the section titled "Universal Naming Convention." Support for UNC is spotty in earlier versions of the Novell client. NetX, in particular, should be replaced with the NLM versions.

Mail Systems

Collabra Share works with any electronic mail system that supports a Mail Application Programming Interface (MAPI) or Vendor-Independent Messaging (VIM) interface. This requirement includes the best-selling mail packages, including Lotus cc:Mail (VIM), Microsoft Mail (MAPI), Novell GroupWise,

Banyan, and Lotus Notes Mail (VIM). Share also recognizes Common Mail Calls (CMC) mail interfaces, but few commercially available applications support CMC.

The industry seems to be standardizing on MAPI, particularly with Lotus providing MAPI access to its popular cc:Mail package. Collabra Share integrates better with Microsoft Mail because it allows support for piggybacked login and the addition of Share's button on the Mail toolbar, for example.

Reviewing System Components

You learned about the Collabra system architecture in Chapter 2, "Planning a Company-wide Configuration," so you're familiar with the basic components of the system. In this section, we'll go into more specifics about the WinShare application, agents, and the Agent Manager because certain optimizations have to do with particular components. The following are discussed:

- WinShare application
- Logical database
- Physical database engine
- Client/Server components
- Agents and the Agent Manager

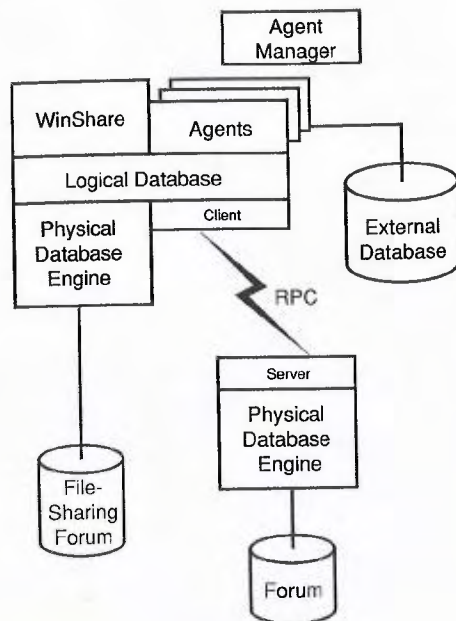
Figure 18.1 illustrates the relationships between components. Notice that forum databases can be managed by the physical database engine both locally with file sharing and over an RPC connection from client to server. WinShare presents the logical database, and agents connect the logical database with external databases.

WinShare

WinShare is the application program that runs on end-user workstations. Its use was described in some detail in earlier chapters, particularly Chapter 7, "Finding and Reading Documents." It is a forum database browser and editor with built-in support for various administration tasks. A companion, WINSHARE.HLP, provides a complete online reference manual and context-sensitive help for the application. (In addition, WSADMIN.HLP provides online reference and help for the Admin tools described in Chapter 20, "Using Administration Tools.")

Fig. 18.1

The Collabra Share system consists of several components.



WinShare executes on the workstation, but may reside on the server. In addition to forum databases, WinShare manages the local database of forum references called the *Library*. A single Library resides on each workstation in a file called WINSHARE.WS1. WinShare is guided by a configuration file called WINSHARE.INI, which is also workstation-specific.

Logical Database

Under the application, a set of Dynamically Linked Libraries (.DLLs) separates both the WinShare application and the agents from the actual physical database module. This *abstraction layer* insulates callers from knowing the specific format of the data on disk, or from caring whether the data is found in shared files or across an RPC connection to a server.

The WinShare application, all four agents—the Mail Agent, Replication Agent, Internet Newsgroup Agent, and the Agent for Lotus Notes—and Collabra's in-house testing utilities each interface with the logical database for all forum access.

Physical Database

Collabra Share is built on a custom-designed, object-oriented database that manages document, category, member, and other objects within a hierarchical collection called a *forum*. The purpose-built database module is optimized for high performance in WinShare at a slight cost to agent performance and disk space utilization.

The physical database includes portions of the full-text index engine. When a document is posted, the engine uses proprietary technology to index every word in the document, including embedded OLE objects.

The file-sharing Workgroup Edition includes the physical database module (FORUMDB.DLL) on each workstation. In the Client/Server Edition, however, the physical database library resides only on the server.

Client/Server Edition

The architecture of the Client/Server Edition of the product is only slightly different, as shown in Figure 18.2.

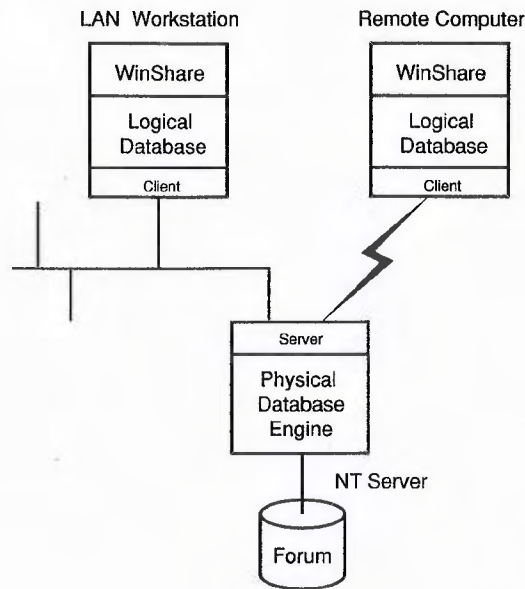


Fig. 18.2 The Client/Server Edition architecture connects the logical database on the client with a physical database engine on the server.

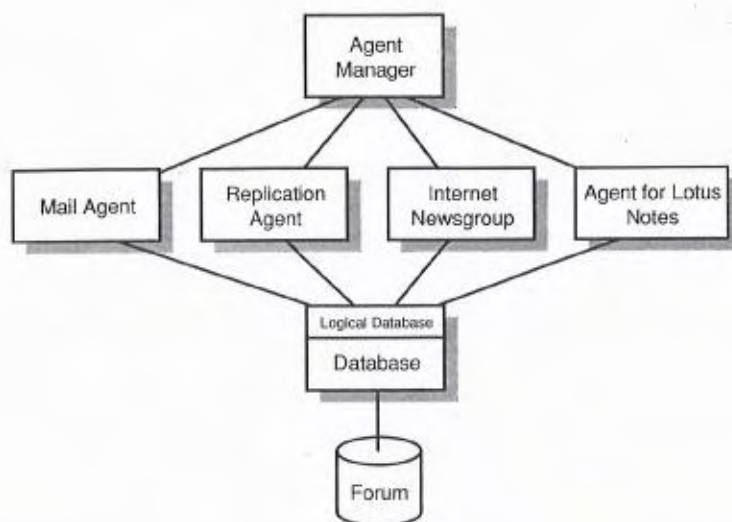
In the Client/Server Edition, the logical database on the workstation uses a small Client module to translate database requests into Remote Procedure Calls (RPC) to be transmitted to the Server. The Server module consists of a listener that interprets RPC commands for the physical database running on the Windows NT server.

Agents

The four Collabra agents—the Mail Agent, Replication Agent, Internet Newsgroup Agent, and the Agent for Lotus Notes—interface with the logical database component just as the WinShare application does. Agents, as shown in Figure 18.3, use the logical *database layer* to communicate with a physical database engine that manipulates forums. Agents connect forums with an

external database of some kind, such as an electronic mail inbox, a Notes database, or Internet newsgroups.

Fig. 18.3
Agents use the same logical database component as WinShare.



The Agent Manager is a stand-alone application (AMGR.EXE), that schedules any tasks connecting agents with specific forums. The Agent Manager launches the agents and refers them to a task-specific configuration file. You can also use the WinShare application to specify replication policies that the Agent Manager will read from the Share Registry. For more information on policy-based replication, refer to Chapter 15, "Replicating Forums."

Agents are currently available that link Collabra Share forums with electronic-mail post offices, with agents running on distant sites for purposes of wide-area synchronization, with Network News Transfer Protocol (NNTP) servers, and with Lotus Notes databases. An Agent Developer's Toolkit is available directly from Collabra, allowing you to create your own agents, linking your forums with any external database you choose.

Registry

The Registry is a special, inaccessible forum that is shared by the WinShare application and the Agent Manager. It contains information about all sites, forums, and members in a given enterprise. The Registry replicates to every site so that each has full information about the others.

Registry replication is initiated by creating a registry at one site and packaging the special forum into a single .PKG file, which can be easily mailed to a distant site. For more information about the Registry and packages, see Chapter 19, "Managing the Registry."

Understanding Installation Options

Installing Collabra Share, as described in Chapter 3, "Setting Up Collabra Share," is a two-step process. First, you install the product on the network. This becomes the initial site for later wide-area replication. The second step is for each end-user to run Setup from the central network directory.

The Share Administrator can give end users a choice: they can run the application from the files on the network or they can copy the files locally. Both have advantages. Either way, Collabra needs to change certain workstation parameters.

Running Files from the Network versus Copying Files Locally

Tell your users to run the Collabra Share files from the network if you want to simplify later software updates or if your workstations don't have much disk space. Program loading takes somewhat longer but you can exchange versions of the product in one step.

Each workstation's system files must still be checked by the Setup program, as described in the section titled "Changing System Files"; each workstation will have its own WINSHARE.WS1 library and WINSHARE.INI configuration file. The total impact is a few thousand bytes of disk space.

Collabra suggests that you allow 7M of disk space to install the Client/Server Edition client on a workstation, or 8M for the file-sharing version. Program loading, which occurs throughout a Share session as pieces of the application are swapped in and out of memory, will be faster if the executable files don't have to come across the network.

If you choose to copy files locally, the Setup program will ask you to approve or rename the standard directories:

C:\COLLABRA\BIN

C:\COLLABRA\FORUMS

C:\COLLABRA\REGISTRY

The contents of each is discussed in more detail shortly, in the section titled "Exploring the Standard Directories." If the directories you specify do not exist, Setup creates them (as you would expect).

Changing System Files

Like other Setup programs, Collabra's Setup modifies your AUTOEXEC.BAT and CONFIG.SYS files, but not much. It also upgrades your Windows system with the latest OLE 2.0 files. If either the AUTOEXEC.BAT or CONFIG.SYS file is changed, Setup will remind you that you must restart your computer for the changes to take effect. You may want to review the changes and modify these files manually.

Tip

The Windows SYSEDIT program lets you view and modify both the AUTOEXEC.BAT and CONFIG.SYS files at once.

CONFIG.SYS

Because of Collabra's use of one file per document or other forum object, Share uses more than a few file handles. Opening a forum, its internal indexes, the full-text indexes, a document, and its category requires a dozen file handles at least. For this reason, Setup recommends that your CONFIG.SYS file be set as follows:

```
FILES=100
```

The default, if your CONFIG.SYS file has no FILES= statement, is just 8. If you receive an Out of file handles error (-22) from Share (or another application), you can increase this number to a value up to 255.

Note

Applications sometimes report Out of file handles when the problem is really low memory. They sometimes behave as if memory is low when the actual problem is that no more Real-mode memory (below 640K) is available. If you suspect that you have file handles and memory available, don't trust the error message. Restarting the system and running fewer applications at once often cures these symptoms.

The following settings in CONFIG.SYS are not applicable to Windows 95, which automatically eliminates most DOS anachronisms. However, if you're using an older version of Windows, you should consider these optimizations:

- **BUFFERS=** More buffers yield better performance, in general, but a value higher than 10 can degrade SmartDrive performance.
- **FCBS=** Chances are that no application you'll run these days needs file control blocks. Certainly Share doesn't use them. The default is 4, so FCBS=1 will save some conventional memory.
- **LASTDRIVE=** If this is set to Z (the default) and you never use a drive letter greater than F, setting it to F can save a few bytes. Set LASTDRIVE to the last drive letter you actually use.

- **STACKS=** Setting this to 0,0 also saves some memory (about 2K).

Only the **FILES=** statement is critical, so that's all the Share Setup program modifies.

AUTOEXEC.BAT

The file-sharing version of Collabra Share requires, not surprisingly, that the operating system be configured to support file sharing. Windows 3.1 only shares files when a memory-resident program called **SHARE.EXE** is loaded at startup. Don't confuse this MS-DOS application with **WINSHARE.EXE** (although you couldn't be blamed if you did). Other flavors of Windows (Windows for Workgroups, Windows 95, Windows NT) support file sharing by default.

On Windows 3.1, the Setup program will add **SHARE** to your **AUTOEXEC.BAT** file if it doesn't find it. If you are running MS-DOS 6.1 or greater, you may want to load it in **CONFIG.SYS** instead; it saves a small amount of memory. To do so, remove (or *rem-out*) the **SHARE** line in **AUTOEXEC.BAT** and add the following to **CONFIG.SYS**:

```
INSTALL=C:\DOS\SHARE.EXE /F:5100 /L:500
```

The **PATH** statement in your **AUTOEXEC.BAT** file allows you to have **WINSHARE.EXE** in a separate directory from its DLL extensions. By default, both the **.EXE** and the **.DLLs** are stored in **COLLABRA\BIN**. If you separate them, be sure to add the **.DLL** directory (or directories) to the **PATH** statement.

If you are using SmartDrive, check to see if the **/X** option is specified. You may want to experiment; Collabra Share runs considerably faster with write-behind caching, which **/X** disables. However, another application may have specified **/X** for its own reasons so you'll want to proceed cautiously.

Installing OLE and Other Application Extensions

As an OLE 2.0 application, Collabra Share checks the workstation at Setup to ensure that the latest OLE 2.0 support files have been installed in the **WINDOWS\SYSTEM** directory. The specific files are these:

OLE2.DLL

OLE2.REG

OLE2CONV.DLL

OLE2DISP.DLL

OLE2NLS.DLL
 OLE2PROX.DLL
 COMPOBJ.DLL
 MFCOLEUI.DLL
 STDOLE.DLL
 STORAGE.DLL
 TYPELIB.DLL

If a file is missing or an older version is found, Setup asks for permission to overwrite the file. Make sure you're not running an application (such as Microsoft Office) that uses the OLE files when you set up Collabra Share.

Several other system files receive the same treatment. If they are missing or an older version is discovered, Setup asks to update them. Share checks the following system-extension .DLLs:

- CTL3D.DLL. Gives dialog boxes that "3-D" look.
- MAPI.DLL. Updates to the latest version, which fixes a known Mail problem.
- MSSFS.DLL. MS Mail Shared File System, also needed to fix a known problem with Microsoft Mail.

WIN.INI

Setup tries to detect the electronic mail in use on the workstation and adds the following to WIN.INI:

```
[Collabra Mail]
SendDocSys=
```

The value of SendDocSys is either VIM or MAPI. Setup tries VIM first, then looks for MAPI.

Share registers itself as OLE-aware by adding the following line to the [Embedded] section:

```
Share.Document.2=
  Share Document,Share
  Document,C:\COLLABRA\BIN\WINSHARE.EXE,picture
```

Modifying WINSHARE.INI Directly

The various settings and options you choose in the Share application are stored in a configuration file called WINSHARE.INI, which is stored in the WINDOWS directory. It is not intended for anyone to modify directly, it is just a text file.

Configuration files all consist of lines of the form: name=value, separated into named sections by lines like [Section Name]. The order of the sections doesn't matter, and the lines within a section can occur in any order as well, except in the case of duplicates, when the first name's value is used and subsequent values ignored.

[Share] Set to 1 by the client/server install, otherwise 0.
UseServer=0|1

Server= The name of the server (if UseServer=1).

Protocol= Server protocol (e.g., "ncacn_nb_nb")

Public= The public forum directory's UNC path.

RegistryPath= The directory that contains the Registry,
in UNC form.

LibraryFileVer2= The path to the Library file.

AllowAdmin=1 If this line appears, Share's File menu will
include the Admin submenu. End-users still
need the Administrator password and be
authorized in the Registry to access
these commands.

LoginWithUID=1 If this line appears, Share will prompt for
a .UID file rather than using the mail system
Share version 1.0 used .UID files
for user authentication; this option has
only a transitional value.

UserName= The user's name to display in the login
dialog (if LoginWithUID=1).

UserFile= The path to the .UID file (if LoginWithUID=1).

[Full Text] BinPath=	The path to the central TOPIC directories (e.g., C:\COLLABRA\BIN\TOPIC).
[Mail] SystemType=	The type detected at Setup (MAPI, VIM).
MailEXE=	The path and name of the Mail executable (e.g., C:\WINDOWS\MSMAIL.EXE).

Collabra Technical Support may suggest adding the following lines to your WINSHARE.INI:

```
[Forum DB]
Flags=1
```

Adding these lines causes the physical database layer to begin logging activity from this workstation in a file called BLACKBOX.LOG in each forum's directory. This log is truncated at 1M, but it is not subject to policy-based administration; you must delete it yourself. The format of the log makes it useful only for debugging a particular problem with the aid of Collabra Technical Support.

Other sections in the WINSHARE.INI file include [Setup], which contains paths used by the Setup program; [Layout], which remembers window placement from session to session; [Desktop Preferences], which stores your General Properties sheet choices; and [InProgress], which keeps track of pending draft documents.

Caution

Modifying WINSHARE.INI entries can cause problems that require you to reinstall Share on the workstation. It is easy to guess what a certain value might mean, such as NumUnreadDocs=. Setting this value to 0, however, does not mark all documents you might think as "Read". (It reflects the Number of Unread Documents check box in the General Properties Layout page.)

Exploring the Standard Directories

As mentioned, both the network and the workstation Setup programs suggest a directory structure like this:

```
C:\COLLABRA\BIN
C:\COLLABRA\FORUMS
C:\COLLABRA\REGISTRY
```


You might want to choose different directories, but making that decision is easier when you understand more about what goes where. For example, you might exclude a particular directory tree from your routine backup. In this case, install the Share executables (the \BIN directory) under this no-backup directory.

Executables and Application Extensions

The WinShare executables and application extensions are placed in the BIN directory, which you specify at Setup time. Table 18.1 shows some of the files you can expect after a network installation of the file-sharing version. These files and their sizes are approximate; subtotals for approximate size show the sizes of various components.

Table 18.1 Collabra Share Executables and Extensions

File	Approx. Size	Contents
Application		
WINSHARE.EXE	1,319K	Share application
WINSHARE.HLP	1,255K	Share help
WINSHAR0.EXE	186K	Initial sign on
VWDLL16.DLL	229K	Editor
COLLEC.DLL	130K	Registry manager
FMNOS.DLL	19K	Network operating system support
NWCALLS.DLL	145K	Novell NetWare interface
ICONDLG.DLL	27K	Icon support
VTSPELL.DLL	52K	Spelling checker
AMERICAN.DIC	259K	Spelling checker dictionary
SETUP.EXE	269K	End-user Setup program
Total	3,890K	

(continues)

Table 18.1 Continued		
File	Approx. Size	Contents
Logical Database		
FMUMW16.DLL	122K	Database redirector
FMDBVIEW.DLL	71K	View manager
Total	193K	
Physical Database		
FORUMDB.DLL	344K	Forum database manager
VDK112.DLL	827K	Full-text engine
Total	1,171K	
Mail System		
COLLML10.DLL	41K	Logical mail interface
CMAPIVIM.DLL	62K	Mail system redirector
SHRMMPOL.EXE	28K	Microsoft Mail poller
Total	131K	
Administration		
RECON.DLL	105K	Reconstructor
WSADMIN.HLP	311K	Admin-specific help
COLLBT10.DLL	34K	Reconstructor index manager
Total	450K	

You can see from this table why the Client/Server Edition requires about 1M less disk space on a workstation than the file-sharing Workgroup Edition. The Physical Database component is not installed in the Client/Server Edition.

The TOPIC directory installed under the BIN directory contains the central files needed by the full-text engine. The TOPIC subtree includes the following:

- English subdirectory (message files)
- Style subdirectory (central configuration files)
- Topic license files
- VDK10 license and configuration files

Customizing the full-text configuration is described in more detail in the upcoming section, "Tuning the Full-Text Engine."

Because forums are identified by icon, Collabra distributes about 800 public-domain icons in 17 categories such as Business, People, Animals, Places, and so on. You access these by clicking the Browse Icons button in the Select Forum Icon dialog box, as shown in Figure 18.4. You can add or delete files in the Icon directory to remove icons your users shouldn't use and to add icons such as your company's logo. You can create your own icons with third-party tools; services such as America Online have thousands of icons available for download. Another source is Microsoft's C:\WINDOWS\MORICONS.DLL.

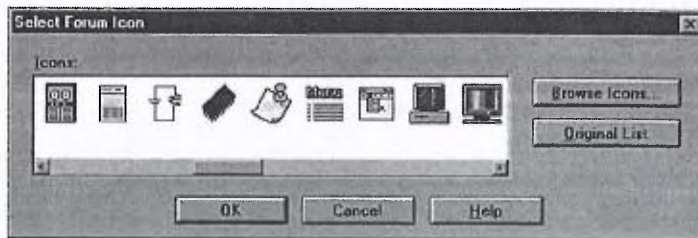


Fig. 18.4
Browse the
Collabra icons in
C:\COLLABRA\
BIN\ICONS.

You can save almost half a megabyte on workstations that are not permitted Administrator access by removing the Administration-specific files shown in Table 18.1. If you permit Administration from this workstation in the future, the files can be hand-copied from the network without needing to run Setup again.

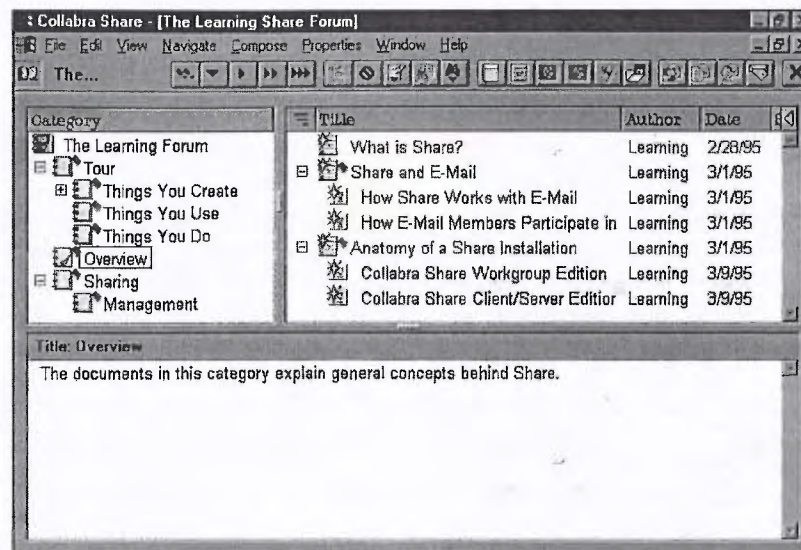
Sample Forums

You choose whether to install sample forums in C:\COLLABRA\FORUMS when you first run Setup on the network. The samples are a good idea.

One problem with Share is that it comes up empty; the Library initially contains no forums—and when you create a forum, it has no contents. Share, designed to bring people together, seems awfully lonely. The five sample forums listed below give your users a sense for how Share can be useful to them:

- Your user's first stop should be the Learning Share Forum (LEARNING.FM) shown in Figure 18.5. This forum was designed by the author of Collabra's Help system as a hands-on tour of the product's basic features (as well as a "readme" for more advanced tips). Categories include Things You Create, Things You Use, and Things You Do. Scanning the text of the sample documents suggests buttons to push and commands to try, leading you to other documents that continue your journey.

Fig. 18.5
The Learning Forum is designed to acquaint you with Share.



Fifteen minutes with this forum should acquaint anyone familiar with other Windows applications with the basic operation of Collabra Share. You can read the entire forum in less than an hour.

- The HR Info forum (HUMAN_RE.FM), shown in Figure 18.6, is an example of a *repository* forum. A repository is a collection of documents rather than a forum for discussions. It contains documents published by the mythical Millennia Aerospace Human Resources department.

This forum illustrates the use of various policies. Contributions to the forum are moderated, so you can't reply directly to the official documents. But anonymous postings are allowed in case someone has grievances to slip into the electronic suggestion box. Try the Compose, Start

Thread with Template command to see how the Job Posting template provides a form for a particular use. For more information about allowing anonymous postings, see Chapter 10, "Moderating Forums."

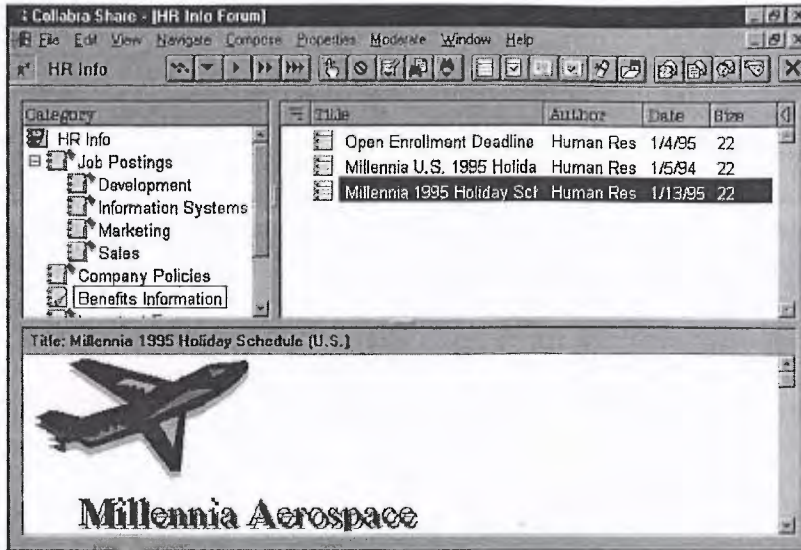


Fig. 18.6
Human Resources information is useful throughout an enterprise.

- Figure 18.7 shows the First! Newsfeed forum (NEWS.FM), an advertisement for a useful customized daily news service offered by Individual, Inc. of Cambridge, Massachusetts.

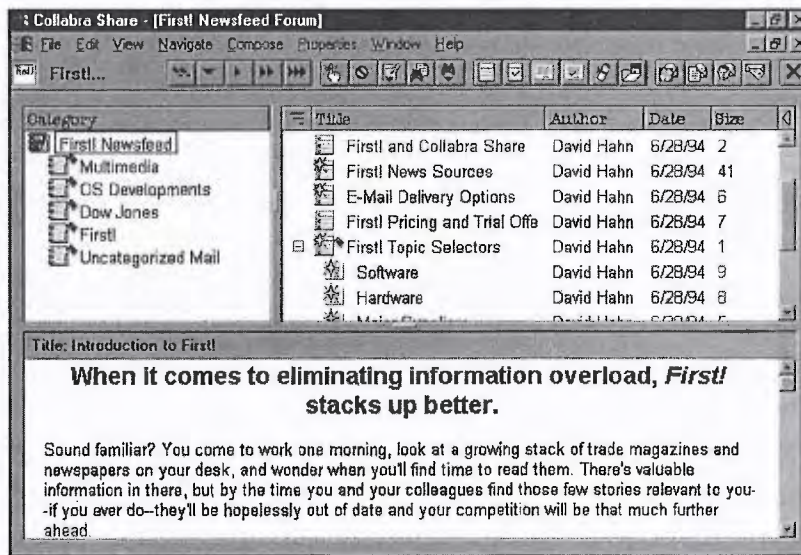


Fig. 18.7
You can use Share to publish a custom newspaper of only relevant information.

Individual's First! service converts your requests into an *interest profile*, which their SMART agent uses to electronically filter and route stories

of interest to your business. You can stay on top with less reading, and have relevant articles in electronic form for further use. Contact information for Individual can be found in the forum itself. You find news stories, delivered by the Collabra Share Mail Agent, in such categories as Dow Jones, OS Developments, and Multimedia. This forum also demonstrates what a mostly Mail-Agent-fed forum looks like. Notice the Uncategorized Mail category and that each category has keywords defined.

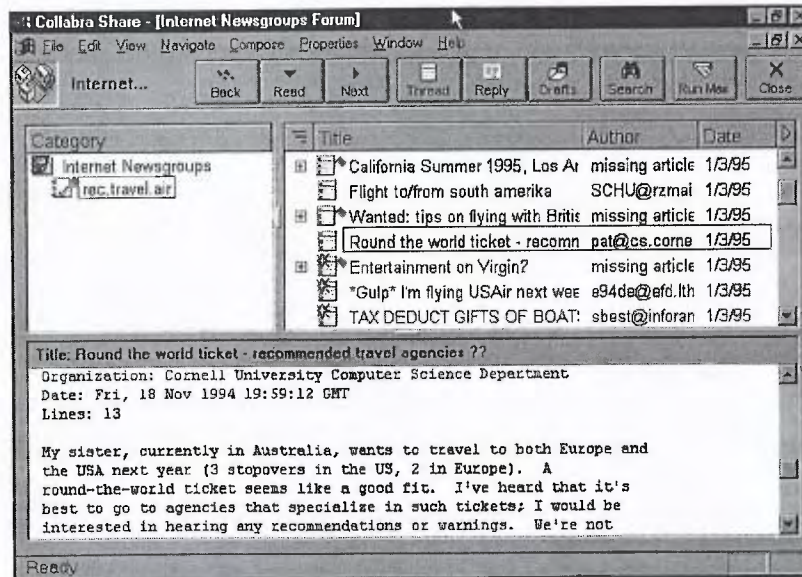
- The Internet Newsgroups forum (NEWSGROU.FM), shown in Figure 18.8, illustrates the connectivity of Collabra's Internet Newsgroup Agent. While the other sample forums have a few dozen documents in ten categories, this forum demonstrates how Share handles a large volume of documents—the fire hose effect, discussed in Chapter 1—by collecting almost 200 documents in just two categories:

comp.groupware

rec.travel.air

These articles are just a sampling from the Internet. As described in Chapter 16, "Linking with Internet Newsgroups," there are thousands of newsgroups you can connect to and a high volume of message traffic in each.

Fig. 18.8
Internet news-
groups can be
accessed with
Share's powerful
navigation and
management
facilities.



- In the World Wide Operations forum (WORLD_WI.FM), shown in Figure 18.9, fictitious Millennia Aerospace employees discuss various aspects of their company's business using embedded OLE objects, nested categories, and other Share features.

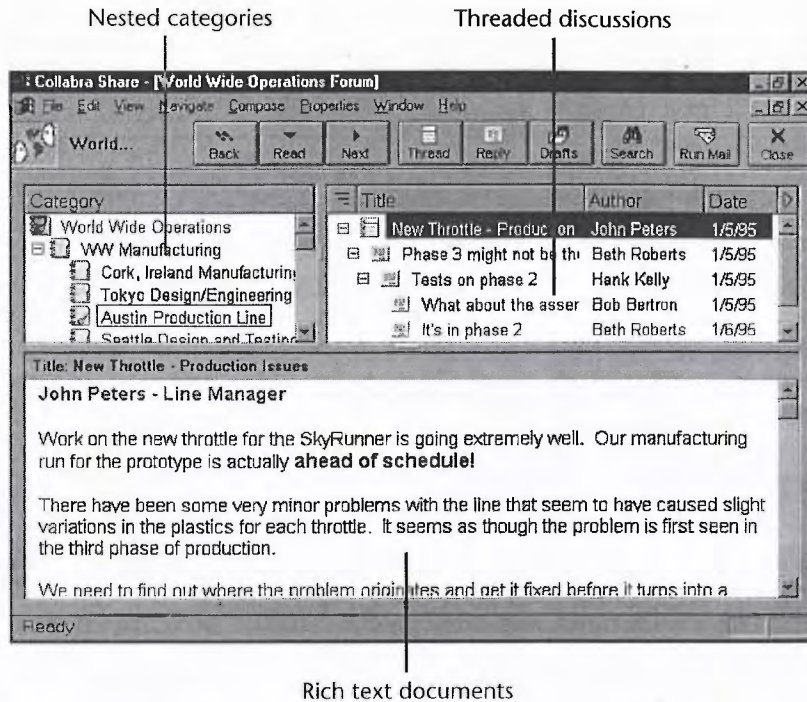


Fig. 18.9
The imaginary operations of the fictitious Millennia Aerospace Company.

The made-up Millennia Aerospace company uses Collabra Share to orchestrate the activities of its employees in the United States, Tokyo, Japan, and Cork, Ireland. Collabra's advertisements feature a forum dedicated to the *SkyRunner* aircraft project.

This forum is particularly useful for experimenting with the Ignore and Summarize Thread features because it has both nested categories and multiple levels of replies.

As you can see, a couple of the forums are advertisements for Collabra agents or third-party services. You might want to delete these forums if they are not appropriate.

The WINSHARE Directory

When your end-user runs the workstation Setup program, it will quietly create a WINSHARE directory under the user's WINDOWS directory and fill it with an empty Library file (WINSHARE.WS1).

When you customize your Library with a bitmap, a copy of the bitmap is stored here as LOGO.BMP.

Note

To set up a workstation with a standard Library, create the Library you want your users to see first, including the bitmap and title, and store it on the network. After you run Setup on a workstation, overwrite the files in the WINSHARE directory with the files on the network.

Forum Directories

A forum database is actually a tree of directories. To illustrate, assume you've created a new forum called "Sales" in your C:\COLLABRA\FORUMS directory.

First, Share creates a read-only *ticket* file with an .FM extension that describes the forum in summary:

```
C:\COLLABRA\FORUMS\SALES.FM
```

Next, a SALES directory (folder) is created in the FORUMS directory. The SALES directory will contain log files and other directories named with numbers, such as 0001. Each of these numbered directories will contain more directories, also named with numbers. These directories, in turn, will contain the actual data files. You guessed it: the data files are named with numbers as well. One of the key files in a forum is file 1, which contains the forum properties, among other things. Its path is:

```
C:\COLLABRA\FORUMS\SALES\0000\0000\0001
```

Other systems documents will be found in the 0000\0000 directory. A document you create will probably end up in a different folder, such as this one:

```
C:\COLLABRA\FORUMS\SALES\0010\0000\0029
```

(Further details about the ways in which files are stored in a forum are proprietary to Collabra.)

The full-text files for a particular forum are stored in a directory called simply V, as follows:

```
C:\COLLABRA\FORUMS\SALES\V
```

The V directory contains several subdirectories, such as PARTS, PDD, and WORK.

If you use the Reconstructor (one of the Admin tools), it will write a log of its actions in a file designated this way:

C:\COLLABRA\FORUMS\SALES\RECONST.LOG

If you are cleaning up your forums directory, you might want to delete any old log files that seem stale. Likewise, if you have turned off full-text indexing on a forum and the V directory still remains for some reason, you should delete it.

Collabra Share Registry

There is one special, inaccessible forum for each enterprise using Collabra Share called the *Registry*. Again, no one could blame you for confusing this with the Windows 95 Registry, but the two have nothing in common.

The Collabra Share Registry contains information about each *site* in the enterprise. A site is usually one LAN, as explained in Chapter 15, "Replicating Forums." The Registry lists every forum and every member in the enterprise as well, which allows it to support centralized administration of user licenses, member information, and forum replication. This chapter also describes how the Registry forum is replicated throughout the enterprise. There is only one Registry, but there may be many replicas of it. Admin tools (described in Chapter 20, "Using Administration Tools") can convert the Registry forum into a .PKG file for use in setting up a secondary site. The Replication Agent synchronizes changes among replicas of the Registry.

The Setup program, by default, creates a COLLABRA\REGISTRY directory and populates it with a REGISTRY forum. If you tell Setup this is a first-time installation, it will create an empty Registry. If you refer to a .PKG file instead, Setup will create a Registry based on the information in the package.

Understanding Agent Workstation Configuration

Unless you have a complex installation, you'll probably run all your agents on a single workstation. This workstation may not run the Share application at the same time as agents are running.

The agent Setup programs each suggest installing in a directory called AGENTMGR, named as follows:

C:\AGENTMGR\AMGR.EXE

C:\AGENTMGR\MAILAGT.EXE

C:\AGENTMGR\REPLIAGT.EXE

C:\AGENTMGR\INAGT.EXE

C:\AGENTMGR\nOTESAGT.EXE

You can choose other directories for your various agents, but it makes sense that they share a common location. The directory that contains the Agent Manager also receives the agent logs and configuration files, which have names like these

C:\AGENTMGR\AMGR0001.LOG

C:\AGENTMGR\AMGR0001.INI

Here the numbers represent task entries in the Agent Manager's list. You can use the Agent Manager to view log or configuration files so you can easily determine which number is associated with which task.

You normally use the Agent Manager's policy-based administration (as described in Chapter 13, "Managing Agents") to keep log files manageable by automatically deleting older entries. Since they are just text files, however, you may need to deal with them manually. For example, you might archive the logs to back up periodically. You can delete the log file and the Agent Manager creates a new one. Don't delete the configuration (.INI) files, however, or you'll have to set up the agent again.

Supporting the Public Forum Directory

An important aspect of sharing files among members of a group is agreement on where those files are stored. To make things simple, Collabra encourages you to put all your forums in a single directory on your network, but you are by no means required to do so.

Organizing your forums is as individual as arranging the files on your network's file servers. You might choose to create several subdirectories to categorize your forums. You might place Sales forums on the file server used by Sales and other forums on a common file server.

The available volumes on a network have names and each user can map a volume to one or more drive letters. For example, the SYS volume can be

mapped to drive S:. Your network administrator has probably established conventions so that everyone maps, for example, SYS to drive S:. In this way, rules and procedures can be promulgated to tell non-expert users to run S:\COLLABRA\BIN\SETUP without explaining how to connect to volume SYS.

Universal Naming Convention

It is often necessary to refer to a file without requiring a particular drive mapping. In fact, a particular server's file may still be accessible even if it is not mapped at all.

The Universal Naming Convention (UNC) is a way to refer to files without mapping drives. Most newer network operating systems, such as Windows 95, Windows for Workgroups, and Novell NetWare, support UNC; support is spotty in older versions like Windows 3.1 and Novell's NetX.

UNC paths begin with a double backslash, a server name, and an ordinary path with respect to that server. For example, a forum might be found on

```
\\SYS\COLLABRA\FORUMS\SALES.FM
```

Note that only absolute paths may be specified. If volume SYS is mapped to drive S: and \COLLABRA is the current directory on S:, you can say

```
S:FORUMS\SALES.FM
```

but with UNC paths, you have to specify every intervening directory name.

Collabra uses UNC paths to refer to all the forums in the Library; it automatically converts ordinary paths to UNC. Therefore, if you specify your public forum directory as S:\COLLABRA\FORUMS, Share stores the path \\SYS\COLLABRA\FORUMS instead. Later, if S: isn't mapped but SYS is still accessible, Share will magically continue to find its forums.

Switching Public Directories

Tell your users to set their public forum directories to the common forum directory on the network. The steps are simple, as follows:

1. Choose the Properties, General command.
2. Select the Locations tab on the sheet.
3. Enter the agreed-upon directory in the public forum directory field.

This way the Get Forum dialog box will always show public forums by default.

You can change the public forum directory setting at any time. If you expect to refer to more than one or two forums that are not in the common directory, it's worthwhile to change your Library setting. It's really just a Get Forum shortcut, because you can select different volumes and navigate to different directories using the Get Forum dialog box.

Using Get Forum to Access Private Forums

It's good to have a common FORUMS directory, as Setup suggests, but you can create forums anywhere on the network. If you want to keep your public forum directory referring to the common directory, you can still use the Get Forum dialog box to navigate to wherever your private forums are. Simply choose File, Get Forum.

Have you ever heard of "security through obscurity?" If you have a super-secret forum, you can encrypt it, set closed enrollment, and so forth—but if it is in the common directory, people will know of its existence. This includes crackers, who will try to get into a forum they think is interesting.

If you have a forum you don't want prying eyes to see, place and name it like this:

```
\\SYS\MSOFFICE\WINWORD\STARTUP\CONFIG17.FM
```

For more information on placing and naming forums, see Chapter 9, "Creating Forums."

Just as long as the system janitor won't accidentally delete it and all the authorized users have the proper network privileges on another directory, there's no reason to leave your private forum in plain view. On Windows for Workgroups and Windows 95, you can share a directory on your local hard disk and keep the forum there.

Tuning the Full-Text Engine

Collabra Share employs the basic index-and-search engine from Verity, Inc.'s award-winning TOPIC product. When you contribute a document in a forum in which full-text search is enabled, Share uses the Verity engine to add the words of the new document to the forum's index. If you are an expert with Verity's TOPIC product, you may be able to apply your knowledge toward fine-tuning Collabra's implementation.

Understanding a Forum's V Directory

Forums in which full-text search is enabled have a directory named V that contains at least five subdirectories. They are

ASSISTS

PARTS

PDD

STYLE

TRANS

Other, ephemeral subdirectories appear and disappear over time: MORGUE, TEMP, TOPICIDX, and WORK. The basic indexes are stored in files with .DID and .DDD extensions in the PARTS directory, but files in the other directories work in concert with these.

Using the TOPIC Directory

Each new forum with full-text indexing enabled receives a copy of the STYLE files in the central TOPIC directory. That is, the TOPIC directory is a prototype for future full-text indexes. If you modify the files residing in the central TOPIC\STYLE directory (in the same way you modify the files in a particular forum's STYLE directory, described in "Changing Style Files"), all subsequent forums will have the new configuration.

Modifying the TOPIC directory's STYLE files has no effect on any existing forums. To change existing forums, you must either modify the forum's STYLE files directly or turn off full-text indexing in the Forum Properties sheet and then turn it back on, which will cause Share to re-create the full-text index.

Caution

It is very important not to modify any of the TOPIC3x or VDK10.* files in the TOPIC directory. These files contain encryption and licensing keys that are not easily reproduced.

Changing Style Files

The behavior of the full-text engine with regard to Collabra Share forums has been set at the factory; as they say, "there are no user-serviceable parts inside." If you choose to modify these files, you are advised to keep a backup

copy of the original. You may have to turn full-text indexing off and back on and re-create the index entirely.

The files in a forum's V\STYLE directory are:

STYLE.DID

STYLE.DDD

STYLE.PDD

STYLE.PLC

STYLE.SID

STYLE.VGW

STYLE.WLD

If you have used Verity's full TOPIC product, you may already be familiar with these files. Because these text files define the contents of the index, changing them can confuse Verity to the point where the indexes become useless.

Note

Share doesn't open Verity's indexes until you search or post a document. If you make a change, don't assume that Verity is working just because Share opens your forum successfully.

If you are a bold experimenter, you might want to fool around with the values in the STYLE.PLC policy file. The entries in this file are in the following form:

```
/work_interval = 2  
/max_new_docs = 2
```

There are also comments preceded by pound signs (#). Default values are shown, but are commented out. You can uncomment them and change their values—if you are brave. You are in uncharted waters, but you can't get hurt too badly in the case of the STYLE.PLC file, unlike the other STYLE files. In the worst case, you can always turn off full-text indexing and turn it back on, which will rebuild that forum's V directory using the prototype files in the central TOPIC directory.

From Here...

This chapter has given you the broad overview of the architecture of the Collabra Share product, along with specifics concerning workstation configuration.

The platform requirements, the product components and their installation options were covered. You learned just what the Setup program puts on the disk and how it modifies system files on your behalf. You now understand how to optimize a workstation's use of Share, along with the details of how forums are organized on disk and where configuration information is stored.

- How to configure forum components throughout your enterprise is described in Chapter 2, "Planning a Company-wide Configuration."
- The details of installation are covered in Chapter 3, "Setting Up Collabra Share."
- For more information about the Share application, WINSHARE.EXE, in the context of Windows, refer to Chapter 5, "Looking at the Collabra Share Desktop."
- For a discussion of policy-based replication, see Chapter 15, "Replicating Forums."
- You learn more about the Collabra Share Registry in Chapter 19, "Managing the Registry."

Special Edition

USING COLLABRA SHARE[®] 2

*The secrets to unleashing the full power of Collabra Share 2—
at your fingertips!*

Que's *Special Edition Using Collabra Share 2* is the ultimate authority on how to set up, maintain, and get the most out of Collabra Share 2 and its e-mail, Internet, and Lotus Notes add-on components. Whatever the task at hand, this comprehensive book has all the answers you need to achieve immediate productivity.

A recognized expert guides you through the fundamentals of installation and maintenance, covering all the pertinent topics you need to know to get started. You'll learn all about client/server and file sharing versions as well as enterprise extensions for Internet and e-mail connectivity. You'll also receive detailed coverage of LAN/WAN hook-ups, remote connectivity, and the Lotus Notes gateway. Comprehensive coverage of the built-in administration tools, and a valuable optimization/minimization chapter all add up to a one-stop resource you won't want to be without!

Get the most out of Collabra Share 2 with Special Edition Using Collabra Share 2 from Que!

User Level

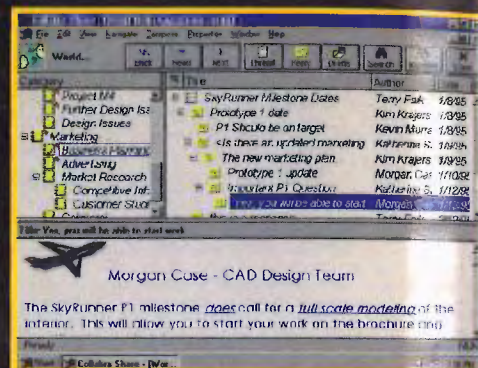
New Casual Accomplished Expert

Category: Groupware

Covers: Version 2 for Windows[®] 95

QUE[®]

Technical edit by Greg Potter,
manager of Collabra technical
publications



- Deploy groupware within your organization and enterprise
- Maximize your group productivity
- Manage add-on agents to connect your forums to Internet newsgroups and other external databases
- Moderate your discussion forums
- Get a hands-on approach with many practical examples, expert tips, and troubleshooting advice

\$34.99 USA / \$46.99 CAN / £32.49 Net UK

