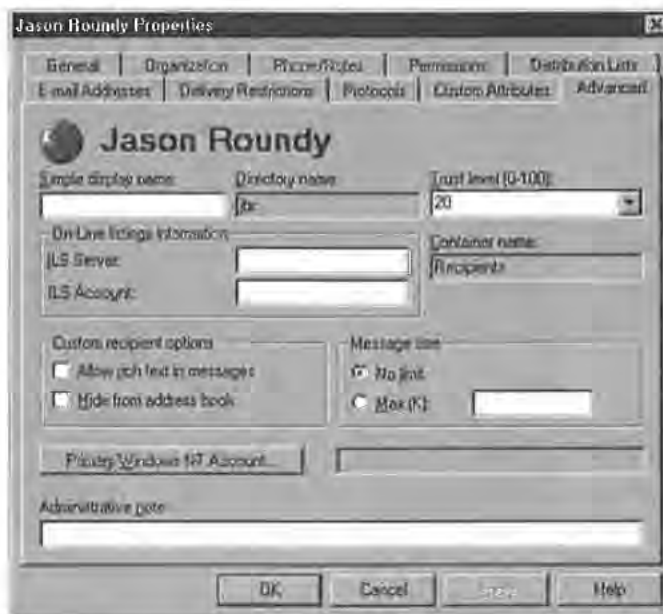


FIG. 16.21

You can set advanced properties for this recipient using the Advanced page.



The Protocols Page

Enter additional protocols data in the appropriate fields. The Protocols property page is functionally equivalent to a standard mailbox's Protocols property page.

NOTE Custom recipients do not have a Delivery Options property page. Therefore, you cannot specify alternate recipients. You also cannot give Send On Behalf privileges to that recipient. ■

Creating Distribution Lists

The following describes the function of the property pages for a Distribution List:

- **General Information**—The General Information property page records basic recipient information, such as name, owner, and members. The General Information property page also enables you to select the expansion server for the list.
- **Distribution Lists**—The Distribution Lists property page specifies the distribution lists to which the distribution list belongs. You can nest lists within each other to develop a hierarchy for message distribution.
- **Email Addresses**—The Email Addresses page enables you to create, modify, and delete alternate addresses for the distribution list.
- **Delivery Restrictions**—The page defines from which addresses this distribution list does or does not accept messages.
- **Custom Attributes**—On this page you can add up to ten administrator-defined fields that you use to keep additional information about the distribution list.

- **Advanced Page**—The page contains all the settings concerned with advanced administrator functions, such as trust levels, message sizes, reporting options, and hidden/not hidden status.

The General Page

The following describes the function of the General tab in the Distribution List property page:

1. Select the General tab in the Distribution List property page. The dialog box in Figure 16.22 appears.

FIG. 16.22

The General property page gives you control over several system-related mailbox functions.



2. Enter a Display Name for this distribution list, as you want it to appear in the address book.
3. Enter an Alias Name which you use to generate other email addresses for this distribution list.
4. The Owner box displays an Exchange user that has the right to modify a list's membership from within the Exchange client. Normally, only an administrator can modify a list's membership. Click Modify to open the Address Book dialog box. Select an owner from the list. Then click OK. Use the Clear button to remove that user as the distribution list owner.
5. The Members box lists the current distribution list membership. Click Modify to bring up an address list. You can then click ADD to put new members on the list. Members can be mailboxes, custom recipients, or other distribution lists.
6. You can also select an Expansion Server for this list. By default, Any Server In Site is selected, and the distribution list expands on the server from which the list was sent. Choose a specific server from the menu, and the distribution list will always expand on the chosen server.
7. Enter any additional notes in the Note box.

8. Click Apply to set the properties and continue with other ones. When you finish with all settings, click OK to return to the Administrator program.

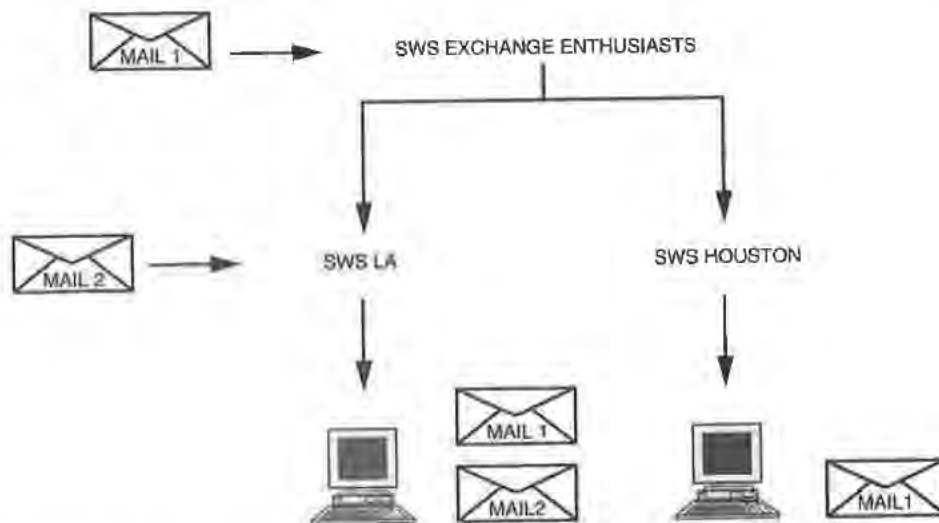
The Distribution Lists Page

You can nest distribution lists by making them members of other lists. Click the Modify button to add or delete other distribution lists of which the list is a member.

The following example illustrates how you can nest one list in another: Three new distribution lists are in the SWSPECTRUM organization. The first two lists are named SWS LA and SWS Houston. Each distribution list has a membership of users, including mailboxes and custom recipients. The third address list created is named SWS Exchange Enthusiasts. This list has only five members. The members are the other distribution lists along with three additional recipients who receive messages intended for these groups. Visually, the hierarchy resembles the one in Figure 16.23.

FIG. 16.23

Nested distribution lists can facilitate list management.



For comparison, examine the following three property sheets depicting this structure.

The SWS LA and SWS Houston Distribution Lists property sheets show the following membership information (see Figure 16.24).

The SWS Exchange Enthusiasts distribution list has both the SWS LA and SWS Houston and three additional recipients as its members. The property sheet for SWS Exchange Enthusiasts looks similar to Figure 16.25.

Recipients within SWS LA now receive messages addressed to the Exchange Enthusiasts as well. You can obtain a similar result by adding all the individual recipients to the Exchange Enthusiasts distribution list. However, you then have two lists in which to keep track of individual members. Nesting lists facilitates management by placing recipients into smaller, logical subdivisions.

FIG. 16.24

A Distribution list can have distribution list membership as well.



Part

III

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16

FIG. 16.25

Members of the top-level distribution list hierarchy.



The Email Addresses Page

Use the Email Addresses property page to establish alternate email addresses for the distribution list. The property page is functionally equivalent to a standard mailbox's Email Addresses property page (see Figure 16.26).

For example, jsmith@corpor.com, an Internet mail user, can address a message to ExchangeEnth@GARLAND.SWSPECTRUM.COM. In effect, the user can send the message to more than 50 members of this distribution list.

FIG. 16.26

The Email Addresses page displays alternate address data corresponding to all installed connectors and gateways.



The Delivery Restrictions Page

You can define other users within the Exchange organization who are not able to send messages to the distribution list. The Accept Messages From and Reject Messages From windows are functionally equivalent to a standard mailbox's or custom recipient's Delivery Restrictions property page.

The Custom Attributes Page

Using the Custom Attributes Page, you can enter additional custom recipient data in the appropriate fields. This property page is functionally equivalent to a standard mailbox's or custom recipient's Custom Attributes page.

The Advanced Page

The distribution list's Advanced property page (see Figure 16.27) is similar to Advanced property pages of other types of recipients. Simple display name, directory name, trust level, and message size are the same settings found on the Advanced property pages of other types of recipients. The following are options specific to the Distribution List property page:

- *Report to Distribution List Owner*—When checked, the option sends a message to the distribution list owner when a message that exceeds the specified size limit is sent to the distribution list. By default, the option is not checked.
- *Report to Message Originator*—When checked, the option sends a message back to the message originator. By default, the option is checked.
- *Enable Out of Office Messages to Originator*—When checked, the option responds with an out of office message for any registered user who is a member of the distribution. By default, the option is not checked.

FIG. 16.27

The distribution list Advanced property page displays some settings that are similar to those of other property pages.



- **Hide Distribution List from Address Book**—As with other recipients, the option prohibits the distribution list from appearing in the address book. Users need to know the name of the list to manually address it.
- **Hide Membership from Address Book**—When checked, the distribution list name itself displays in the address book. Users can, however, view the individual members of the list.

Creating and Configuring Public Folders

You create public folders from within the Microsoft Exchange Client. Then they are copied to a public information store. You handle general configuration through the Administrator program. The following is an overview of the Public Folder property pages:

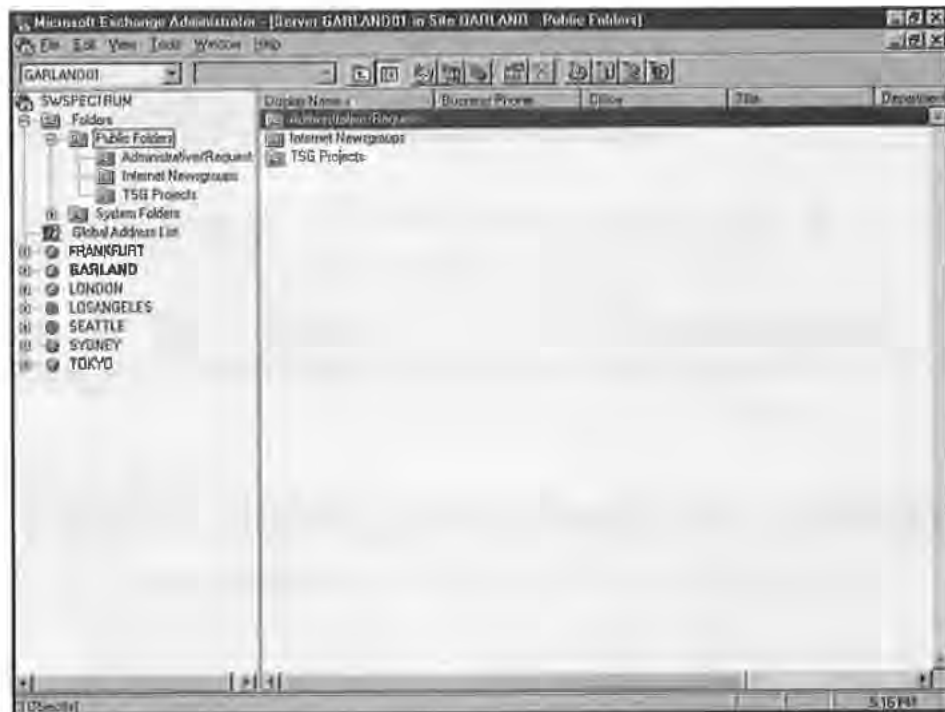
- **General Information on the Folder**—The page gives the folder's name and display name, age limits, and specific client permissions.
- **Replicas of the Folder**—Add, remove, or copies public folders on other servers within your organization.
- **Folder Replication Status**—You can view and track the folder replication process for troubleshooting purposes using the page.
- **Replication Schedule**—The page helps you specify at which times information within public folders replicate throughout your organization.
- **Distribution Lists**—A folder is a member of certain distribution lists. The page helps you specify to which lists the folder belongs. Any messages sent to the distribution list are also stored in this public folder.
- **Email Addresses**—The page enables you to create, modify, and delete alternate addresses for the public folder.

- *Custom Attributes*—The page enables you to add up to ten administrator-defined fields, which you use to keep additional information about the mailbox.
- *Limits*—Configure deleted item retention time, storage limits, and age limits on the page.
- *Advanced*—Contains all the settings concerned with advanced administrator functions, such as trust levels, replication messages importance, and hidden/not hidden status.

Public folders are listed near the top of the Administrator's object hierarchy (see Figure 16.28). To view the public folder hierarchy in your organization, click the Public Folders object in the Administrator program.

FIG. 16.28

View the public folders within your organization in the Administrator's hierarchy window.



To edit a specific folder within your site, open its property pages. You can set all the options presented in the preceding list. To edit a public folder's contents, you must use the Microsoft Exchange client program and have appropriate client permissions. Another section later in the chapter discusses assigning client permissions. The next section covers the options available on the Public Folder property pages.

The General Page

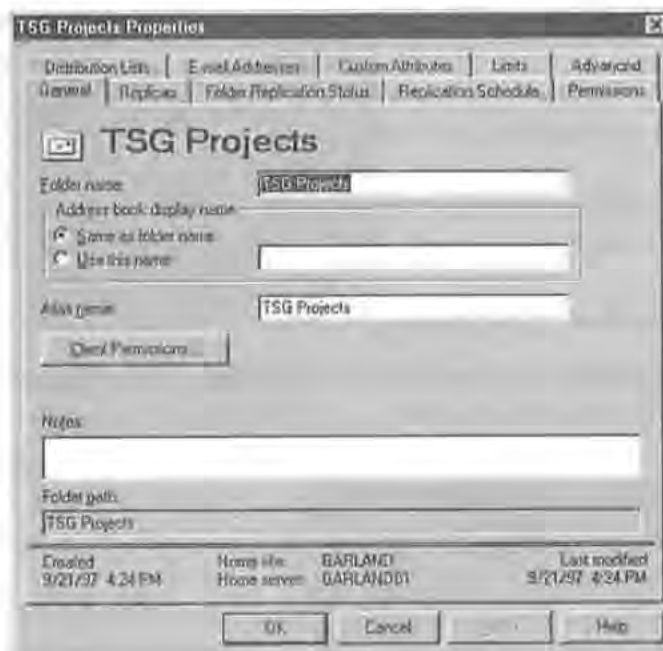
The public folder is a unique recipient in that many different users can view and edit the information that it receives. As with other recipient types, the General property page enables you to set names for this object, as well as other general administrative notes. However, you have some very specific settings for this recipient type.

The following steps describe in detail how to set General properties for the public folders:

1. Select the General tab of the Public Folder property pages. The dialog box in Figure 16.29 appears.
2. You can change the Folder Name in the appropriate box. The name is first assigned when the folder is created in the Microsoft Exchange Client program.
3. If you want to give the public folder a different display name for the address book, click the option button marked Use This Name under the heading Address Book Display Name. By default, the Same As Folder Name button is selected.
4. You must enter a required Alias name used to generate additional email addresses for the public folder.

FIG. 16.29

General properties for Public Folders are somewhat different from other recipient types.



5. Enter any additional notes in the Note space provided.
6. The Folder Path box displays the hierarchy of subfolders that leads to this public folder. If this is a main level folder and not a subfolder, only the folder's name displays.
7. Click Apply to set the properties and continue with other properties. When you finish with all the settings, click OK to return to the Administrator program.

Assigning Client Permissions The Client Permissions button on the General Properties page enables an administrator to set access permissions on Public Folders without needing to use the Outlook or Exchange Client.

The following are the roles available in the pull-down menu:

- **Owner**—The owner marks the user as folder owner. The role also gives the user complete permission on the folder.
- **Publishing Editor**—The editor has all create, edit, and delete permissions on a folder. The role also gives permission to create subfolders. The permission does not, however, mark the user as the owner.
- **Editor**—The role gives all create, edit, and delete permissions.
- **Publishing Author**—The publishing author has permission to create subfolders. Also, the role gives create, edit, and delete permission only to the publishing author's items.
- **Author**—The role gives permission to create, edit, and delete only the author's items.
- **Reviewer**—The reviewer has permission to read items.
- **Contributor**—The contributor has permission to create (although not to read) items.
- **None**—No permissions are given on this folder. You often use the role as a default to limit access to a specific public folder.

NOTE The pull-down menu can also display a role of Custom. Custom indicates that you have put together a combination of permissions that does not match one of the preceding roles. ■

Setting Up Permissions The following steps help you to set up permissions:

1. Click the Client Permissions button on the Public Folder General property page. The dialog box in Figure 16.30 appears:

FIG. 16.30

Client permissions determine what level of access a user has on a public folder.



The Name: and Role: columns display current users and their roles (see Figure 16.31). The Default role applies to any user not shown on this list.

2. Click Add to bring up the address list and add members to the Client Permissions list. Click a name. Then click Remove to delete the name from the list. Again, click a name. Then click Properties to bring up the user's property pages.
3. The Roles pull-down menu displays preset roles for certain types of users. Clicking the menu pulls down the following list (see Figure 16.31).

FIG. 16.31

You can use the Roles pull-down menu to give customized properties to a user.



Select a role from the menu. Note that the check boxes and option buttons reflect the change in access rights for each role.

4. Alternatively, you can customize a role by clicking the available option buttons and check boxes. If by clicking, you set a configuration that matches one of the predefined roles, the role displays in the Roles pop-up menu heading. For example, you select the Author permission from the menu. The boxes and buttons display the permissions for the user role Author. When you click the Create Sub-Folders button, the name in the Roles menu changes to Publishing Author.
5. Click OK to set the permissions and continue editing other public folder properties.

The following list details the check box definitions:

- **Create Items**—The check box gives permission to post items to the folder.
- **Read Items**—When you check the Read Items box, you give permission to open any item in a folder.
- **Create Subfolders**—Check this box to give permission to make a subfolder of the main public folder.
- **Folder Owner**—All permissions are given with respect to the folder.
- **Folder Contact**—A user with Folder Contact status receives automatic error or conflict messages from the folder, such as replication errors and oversize limit warnings. The user also receives users' requests for more access or other administrative tasks. Often, the owner and the contact are the same individual.

The following list outlines the scope of Edit permissions:

- *None*—Users cannot make any modification to existing public folder items.
- Users cannot delete any folder items, even ones they create themselves.
- *Own*—The user can edit only items that they create.
- *All*—The user can edit any folder item, regardless of its creator.

The following list details the scope of Delete permissions:

- *None*—Users cannot delete any folder item, even the items they create themselves.
- *Own*—Users can delete only items that they create.
- *All*—The user can delete any folder item, regardless of its creator.

The Replicas Page

The Replicas property page displays the destination servers to which a public folder replicates. You also can add or remove replicas throughout your organization using this window.

The following steps help you to configure replicas:

1. Select the Replicas tab from the public folder property sheets. The dialog box in Figure 16.32 appears:

FIG. 16.32

View the public folders within your organization in the Administrator's Hierarchy window.

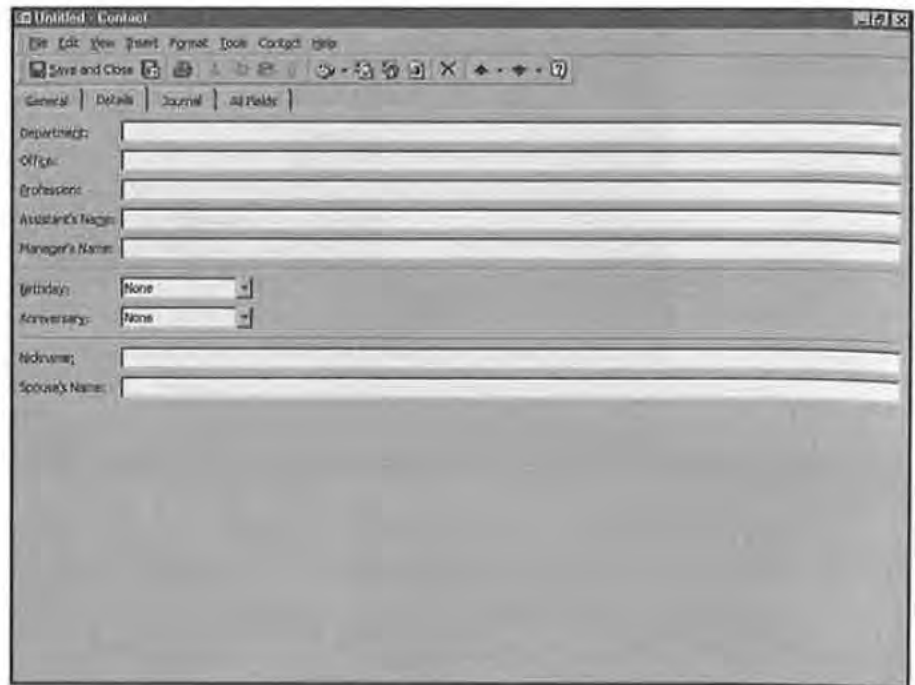


The left side of the screen labeled Servers lists all the public folders. The right side of the screen labeled Replicate folders lists all the servers to which the folder replicates.

2. Using the Site pull-down menu at the bottom of the property page, choose the site of the destination server. Click and highlight the desired server from the list of Exchange Servers on the left side of the window.
3. Click Add to include that server in the replication list.
4. To remove a server from the replication process, click its name on the right window. Then click Remove.
5. Click Apply to set the properties and continue with other properties. When you finish with all settings, click OK to return to the Administrator program.

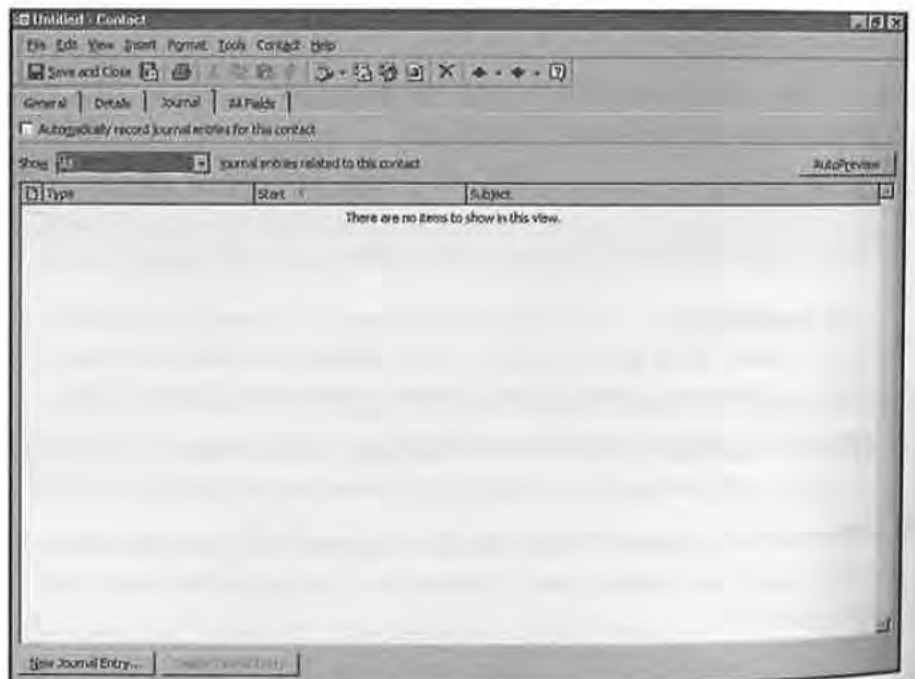
The Replicate Folders To box should now list every server to which you want the particular public folder replicated. If not, repeat the preceding steps until you select all desired Exchange Servers. ●

FIG. 30.12
Viewing the Details
page.



After you have configured all of the important and useful information for yourself, be sure to click **Save and Close** to finish adding in your new contact.

FIG. 30.13
Viewing all journal
entries for your contact.



Viewing Contacts

FIG. 30.14

A display of available fields for your contacts.

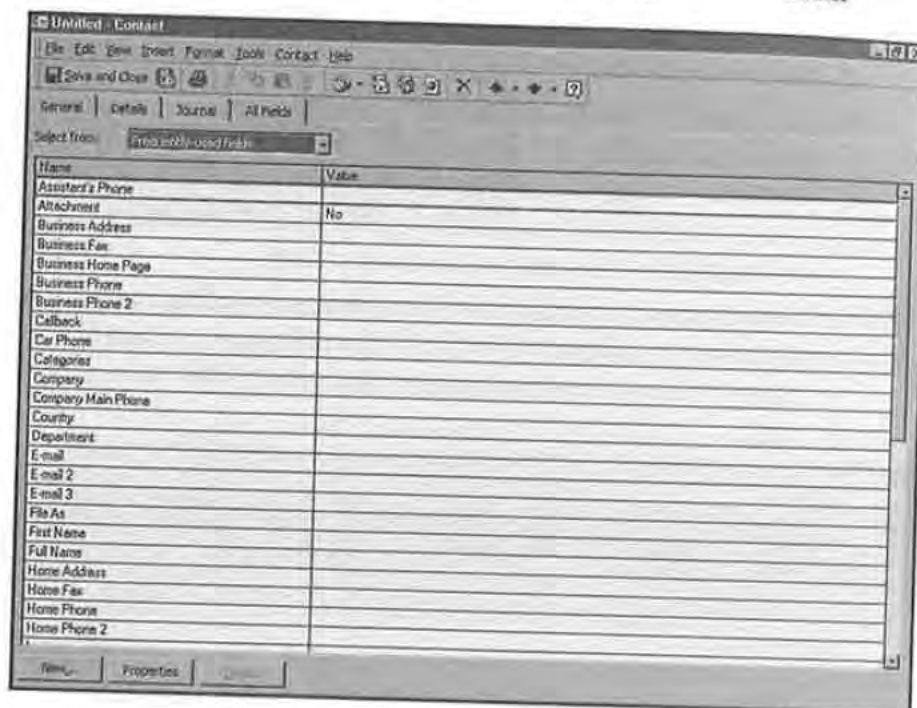


Table 30.5 displays a list of predefined views to see your contacts' information.

View	Display Results
	Individual cards with phone numbers such

country.

Suppose you want to change the way you that is not set in the default views availabl view that is more useful.

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3. In the Name of New View box, enter the name of this new view.
4. In the Type of View box, choose the type of display in which you want to see the view.
5. In the Can Be Used On box, choose who and when this view can be displayed.
6. In the View Settings dialog box, click Fields to adjust the fields for the new view.
7. You can add fields from the Available Fields list to the Show These Fields in This View list by clicking the desired field and then clicking Add. If a field is not displayed in the Available Fields, you can use the drop-down list under Select Available Fields to select more fields. If you want to create a new field, choose the New Field button and enter the appropriate information for the new field.
8. In the Show These Fields In This Order box, you can change the order of the fields displayed by clicking the field and then clicking the Move Up or Move Down button to change the order of importance of that field.
9. When you are finished configuring all views, click OK.

Importing Contacts from Personal Address Book

If you worked with the Exchange Client (Windows 95, Windows NT 4.0, Exchange Client 5.0) prior to moving to Outlook, you can import your old Personal Address Book into your Outlook Contacts folder.

1. Under the File menu, click Import and Export.
2. In the Import and Export Wizard dialog box, highlight Import from Schedule+ or from Another Program or File, and click Next (see Figure 30.15).
3. In the box under Select File Type to Import From, click Personal Address Book and click Next.
4. In the box under Select Destination Folder, click Contacts and then click Next.
5. Click Finish to start importing data.

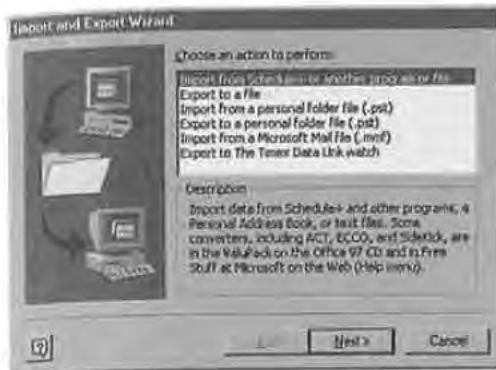
Deleted Item Recovery

Deleted Item Recovery is one of the new Exchange Server 5.5 enhancements that Outlook 5.0 was designed to deliver. This feature takes message deletion from a two-stage process to a three-stage process and puts additional control in the hands of the user. This section explains the steps involved in using this new functionality.

Figure 30.16 shows a Deleted Items folder with two items in it. These items are normally deleted upon exit or may be emptied manually if a user is cleaning house.

In Figure 30.17, the items are deleted and the folder is empty. Figure 30.18 shows the Deleted Items button at the far right of the toolbar.

FIG. 30.15
The Import and Export Wizard dialog box.



Clicking the button brings up the Recover Deleted Items window (Figure 30.19), from which you can select multiple items and click Recover Selected Items. The items are then returned to your Deleted Items folder from which you can use them again.

FIG. 30.16
The messages in the Deleted Items folder.

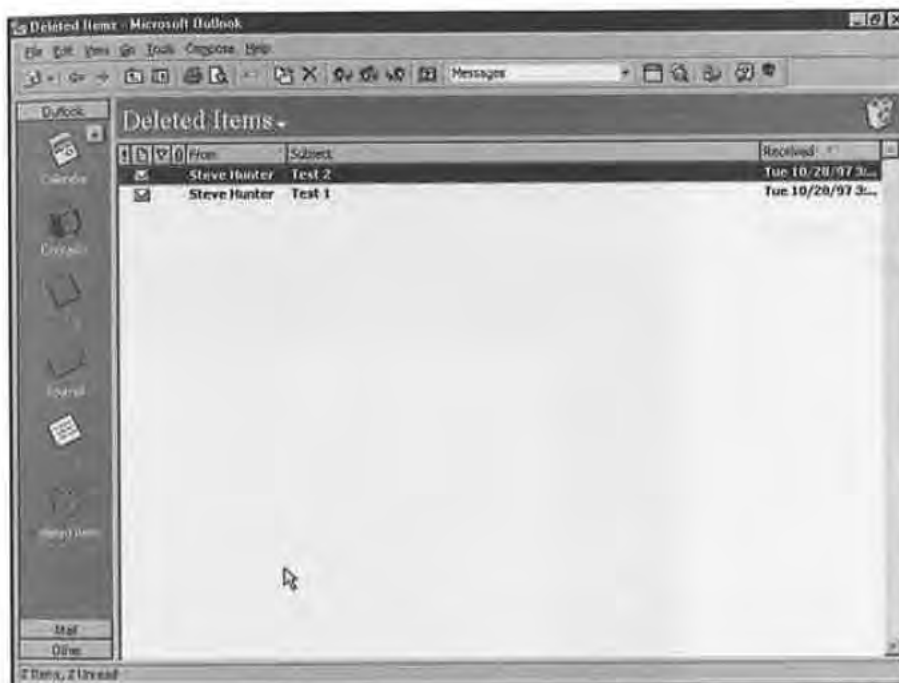
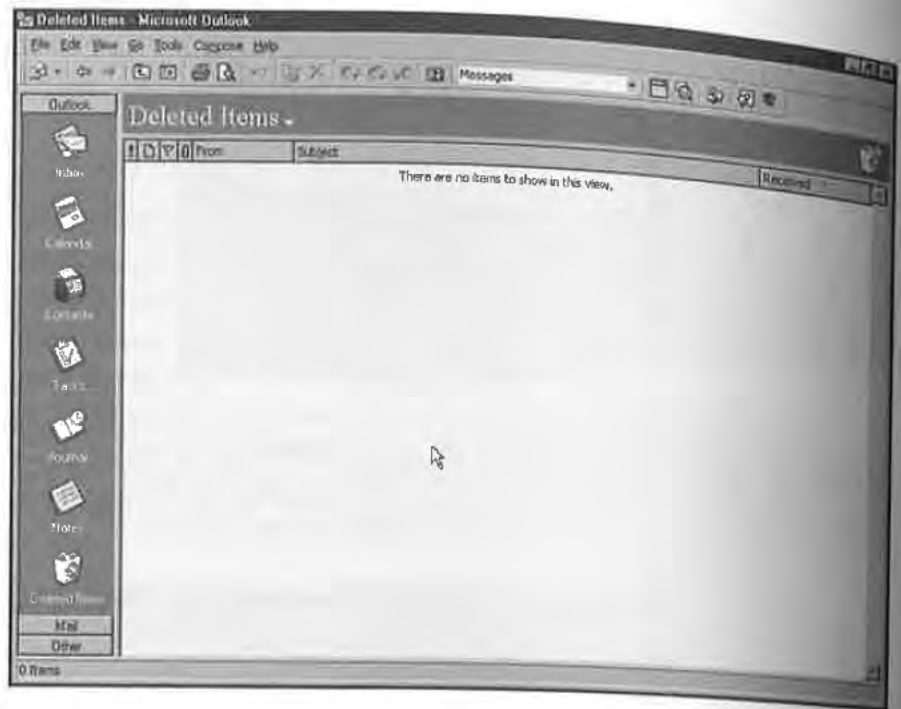


FIG. 30.17

The messages have been deleted.

**FIG. 30.18**

The Recover Deleted Items button.

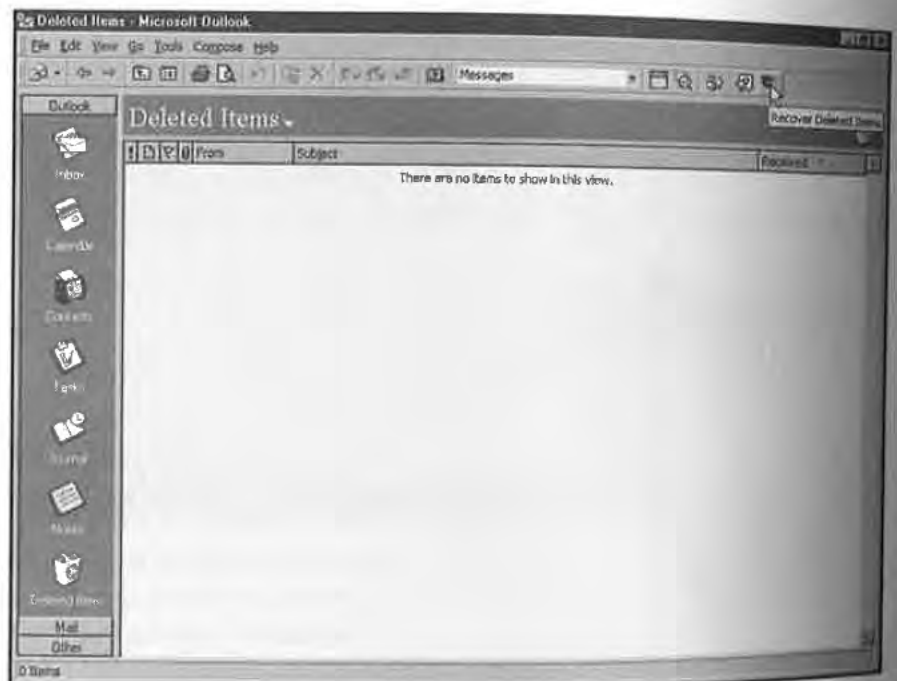


FIG. 30.19
The Recover Deleted
Items window.



FIG. 31.6

Configuring items and contacts to be automatically recorded in Journal.



3. In the box under **Automatically Record These Items**, click the items you want automatically recorded for the contacts that you will choose.
4. In the box under **For These Contacts**, select the contacts you want to record in Journal.
5. In the box under **Also Record Files From**, select the Microsoft products you want to record in Journal.
6. Click **AutoArchive Journal Entries** if you want to set the options for automatically archiving your journal entries after a specific duration (see Figure 31.7).

FIG. 31.7

Setting the amount of time to elapse before archiving Journal entries.

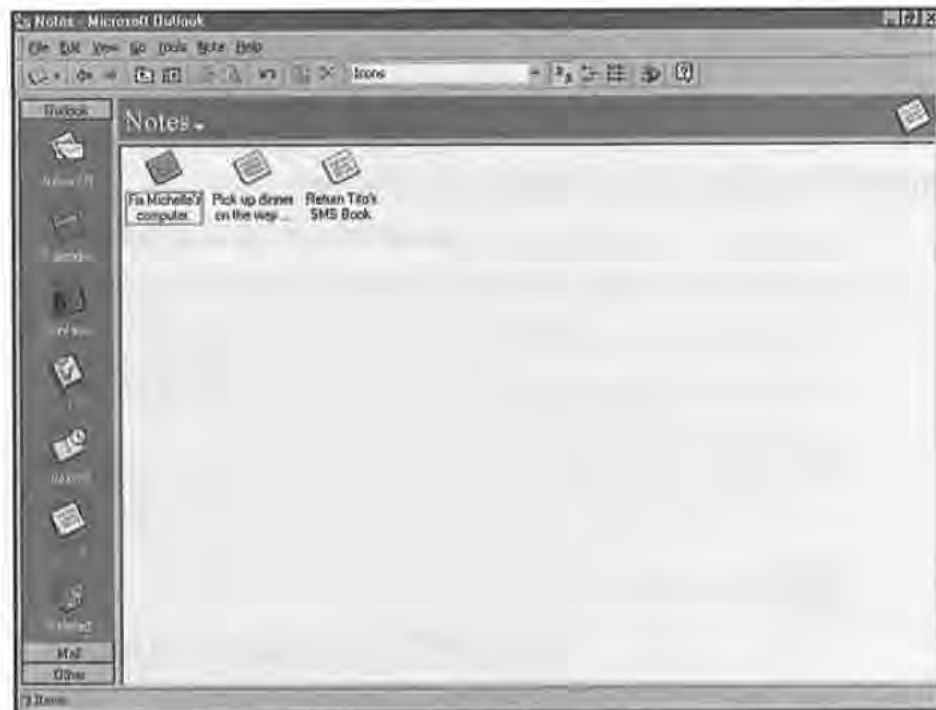


Using Notes

Notes can be very useful in helping you remember things. Just like the popular paper sticky notes, you can use Notes in Outlook to write down reminders for yourself, just as you would with paper.

To work with Notes in Outlook, click the Notes button on the Outlook bar (see Figure 31.8). To create a new note, select Note and then click New Note. You also can press Ctrl+Shift+N from anywhere within Outlook instead. The Notes Information Viewer opens. You can now type in any quick reminders, questions, or ideas. The note displays over whichever part of Outlook you are currently in. Type your comments in the note and press Escape. Outlook automatically saves the note in your Notes folder. Next time you bring up Notes, your message will appear.

FIG. 31.8
Sample notes in Notes
folder.



Notes are yellow by default, but you can change the color to blue, green, pink, or white to color code your messages. To change the color of your note, right-click the note you want to change. To change the color of a new note, click the icon at the top left corner of the note, choose Color in the menu, and select the new color from the list displayed.

Profiles and Information Services

Outlook is very flexible and can be used by more than one person or possess multiple configurations per user. This is accomplished with Profiles. Outlook can also be used to access multiple sources of information. This option is configured through a feature called Information Services.

Introduction to Profiles

Generally, the profile you create during installation is the only profile you will need, unless one of these situations occurs:

- More than one person uses the same computer. Each person should have a profile to keep mail private and secure.
- You need to work with a different set of services. You can create an additional profile with those custom services.

NOTE You can start Outlook with the default profile you have specified. You can also be prompted to select a profile each time you start Outlook. 

TIP

Being prompted to select a profile is a good idea when you use multiple profiles, or when there are multiple users per computer.

Understanding Information Services

Information Services provide for Outlook's great flexibility because they do the following:

- Control how your messaging applications address and route your mail.
- Enable you to modify where your mail and folders are stored.
- Specify the location for incoming mail, your Personal Address Book, and any sets of personal folders you have created.
- Enable you to send faxes or connect to other mail systems such as Exchange, Microsoft Mail, the Internet, or a variety of MAPI-enabled mail systems.

NOTE Before you can use an information service, you must add it to an active profile. 

Working with Delegates

In Outlook, you can set up delegates to manage resources such as conference rooms, office equipment, and so on. These resources can be managed manually (making the delegate fully responsible for their availability) or automatically, depending on your organization's requirements. Since a resource cannot respond to any requests for its use, you can establish a delegate to take care of booking the resource for a particular meeting. To create a delegate, perform the following steps:

1. Open Outlook using the profile set up for the resource account.
2. Under the Tools menu, click Options.
3. In the Options dialog box, click the Delegates tab.
4. Click Add to assign a delegate to the resource account.

5. In the Add Users dialog box, choose a delegate and then click OK.
6. The Delegate Permissions dialog box appears and you can set up any additional permissions for the user.
7. Click OK when you are finished. This brings you back to the Delegates page.
8. In the Delegates page, click Send Meeting Requests and Responses Only to My Delegates, Not to Me checkbox.
9. Click OK to save these settings for the new delegate.

At this point, all meeting requests involving this resource are automatically forwarded to the delegate.

You can also set up the resource account to be booked on a first-come, first-served basis. This would fully automate the process of booking a resource. To override any advanced bookings, however, you need to contact the delegate or the administrator since they are the only ones with access to the resource account.

1. Open Outlook with the profile set up for the resource account.
2. Under the Tools menu, click Options.
3. In the Options dialog box, click the E-mail tab.
4. In the Settings for Automatic Processing of Mail section, make sure the Process Requests and Responses on Arrival checkbox is selected.
5. In the Options dialog box, click the Calendar tab.
6. Under the Calendar tab, click the Advanced Scheduling tab.
7. In the Processing of Meeting Requests section, select the options that need to be handled automatically.
8. After selecting the appropriate options, click OK.

Working with Public Folders Offline

If your Exchange organization uses public folders, you can work with some or all of these folders while you are offline. This feature is very useful for organizations that keep documents on the server. This enables users who work with offline folders to be continuously updated with information that is added to public folders. Also, this is a great way for you to make changes to documents while you are offline, and have those changes automatically updated when you connect online.

Under public folders, you will find a folder called Favorites. Store all the public folders you want to view offline here. To add these folders, follow these steps:

1. Under Public Folders, open All Public Folders.
2. Select the folder you want available when you are offline.
3. Under the File menu, choose Folder and click Add to Public Folder Favorites.

4. In the Add to Favorites dialog box, you can change the name of the folder. After choosing a name for this folder, click Add.
5. Under Public Folder Favorites, choose the folder you just added.
6. Under the File menu, choose Folder and click Properties
7. In the Properties dialog box, click the Synchronization tab.
8. In the This Folder Is Available box, click When Offline or Online.
9. Click OK to confirm that this folder is now available to you offline.

Web Outlook View

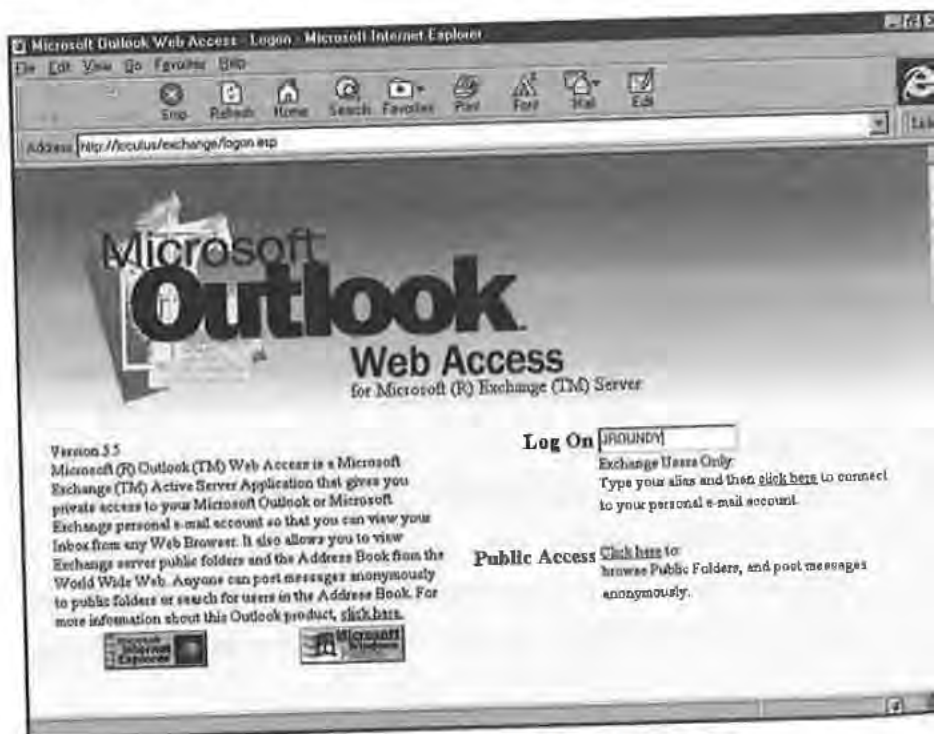
Outlook Web Access is an enhanced feature of Exchange Server 5.5. This feature is greatly improved from the Active Server component of 5.0 for users needing to attach to the server without having to use the full-featured Outlook client. Outlook Web Access is very practical for someone who wants to use a computer with Internet access to quickly and efficiently check e-mail. Your organization can also utilize Outlook Web Access on computers that cannot run the Outlook client and need an alternative to attaching to the Exchange Server for secure access to mailboxes and public folders, such as UNIX or Macintosh clients.

Messaging with Outlook Web Access

In Outlook Web Access, you can access your mailbox on the Exchange Server to send messages and read messages in your Inbox. Contact your administrator for details on how to log to your Exchange Server from your Web browser. Once you pass the security set up by your network administrator, you receive the login screen (see Figure 31.9).

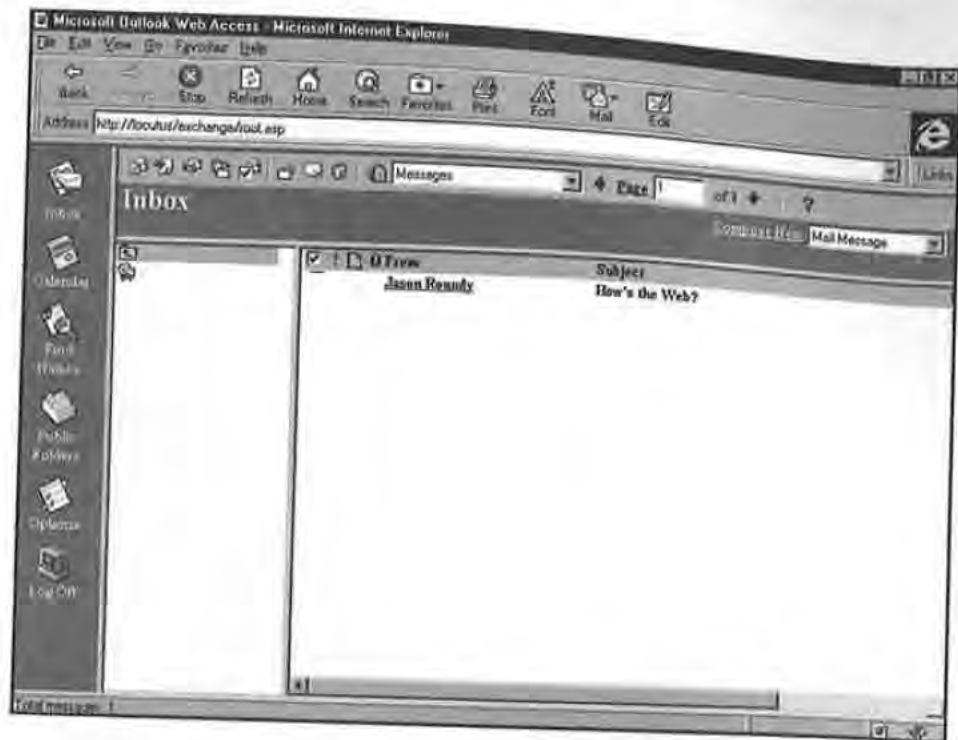
FIG. 31.9

User login to mailbox in Web Outlook view.



After successfully logging in to your mailbox, you see the current contents of your Inbox through Outlook Web Access (see Figure 31.10).

FIG. 31.10
Viewing the Inbox in
Web Outlook view.



Creating Messages In the Inbox of Outlook Web Access, click Send New Message. A New Message form appears, which is similar to the Mail form in Outlook (see Figure 31.11). You have several options to configure before sending the message:

- **To:** This box contains a list of the main recipients of your message.
- **Cc:** Enter the recipients that need a carbon copy of the message.

NOTE When you enter a name in either of the above boxes, you can type in the Display Name of the recipient in your Exchange organization or the SMTP/Internet address for all other recipients.

- **Subject:** You can add a brief description of your message here.
- **Message:** Type in your full text message here.
- **Attachments:** These are files you want to send with your message (see Figure 31.12).

On the Attachments page, type a path to the files you want to attach to your message. On the Options page, configure read and delivery receipts and the use of BCCs (see Figure 31.13).

FIG. 31.11
New Message form.



FIG. 31.12
Setting attachments in
your message.



When you are finished filling out the form, you can send or cancel it.

Reading Messages You can open a message in your Inbox by clicking the sender in the From column (see Figure 31.14). After reading the message, you have several options to further handle this message:

- **Reply:** When you choose this option, you send a reply to only the sender of the original message.
- **Reply to All:** This option is similar to Reply, but the reply is sent to all recipients who received this message.

FIG. 31.13

Configuring options for read & delivery receipts and the use of BCCs.



- **Reply to Folder:** This option enables you to post your response to a folder.
- **Forward:** You can forward this message to another recipient.
- **Move to Folder:** You can move the current message to any folder available to you on the Exchange Server. You need to choose a folder and then verify that you want to move the message to that folder.
- **Delete:** This option deletes the message from your Inbox.
- **Previous:** This option takes you to the previous message in your Inbox.
- **Next:** This option takes you to the next message in your Inbox.
- **Help:** Enables you to access online help

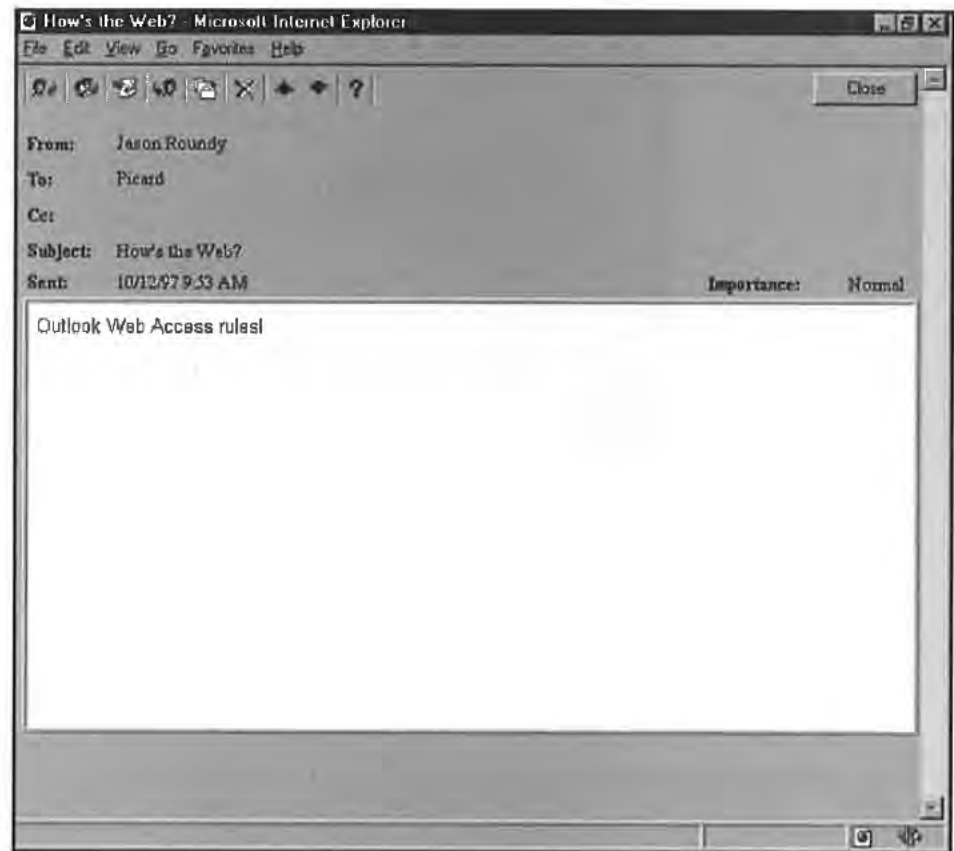
Public Folders

You can access public folders as easily as your mailbox after you log in to your Exchange Server over Outlook Web Access. Once the server has authenticated you, you can start posting and reading items stored in the public folders (see Figure 31.15). The following sections provide a basic guide for you to manipulate public folders.

Post New Item From Outlook Web Access, you can post a new item to a public folder. First you need to select the correct public folder to which you want to post information (see Figure 31.16).

FIG. 31.14

Reading a message in your Inbox.

**FIG. 31.15**

Public folders viewed through Outlook Web Access.

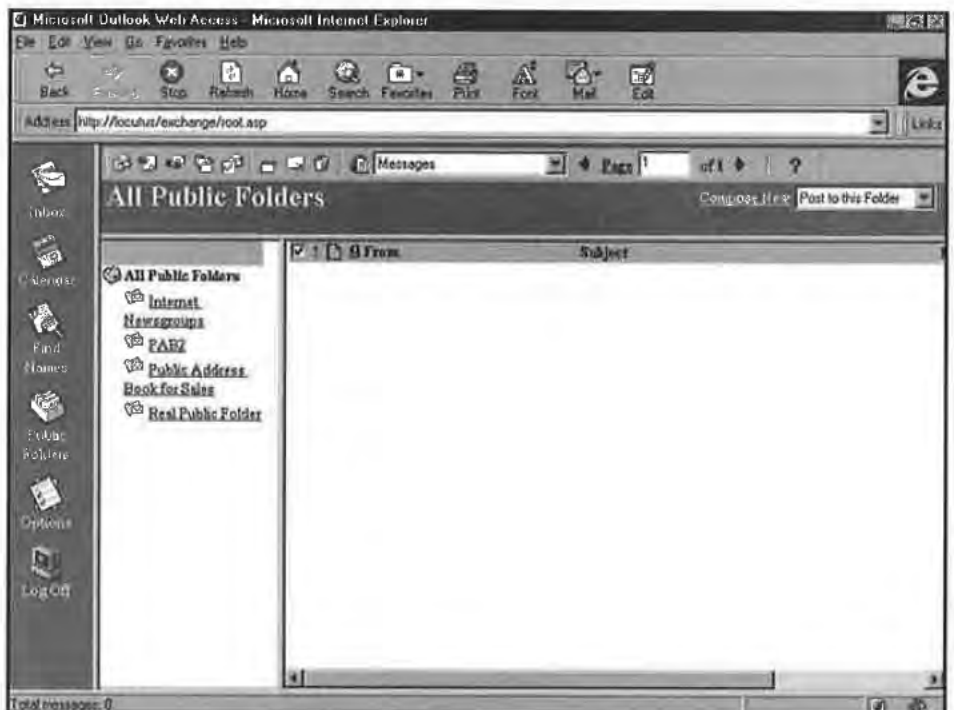


FIG. 31.16
Viewing posted
messages in a public
folder.



Then in the Action Area of the Outlook Web Access, click Post New Item. A New Post form appears, and you have several options to configure before finally posting the item in the public folder (see Figure 31.17).

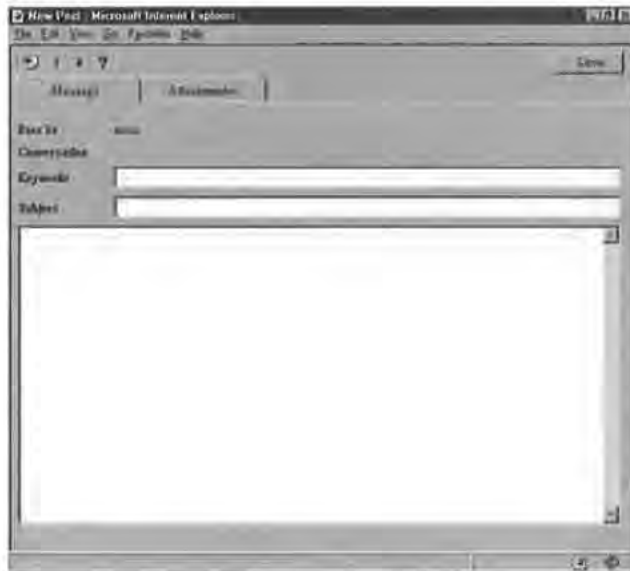
- **Keywords:** You can add keywords to your post to help others determine whether your post is of some interest.
- **Subject:** This is a brief description about your post.
- **Message:** This is the body of the post. It contains the information you want to announce to the audience of this public folder.
- **Attachments:** This page functions exactly as it does for a new message.
- **Importance:** You can set the importance of your post as Low, Normal, or High by using the buttons in the toolbar.
- **Post:** Select this option when you are ready to post your information to the public folder.

Reading and Responding to Posts Posting information to a public folder is only part of what you can do over a Web browser. You can also read and respond to posts. To start reading posts, you need to select one from a public folder that interests you. After reading that post, you have three options to handle it and possibly continue the discussion.

- **Reply to Folder:** This option enables you to post a reply to the post you just read. When you click this option, a Post form appears with copy of the old post in the Message Box. You can edit your reply and set the same options as a new post. Be sure to click Post to post the reply in the public folder.

FIG. 31.17

The New Post form.



- **Reply to Sender:** This option enables you to send a new message to the author of the post. Since you are creating a new message, you can also send a copy of this post to other recipients.
- **Forward:** You can forward this post to another recipient.

Find Names

The Find Names option enables you to search the Exchange Address Book. You can get detailed information about someone in your organization by typing in any information you know about that person. The available fields include Display Name, First Name, Last Name, Title, Alias Name, Company, Department, Office, and City (see Figure 31.18).

FIG. 31.18

Using Find Names.



After typing in that information, click Find, and if there are matches to the request, a list appears. You can then select the name to get more information about that person (see Figure 31.19).

FIG. 31.19
Viewing the Exchange
Address Book.

Name	Phone	Alias	Department	Office
Picard		Picard		
Picasso		Picasso		

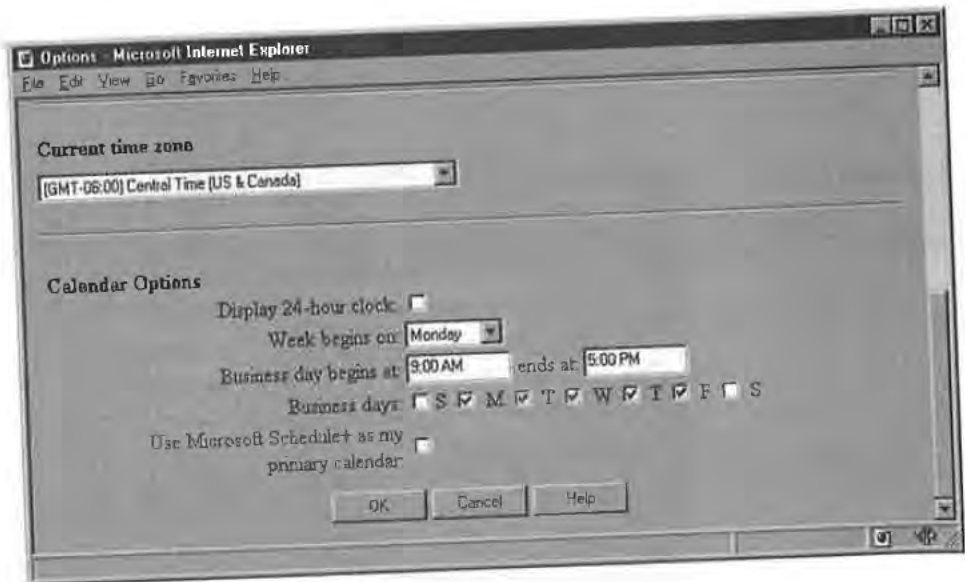
Options

Under Options in the Navigation Bar, you can set your Out of Office Assistant. You can indicate that you are In the Office, or you can select Out of the Office and have replies with a text message sent to each sender (see Figure 31.20). You can also reset your time zone and configure some aspects of the calendaring functionality (see Figure 31.21).

FIG. 31.20
Out of Office Assistant
options.

FIG. 31.21

Current time zone and
Calendar options.

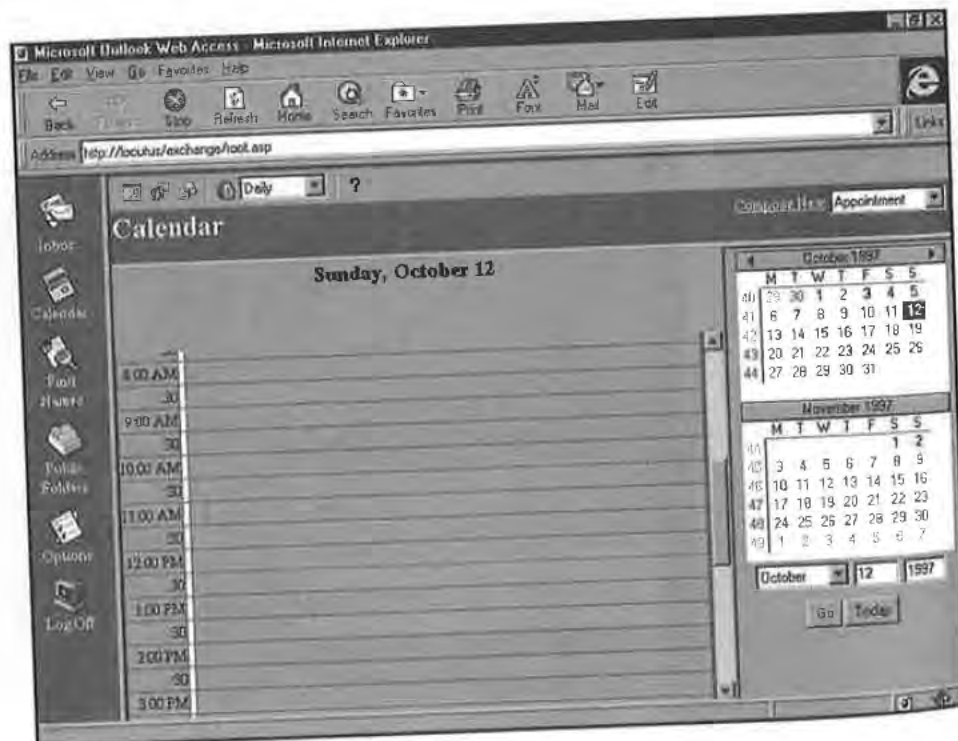


Calendar in Outlook Web Access

Calendar functionality, new with Exchange 5.5, significantly enhances the web-based solution for local and mobile users and makes it very attractive and viable. The initial Calendar view is in Figure 31.22. One of the great features is the continuity with the actual Outlook client interface. This will be familiar to Outlook users and intuitive to new users accessing Exchange services.

FIG. 31.22

Calendar view in
Outlook Web Access.



In Figure 31.23, notice the **striking** similarity with the New Appointment screens in the Outlook client. Some features are **exactly** the same as they are in the client, such as the Meeting Planner page (see Figure 31.24). Others are offered in a new venue, such as the Recurrence features (see Figure 31.25), but allow for much of the same functionality. Again, attachments and options work as they do when you create a new message.

FIG. 31.23

The New Appointment screen in Outlook Web Access.

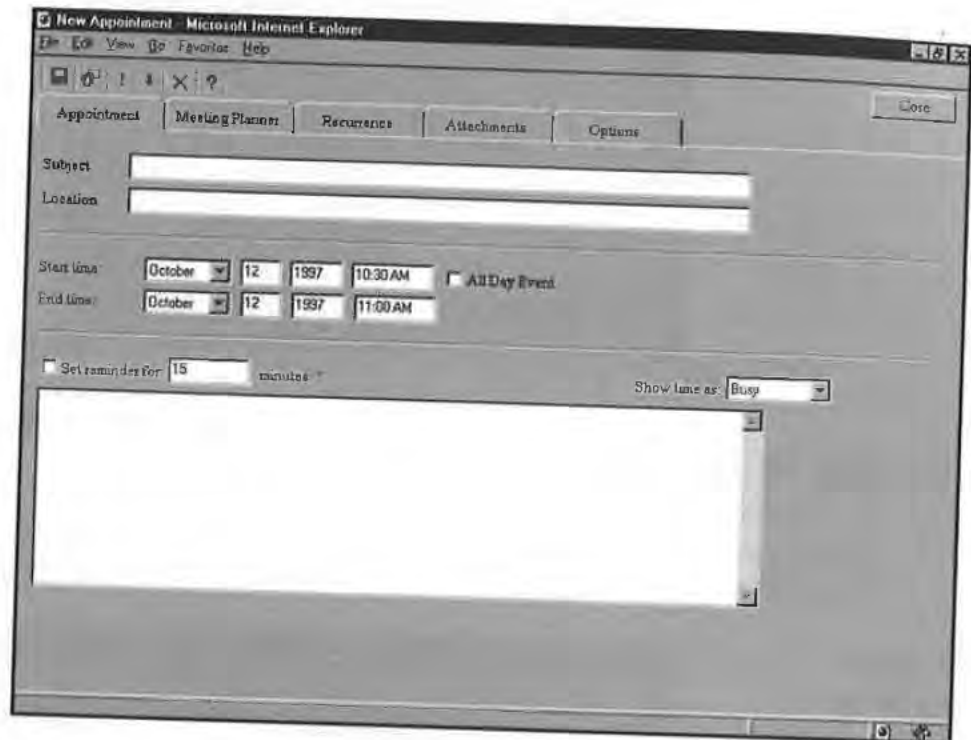


FIG. 31.24

The Meeting Planner page.

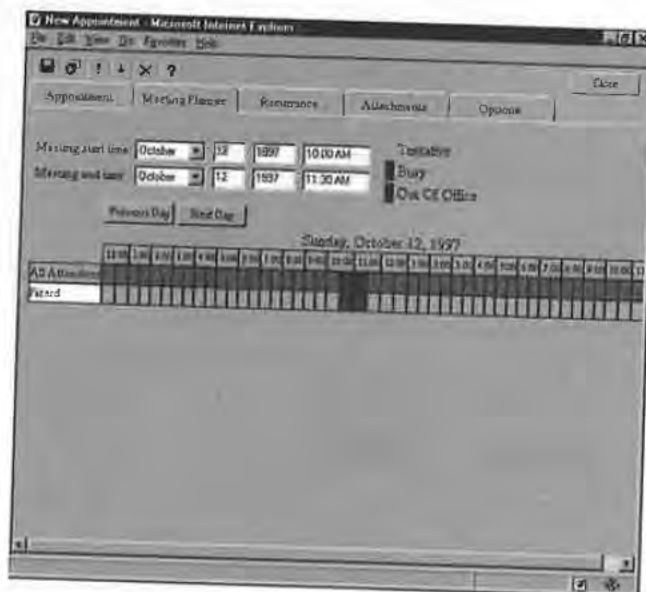
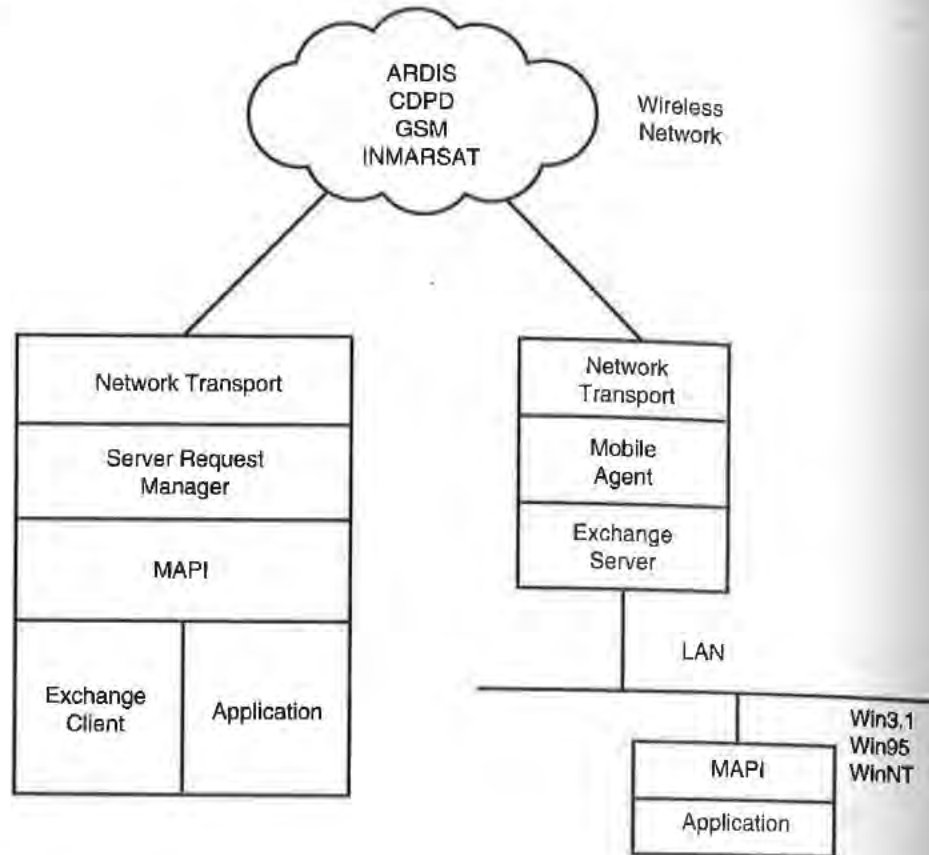


FIG. 32.7

Wireless networking
technology by Inmarsat.

Wireless Network Interfaces to Exchange



The key functionality of the user interface is the remote copy of message headers, remote copy of messages, remote deletion of messages, remote forwarding of messages, and remote configuration of user rules and filters. The server request manager interfaces with the Exchange Server. The purpose is to process client-side requests from the mobile agent. It performs this process by using standard MAPI transport providers.

Visit this site for more information:

<http://www.worldserver.pipex.com>

- **Vodafone Group**—Vodafone and Paragon Software have an Exchange Middleware messaging solution for wireless networking. Vodafone follows Inmarsat's wireless messaging technology to provide users with wireless access to Exchange around the world. Vodafone has 40 GSM roaming agreements to provide worldwide coverage. GSM is an organization that provides a standard for wireless communication, which is growing at the rate of 10,000 new customers each day. Based on the number of GSM agreements, Vodafone is a leader in wireless communication.

Paragon provides Precis Link, which is a MAPI-based remote access standard for Exchange. Precis Link provides similar functionality to Inmarsat, with offline message processing, to include rules, filters, forwarding, and deleting.

Visit this site for more information:

<http://www.vodafone.co.uk>

- **AT&T**—AT&T wireless services provide wireless access into Exchange servers. AT&T relies on the communication standard, Cellular Digital Packet Data (CDPD). CDPD makes wireless data communication ready for end users. Currently, CDPD is deployed only in the United States. It's based on the TPC/IP protocol. This offers easy integration with existing infrastructures. CDPD offers transfer rates of up to 19.2 KBPS, enhanced security, and the capability to support voice and data. Forty-seven of the top fifty cities in the U.S. already have CDPD service available. AT&T's service hopes to provide a cost-effective solution for the workgroup model by allowing field sales and support personnel to easily connect to resources.

Similar to Inmarsat and Vodafone, AT&T enables users to download headers before retrieving messages, remotely administer rules and filters, and configure support for attachments. AT&T provides server-based agents to perform tasks for the client.

Visit this site for more information:

<http://www.attws.com/nohost/data>

- **Sprint**—Sprint provides Sprint Message Xchange (SMX) service for Exchange. SMX currently is used to link together various mail systems over Sprint's private network services. SMX now links Exchange LAN sites with other MS Mail, Lotus, and Exchange LAN sites. This method is effective to link LANs by outsourcing some of the messaging backbone to Sprint.

Sprint's network extends to over 140 countries, which is a tremendous benefit if a company has both U.S. and European offices and wants to link together its Exchange LANs. Sprint acts as the messaging switch to support the connection, which is a huge cost savings to the companies because they can connect to Sprint in native Exchange formats without maintaining extra X.400 gateways. Sprint provides addressing templates for recipients on X.400, the Internet, fax, and telex.

Visit this site for more information:

<http://www.sprint.com>

Besides Sprint, several other value-added networking providers are working on supporting Exchange backbones. Services will provide companies with links from Exchange into legacy systems, Profs, All-in-One, and Officevision; into other LAN mail systems such as Lotus and cc:Mail; and into other forms of messaging—EDI, fax, telex, CompuServe, X.400, and the Internet. A good way to think about these public and private networks is as a way to out-source gateways and address/message conversion processes. By supporting native Exchange formats, the providers can allow easy integration from the corporate LANs into trading and business partners.

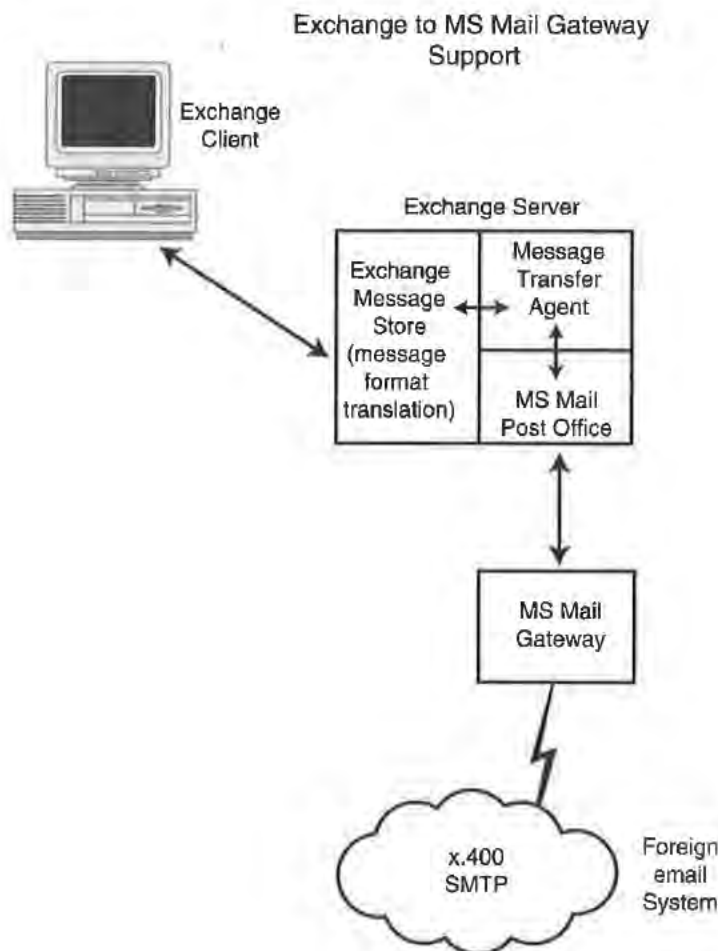
Gateway Support for Exchange

Gateways and connectors are used to extend Exchange into existing LAN-based mail systems or legacy host systems (see Figure 32.8). They also can provide new types of functionality,

such as faxing and paging, to enhance messaging within the organization. With Exchange you can implement Exchange-specific connectors as well as leverage existing MS Mail gateways.

FIG. 32.8

The MS Mail gateways for Exchange Server.



The following is a list of gateways and connectors that can be used with Exchange:

- **Attachmate**—Attachmate is providing Profs and SNADS gateways for Exchange. These tools are used to extend Exchange into legacy SNA environments to link users with Profs and Officevision mail systems or use the SNA transport to communicate with other servers.

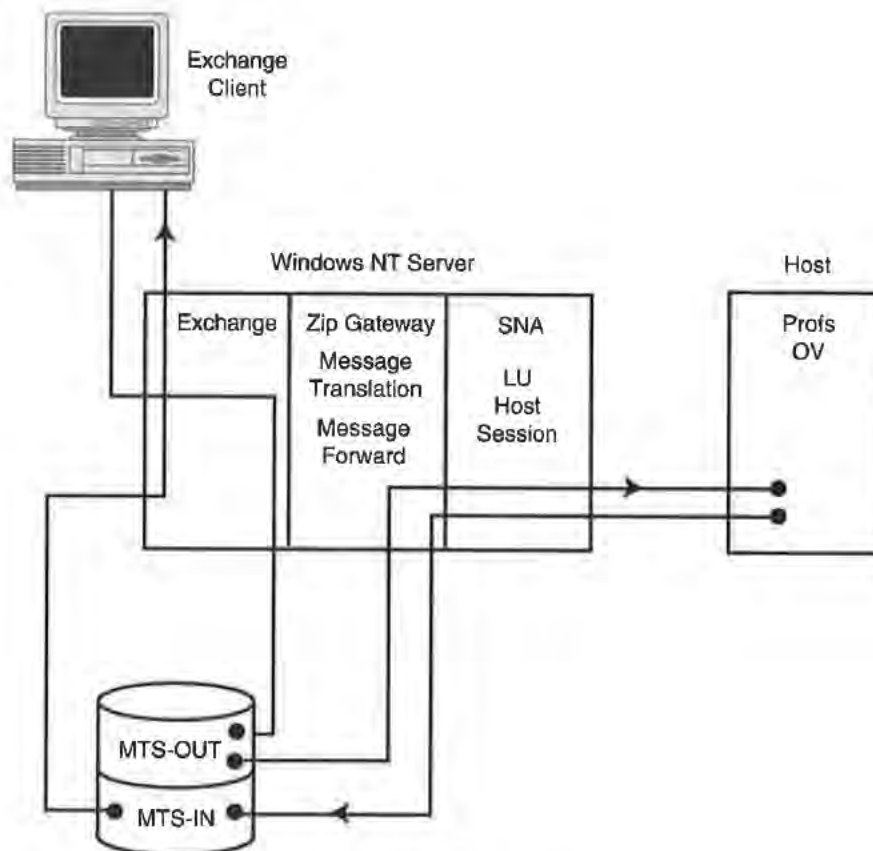
The gateways are known as Zip! Office gateways for Exchange. These gateways enable users on VM/CMS host systems to share messages with Exchange clients (see Figure 32.10). The gateway routes messages and status reports between Exchange and the host systems. Host users can use Profs, CMS Notes, or CMS Reader to read and create messages. This gateway also is used for processing SENDFILE or PUCH requests from VM to the LAN.

Exchange manages the in- and out-bound messages for the Zip gateway. Exchange stores the out-bound messages in its MTS Out folder. The Zip gateway polls this folder and, when it finds a message, processes the message. After the gateway has the message, it translates the message and attachment to be forwarded to the host system.

FIG. 32.9

ZIP! Office gateways for Exchange Server.

Zip Office Gateway for Exchange



NOTE Due to message formats on the host systems, only one attachment can be sent in the body of a message. If multiple attachments must be sent to a host recipient, multiple messages must be used. ■

For more information:

<http://www.attachmate.com>

- *Fenestrae*—Faxination 3.0 for Exchange is a natively integrated fax solution specially designed for Exchange. It adds the power of sending and receiving faxes from, or within, Exchange, just like e-mail. Due to the true native integration, Faxination provides ease of use, ease of management, cost savings, and reliability. The cost of ownership is extremely low.

Faxination for Exchange offers productivity enhancements and can actively control telecommunications costs by offering automatic "off-peak hour" scheduling and "least-cost routing" options. There is no need to install additional fax client software, provide additional end user training, or change workflow procedures. Faxination for Exchange is designed as a native Windows NT service. Faxination is available in English, German,

French, Spanish, Italian, Norwegian, Swedish, Finnish, and Danish. To suit your future needs, Faxination is fully scaleable and can also integrate Mobile messaging and Telex within Exchange. Within Exchange, Faxination is a Fax connector similar to X.400 and SMTP. Fax-specific items, implemented as extensions on Exchange, can be administered through the Exchange administration. Faxination fully supports Exchange 5.0. Faxination for Exchange runs as a service on the Windows NT Server or Workstation. Faxination supports most internationally approved ISDN and analog faxboards.

Faxination connects to the Exchange Server as an Exchange transport. It can run on the same physical Exchange Server or a separate machine. Because Faxination has native integration with the Exchange Server, all existing and future Exchange clients are fully supported. In addition this close integration with Exchange enables you to administer Faxination without using a separate administrator program.

Visit this site for more information:

<http://www.fenestrae.com>

- **RightFax**—RightFax has a fax gateway solution for Exchange. This gateway runs as a Windows NT service for integration with the Windows NT directory services and Exchange. The fax gateway consists of a client and server set of components.

From the client, a user can create an e-mail message. When defining the recipients, the user can specify users to receive the same mail message by way of fax. (The mail message doesn't need to be configured in any different manner.) When the message is received by the Exchange Server and the recipient list is parsed, the server recognizes the fax recipient and routes the message through the fax gateway.

On incoming faxes, RightFax supports DID lines for individual caller fax identifiers, which requires additional hardware to support phone-line trucks or direct connections to the phone systems coming in via T1 connections. One fax server can service over 700 DID lines. For a large organization, this capability enables every individual to have a direct fax line. When the fax server actually receives the incoming fax, it resolves the destination user recipient on the Exchange mail system by the DID identifier. The user receives faxes just as he or she does an e-mail message or other inbox applications.

The RightFax client becomes integrated with the Exchange inbox on the desktop. This client has numerous advanced features, including support for DTMF, OCR, Imaging, letterhead, signatures, voice prompting, group send options, delayed transmissions, and support for complex graphics. Additionally, you can send document attachments by way of fax without doing the conversion on the client PC. The conversion is handled by the server gateway.

Visit this site for more information:

<http://www.rightfax.com>

- **Ikon Office Solutions**—The Ikon Wireless Messaging Server (WMS) makes sending a page as easy as sending an e-mail message. Using the Wireless Messaging Server and Exchange, you can automatically send wireless messages and pages to any digital or alpha-numeric pager from the convenience of your desktop. You can even send wireless messages to PDAs or laptops with onboard paging cards or wireless modems.

One of the most powerful features uses Exchange's "Inbox" and "Out of Office" assistants to automatically forward messages from a workstation to an alphanumeric pager or a laptop with an onboard paging card or wireless modem. You can even create rules to forward e-mail messages that meet your specified criteria.

Another powerful feature is the ability to send a wireless message via the Internet. When the Wireless Messaging Server is installed in conjunction with the Exchange Internet Connector, both the wireless and Internet addresses are created at the same time. This enables users to send a wireless message from anywhere in the world.

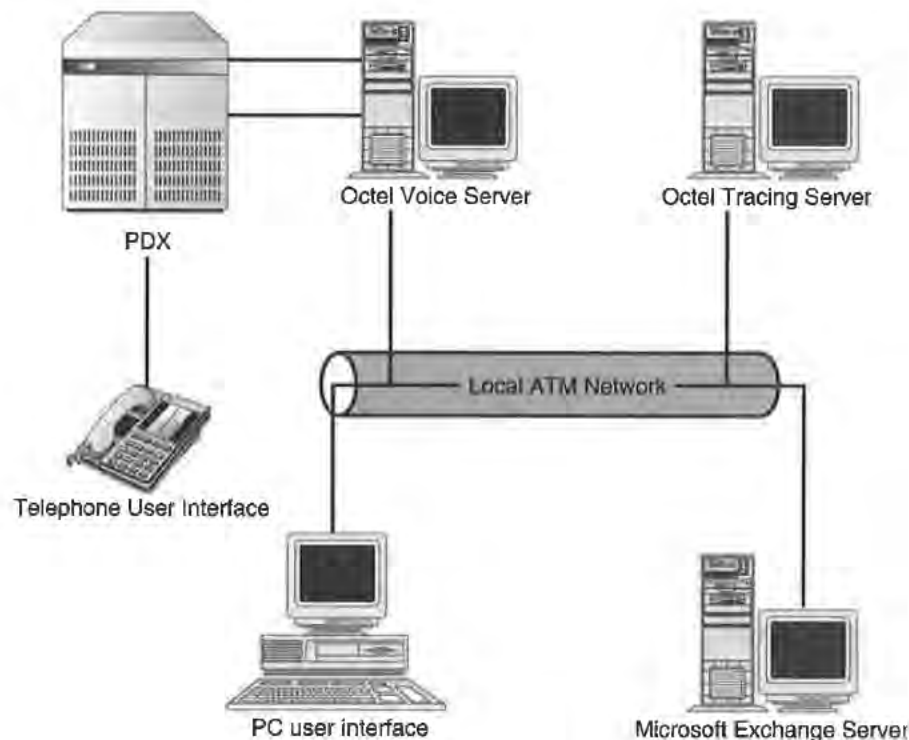
Visit this site for more information:

<http://www.ikon.net/wms>

- **Octel**—Octel developed a framework for voice messaging on top of the Exchange platform. The Unified Messaging Strategy consists of using the e-mail backbone for Exchange to connect to PBX phone switches and route voice mail directly to the desktop in the Exchange client inbox (see Figure 32.10).

Octel positions the phone systems as an extension to the messaging architecture of an organization. From within the inbox you may receive e-mail, faxes, documents, and now voice mail. Voice mail also can be accessed 24 hours a day by touch-tone phone. Voice mail has many of the same communication properties that e-mail uses. Voice-mail messages are stored and forwarded between users as needed. The messages also are routed by content or request.

FIG. 32.10
Sample office
configuration—Octel
Voice-Mail gateway for
Exchange Server.



The Octel server provides in- and out-bound voice functionality. It acts as a voice-mail gateway to external systems. The user can create a voice-mail message from the desktop and have Octel route the message to the destination to be played back for the user. This Octel system can take advantage of multimedia PCs but doesn't require them. If a user has sound capabilities on the PC, the voice-mail message can be played back from the PC. If the user doesn't have sound capabilities, when he or she opens the e-mail note that contains the Octel message, Octel dials the user's phone number from the PBX and plays the message back over the phone.

The key to this strategy is that Exchange and Windows NT will handle all the directory services for the enterprise. The Exchange account that originates from the Windows NT Domain account also will be used for the voice-mail system. A component of the user account includes the voice-mail system information. However, all the voice-mail data is stored inside the Exchange message in a compressed format. Octel also plans to include faxing as a functionality of this Unified Messaging Strategy.

The Octel server supports voice, fax, text-to-speech, and voice recognition. This includes support for DTMF, DID lines, PBX connectivity, and open computer-industry standards for customization. The server is based on Windows NT and takes full advantage of the user accounts, Windows NT registry, Event Log, performance monitor, and all other Windows NT management utilities. Octel provides additional management capabilities for the Octel server by way of Exchange's Administration utility and a separate administration application.

Visit this site for more information:

<http://www.octel.com>

This section described many of the gateways, connectors, and communication protocols supported by third parties for the Exchange client and server.

Content Indexing, Searching, and Retrieval

The Fulcrum Knowledge Network is a high-performance text-indexing and retrieval engine offering rapid access to vast amounts of corporate information stored in documents or databases. Fulcrum Knowledge Network provides users with a suite of advanced information retrieval features for searching and retrieving the information they need to build knowledge. Some key features include search-term highlighting and navigation to pinpoint information within documents, statistical relevance ranking, natural language searching, and support for major European and Asian languages.

The Fulcrum Knowledge Network can dramatically improve the way your organization manages its information resources. The Fulcrum Knowledge Network enables users to conduct single, unified searches across various information sources, including Exchange Server, web sites, and more.

Visit this site for more information:

<http://www.fulcrum.com>

Virus Protection Products

With the rapid pace at which new computer viruses are being created and spread, organizations must implement virus detection and cleaning tools. Virus infections, especially macro viruses, are particularly hard to eradicate because viruses can hide in old message attachments and public folders. The following section presents a subset of third-party products that provide this functionality for Exchange Server.

- **Cheyenne**—Cheyenne AntiVirus Agent for MS Exchange Server detects and cures viruses in documents attached to Exchange messages. The Agent works in real-time with Cheyenne InocuLAN, which is certified to detect most, if not all, viruses—including the rapidly spreading macro viruses. The AntiVirus Agent works on messaging servers, scanning all file attachments before they can be delivered to the desktop. Users can also perform scheduled scans of the Exchange system. Like all Cheyenne anti-virus products, the Exchange agent tightly integrates into Cheyenne's anti-virus system, making it easy to remotely manage and update your anti-virus software.

Key features include the following:

- Support for Exchange 5.0 and previous versions
- Scan and cure of attachments in Exchange E-mail and shared libraries
- Notification of viruses by Exchange E-mail and other methods
- Real-time and scheduled scan and cure

Cheyenne's AntiVirus Agent for Exchange Server works in conjunction with Cheyenne's network anti-virus solution, InocuLAN. It scans for viruses in documents attached to messages while the messaging system is live and running, without impacting users. Infected files are automatically cured and users are notified directly through e-mail.

Visit this site for more information:

<http://www.cheyenne.com>

- **Trend Micro Inc.**—Trend Micro's ScanMail enables the administrator to manually scan for viruses in old files to ensure a clean start-up environment. Depending on how your Exchange Server is deployed, ScanMail can check Internet or Intranet e-mail attachments for viruses.

ScanMail uses Trend's proprietary virus scanning engine, which incorporates both rule-based and pattern recognition technology to provide detection and removal capabilities for more than 8,000 known computer viruses. ScanMail will also incorporate MacroTrap, Trend's patent-pending generic macro virus scanning engine, which will detect and remove known and unknown macro viruses. Viruses that cannot be cleaned may be mailed to Trend Micro's Virus Hospital.

ScanMail provides automatic web-based updating. The system administrator may also configure ScanMail to automatically update the pattern file weekly or monthly.

Visit this site for more information:

<http://www.trendmicro.com>

Developing Exchange Forms

In this chapter

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- Using Forms in Your Organization 755
- Explaining the Forms Environment 756
- Explaining the Form's Components 759
- Setting Properties of Form Components 760
- Installing Forms 760
- Planning Your Exchange Form 761
- Creating the Web Site Button Form 762
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- Creating the Personnel Profile Information Application 787
- Creating the Personnel Profile Information Folder 788
- Creating the Personnel Profile Information Request Form 790
- Creating the Personnel Profile Information Form 796
- Reinstalling the Personnel Information Request Form 807
- Outlook Forms Development 808

This chapter introduces you to the world of making custom applications for Exchange and Outlook without prior programming experience. If you're already familiar with Windows and Visual Basic, you'll have a very easy time using the Forms Designer interface.

The Forms Designer lets you lay out all the different fields on your form, link them to messaging objects, and designate actions on events. Without any previous programming experience, you can create applications that will make your organization more productive. Many example applications are provided on the Exchange CD-ROM. You can use these pre-designed forms and modify them for your use.

The Forms Designer enables the creation of two types of forms:

- **Stand-alone forms:** These forms are not associated with any particular folder. They facilitate data input with the intent to send data to an individual or group of users. These applications include message-taking, office supply requisitions, and vacation requests.
- **Folder forms:** These forms facilitate the input of information into a public folder where permitted users can view it in an organized way. These applications include group discussions, bulletin boards, and enterprise-wide groupware databases. Filters can be applied to move data into subfolders, and views can be applied to group or soft information.

Among the potential custom applications you can create are *electronic forms*. In many organizations there are standard forms routed to specific individuals. Using the Forms Designer, you can create a travel request form, time-off request form, or office supply requisition. These applications take the work out of making simple requests. In addition, with the integration of *public folders*, the forms are easy to distribute throughout the organization. You no longer have to make sure that everyone has the most up-to-date form, and that they have enough copies. Distributing the forms electronically makes it easier for the user, and for the recipient who receives all the forms. The recipient can easily organize and process all the requests in the universal Inbox.

Another strong suit of the Forms Designer is to maximize the effectiveness of public folders. By designing an application, you can make it really easy to enter data into a public area. A great example of this use is for those organizations that post a lot of memos. Instead of printing out the memos and distributing them through the mailroom or by e-mail into everyone's Inbox, you can just create a public folder called Company Memos, and then write an application that lets the user enter the memo into some structured fields. Once the user executes the form, the memo is posted to an appropriate subfolder under the main Company Memos folder. The subfolder could be based on a field on your form that has a drop-down list of company departments. Everybody wins using this system. The mail room folks have less junk mail to route, the people in the copy room have less to copy (which saves toner), and most importantly, paper is saved, which is good for the environment.

Installation of the Exchange Forms Designer

As mentioned throughout this book, the Forms Designer is a *client application*. It is installed with Schedule+/ and the Exchange Client, as well as Outlook. You may not have installed it when you installed the other components, however. The following list is an installation procedure:

NOTE Before you install the Exchange Forms Designer on your workstation, please consider using 48MB-64MB of memory. This is especially needed for application development that uses the Visual Basic 16-bit program to extend your applications.

These recommendations directly affect the capability of your development environment. ■

1. From the Client CD-ROM, under either the Eng directory or the Frn directory, double-click the EfdSetup directory and choose Setup.
2. Choosing Complete/Custom from the menu, you see two options—Exchange Forms Designer and Sample Applications. This option gives you the option to install the Sample Applications. You may also choose Typical setup, which automatically installs the Forms Designer and the Sample Applications.
3. From the Complete/Custom window, choose Change Options.
4. In the Options box, select Forms Designer and Sample Applications and then choose OK.
5. Choose Continue.

If you had any previous version of the Forms Designer on your drive, Setup detects it and displays a screen asking you to reinstall, add/remove programs, or remove all. Any forms you create will not be overwritten by any new versions you may install.

Along with the application, all the different sources of help are installed. There are three different sources of help when you are designing applications: Cue Cards, Online Help, and Online Documentation.

These various sources of online help are a great supplement to this chapter. You will get the context-sensitive help you need, and at the same time you'll get more step-by-step tutorials to walk you through all the functions. The online manuals give you access at your fingertips.

Using Forms in Your Organization

Exchange's structure provides for many different uses of the containers in the hierarchy. You can design applications that leverage this flexibility.

Discussing Applications

In many organizations, several different teams work on different projects. As they get ideas, they usually send out an e-mail to all the people involved. As the weeks go by, everyone winds up with many e-mail and voice-mail messages that have no structure. Many are simply carbon copies, forwarded messages, or replies. Recipients usually must go back and sift through all the messages looking for information.

Some groups use a *bulletin board* or *internal newsgroup* to help centralize all the data. The only problem with this solution is that most e-mail packages that provide bulletin board capability have poor security. You can't control who can post, read, or modify. When using Usenet-style newsgroups, you can't control very easily who can read and post. You either would have to set up passwords or host entries for each machine to read or post. It isn't very easy or robust.

Using a custom Exchange application for discussion, you gain all the access control that is inherent in Exchange and NT Server. You can allow only members of the proper teams to access their information. In some cases, you would want to allow read-only access to people in other groups to promote team cooperation. Exchange's public folder structure is flexible enough to enable this.

Using a custom application can structure the data. The forms you create can contain certain fields, and information about threads. The capability to structure information in different views gives the user the ability to choose a report sorted by date, author, or subject. You can also use structure subjects if you want to keep discussions along a certain topic.

Some of the most common uses of discussion applications are customer-support databases, brainstorming applications where team members can input ideas as they come to them, frequently asked questions lists, and meeting summarization applications.

Referencing Repositories

Exchange serves as a great repository of documents and objects as well as e-mail. You can easily write applications that provide easy access to all your standard documents throughout the enterprise. Many organizations have several standard documents, such as policies and procedures manuals, style guides, and computer-usage guidelines. In addition, many organizations have standard Word document templates. These objects can be placed in an Exchange public folder and made available right on the user's desktop.

Explaining the Forms Environment

A few pieces of the Forms environment need to be explained in the scope of the large Exchange picture. These components consist of the following:

- Forms libraries
- Views
- Rules

- Permissions
- Items

Forms Libraries

When you create a form, you save and install it into a Folder Forms Library. The properties of the forms saved into a particular folder are dependent on the properties of the folder. This includes access permissions. When the user chooses New Form on the Tools menu in the Exchange Client, a list of forms available in the folder is presented.

The Global Forms Library The Global Forms Library houses all the forms you want to make available to everyone in the enterprise. These forms could include vacation-request forms, corporate memos, or telephone message forms.

The Folder Library Every folder, either public or private, has a forms library associated with it. You can save forms into one of your private folders, but they will only be shared with anyone to whom you have given access to your folders.

By putting forms into a public folder, you allow robust sharing based on the permissions of the folder, which are generally easy to change if the need arises. When new users are added to the Exchange system, their group memberships can determine to which public folders they have access.

Say you had a group called Directors, for example, that contained people at or above the level of director in your organization. You could create a folder that contained a form these users could fill out that would make it easy to enter product data sheets, and store them in a public folder so that all people at that level or above could view and modify them. The folder you set up has the permission properties set to enable only members of the NT group Directors to view and modify.

The Personal Forms Library This library is not shared with any other user. It contains the forms the person uses most often. If you have functions you perform every day and create a form to automate those tasks, you would place the form in your personal library. In addition, you can use these forms when working offline as long as your default information store resides on your local disk.

Views

Because forms reside in folders, it is pertinent to discuss folder views. Global views apply across all forms and folders, and folder views apply only to the selected form containing the view.

Think of views as the different reports generated off a database. In the old days, you had to write different report specifications to get the data you wanted presented in the order you wanted.

Views enable you to order information and present it to the user the way he or she would like to see it. When you establish a form, you create structured fields within it that lend themselves very nicely to the four kinds of views:

- **Filtering:** Using filtering gives you the ability to view only information that meets certain criteria. Let's go back to the Directors example. If you want, you can set a filter to display only product descriptions of a certain product line rather than the whole line.
- **Sorting:** This view enables you to sort on any field. In the example, you can easily sort by part number or department number. Even better, you can sort by director name, which lets you easily see which director was responsible for which products.
- **Grouping:** Grouping lets you use a hierarchical model such as the Windows Explorer in Windows 95 or the File Manager in Windows NT. You can click a certain title to expand or collapse the information. You can group the items by product line, and then filter down to more specific product information for each product in that particular line.
- **Columns:** You can format the data in your folder like a spreadsheet. This makes it very easy to read and very familiar to the majority of users. You can place all your fields in any order across the screen.

Views are created outside the form in the Exchange Client. Once you install a form into a Folder Form Library, all its fields are published to the library, enabling you to set up views easily later on in the Client.

Rules

Just as views are folder properties that apply to form, so are rules. Rules are a powerful feature in Exchange that enable you to control what happens to an item once it is submitted to a folder.

Many e-mail packages have this functionality in some form. In most cases, however, you must be logged in to your mail application for the rules to take effect. Also, most e-mail packages lack the ability to do this with bulletin board-type functionality.

With Exchange, an example of applying rules to a form entry would be that any item meeting certain criteria can be moved to a subfolder, e-mailed to someone else as a carbon copy, or even deleted.

This functionality gives you much more control over the organization of your data, and even helps reduce redundant entries. It cuts down on administration because everything is automatic once the rules are established. For more information on rules, see the section titled "Setting Folder Rules" later in this chapter.

Permissions

By establishing folder permissions, you control who has access to any of the forms contained in that folder's Library. You also control what the user can do in the folder. You can set options to allow read, write, and edit access. In addition, you can select pre-defined roles that enable the administrator to quickly establish a set of permissions for the user.

You can also delegate any user as an owner of a certain folder. This enables that user to give other users access permissions. This is analogous to Windows NT Server permissions that allow multiple users to be administrators for a certain domain. Giving someone else ownership permissions allows for multiple administrators and the delegation of responsibilities.

Items

An easy way to think of items is to think of database tables. In a database, tables consist of records, which consist of fields that have values. Exchange forms work the same way. Folders contain items that contain fields that have values. It's very straightforward. An item is like a record in a database.

Explaining the Form's Components

If you are familiar with Visual Basic at all, this section will be refresher material. If you've never used Visual Basic, this section will provide very important information that will aid you in understanding the form design process.

Visual Basic is mentioned because Exchange forms are Visual Basic Version 4 executable programs. They do not need to be run independently of Exchange, as the Exchange Client takes care of this process. Using forms is completely transparent to the user.

The Forms Designer serves as a front end to Visual Basic, so non-programmers can create robust applications using a simple tool without the advanced knowledge needed to use Visual Basic.

Using Visual Basic comes with some consequences. Non-Windows clients are not able to use Exchange forms because there is machine-executed code involved, and non-Windows platforms cannot run this code.

On the flip side, however, companies that have in-house Visual Basic expertise can build robust, enterprise-caliber applications that take full advantage of object linking and embedding, as well as SQL Server access. You could have an Exchange application, for example, that relies on the Global Address Book for addressing information, but at the same time writes fields to an SQL Server database somewhere on the network.

An Exchange form is made up of the following components:

- **The Form Itself:** The form's appearance and behavior are set through its properties that is discussed in the next section. You can use a form within a folder as a part of another application, or as a standalone application.
The form itself acts as a shell that encases its components. It is at the top level of the hierarchical structure of the form.
- **The Form Windows:** Forms can contain multiple windows that are used for different functions. One window might contain addressing information, while another might be an output window. Windows enable you to keep the screen neat and logically organized by function. Keep this in mind as you design your forms.

By using multiple windows in the same form as opposed to multiple forms, you have greater control. It is easier to pass information between windows than forms.

- **The Window Fields:** Each window presents information as fields. You determine which fields appear in which windows. You can either create new fields in each window or use field values from other windows in the same form.

Fields are not limited to input and output; they also can be menus and toolbars. Fields can initiate actions by having events assigned to them. The field's actions are governed by its properties.

Setting Properties of Form Components

Setting a form's properties is the most daunting task facing the Form Designer. The Form Designer takes the desired effect through these properties. Properties sheets are the means by which the Forms Designer accomplishes its magic without the need for writing code. Depending on the properties of each object, certain actions bring about certain results.

As indicated by the title of the section, setting up the properties of each component is easier because the properties are organized by Form, Window, and Field. The properties that can be set for an item varies with the item:

- **Form Properties:** The general properties of forms consist of the display name, the name the user will see, the version of the form, the item type associated with the form, and a brief description. In addition to the general properties, the event properties control what happens when a user takes a certain action on the form. If the user clicks a Submit button, for example, you could have the form display a configuration window or update the value of all the current fields.
- **Window Properties:** The general properties of a window are the name, tab order, fields in the window, caption, and the WinHelp filename. You can also control window options, borders, and window colors with the format properties.
- **Field Properties:** In addition to the standard general properties such as field name, caption, and location, fields enable you to set initialization values. This enables you to set default values to all the fields in your window. If you have a radio button in your window, for example, you can set whether one button is the default, or no button is selected. Note that all these properties are discussed in greater detail when the design of a form is discussed. Each property is explained in detail. What is important at this point is that you get the feel for what needs to be done when designing a form.

Installing Forms

Upon the creation of a form, a form project file with an .EFP extension is created. It is similar to a Visual Basic project file.

When you choose the Install command from the Forms Designer, several things happen that are transparent to you. The form files are taken by the installation routine and Visual Basic project files are created. This enables you to use these .MAK files and use them within Visual Basic 4 to extend your applications at a later time.

Once that happens, the form is compiled into an .EXE file, just as when you use the Make .EXE command from the File menu in Visual Basic. In addition, a configuration file with a .CFG extension is created. This is used by the forms library for installation.

After that step is completed, the form gets installed into the forms library of your choice. You will now be able to access your form from the folder you chose.

Planning Your Exchange Form

You now have all the information you'll need to create an application. The information in this section gives you a general overview of the steps to follow to create an application from beginning to end.

When designing a form, you should follow these simple steps:

- Define the purpose of the application. This sounds very obvious, but this simple step helps you stay focused. By determining what the form will do, you'll give yourself information that will aid in the design. If the application is a simple message-taking application that will be available to everyone in the organization, for example, you may want to keep the design very simple. You know that the form will most likely wind up in the Global Forms Library, so you might want to contact the administrator of the system to get permission to post it there.
- Define the fields. Defining the purpose of your form gives you a good basis for which fields you should include on the form. To continue the example from above, you might want to include the time the person called, his name, company, the message, and whether to return the call.

It is a good idea to come up with a logical field structure, which will help you lay them out on the screen and decide whether you need more than one window.

- Create a folder for your application. You need to determine where your form will reside.
- Create the form. Using the Forms Designer, create the actual screen that will contain the fields. Drag and drop the objects onto the window on the form. This part of the Forms Designer feels very much like a drawing program. Make sure the form has a logical flow, and that all fields are appropriately marked.
- Set the properties of all objects. Once you create the form, you need to go back and set the properties of all the objects on your form, including the form itself. Although some people like to set the properties of each object when it is created, doing it in two steps enables people to collaborate on the layout and confirm all the field choices and names before moving forward.

- Install the form. Once you set properties on the objects on your form, you need to install it in order to test the functionality of the application. If the application spans multiple forms, be sure all the forms are installed in the folder. It's a good idea to keep the application in a personal folder so no one else can access it while it is being debugged and tested.
- Test the form. In order to make sure your form performs all the functions you intended and in the way you intended, you need to test the form extensively. Things to look for are whether the screen layout is correct, required fields are in fact required, and that button groups work properly.
- Design the views. As explained before, views let you order the data for your users. Once the form is installed, you need to establish the views that will better facilitate the purpose of the form. You can sort, group, filter, and make columns. Once you register your forms with the folder, users can access the views from the Exchange Client.
- Move or copy the form. Once the views are designed, and further testing is performed, you can move or copy the form into its final destination folder. In your first step, you knew who would be using the form, so you contacted the administrator to get permission to post the form into the proper public folder. You now use that permission and post the form. Planning ahead will save you a lot of time.
- Set folder properties. Now that the form is in a public place, you can set the properties that do such things as define a default view and whether or not the form is accessible. This is a good feature if you have not completely finished the testing process.
- Set permissions. As stated throughout this chapter, you can set the permissions of the public folder that houses your forms. If you only want certain users to access your applications, or want the form to be read only for certain people, you can set the permissions to reflect your wishes.
- Set folder rules. You can set rules to specify actions for incoming data based on conditions. You could use this feature to eliminate duplicate data, generate carbon copies to certain recipients automatically, or move data to subfolders.

You are now ready to create applications using the Microsoft Exchange Forms Designer. The next section goes into detail with a step-by-step tutorial. A sample form is created from scratch, showing you how the outline above helps you design custom applications.

Creating the Web Site Button Form

You are now ready to design a form from scratch. Try to follow the outline for designing forms as closely as possible.

Defining the Purpose

Many organizations that have World Wide Web sites on the Internet choose to advertise their sites on other servers. These companies must design forms that enable the technical staff to communicate effectively and quickly with the media department that purchases the space on others' web sites.

The form you're going to design facilitates that need. It makes it very easy to let the technical staff know exactly what's needed by the company housing the hypertext links.

Defining the Fields

The purpose of the form has been stated rather clearly, so move on to defining the fields you'll use on the form.

TIP

It is a good idea to collaborate with all the departments involved with the fields on the form at design time. They can provide a lot of key insights that will make the form much more useful to all the parties involved. For this form, the media, creative, and account departments need to be involved in the form-layout process.

The fields are shown in Table 33.1.

Table 33.1 Web Site Button Form Field Names and Descriptions

Name of Field	Purpose
To	Addressee on the technical staff
Date	Date the note was sent
Subject	User-definable subject field
Company	Company from whom you leased space
URL	Web site URL the button will reside on
OurURL	URL the button will point to
Size	Pixel size required by the company
StartDateEffective	Button start date
EndDateEffective	Button end date
Transport	Type of media required, if any
Address	E-mail address of company
Contact	Name of contact person
ContactPhone	Phone number of contact

This table is exactly what you should draw out before ever loading the Forms Designer. The field names are used later in the field properties definitions. The purposes of each field will also help you and your colleagues better design the form and add fields later.

Creating a Folder for Your Application

You now have to determine where your form will reside. For this application, just store the form in a Folder Forms Library. There's a person in the media department who coordinates all the web site space lease agreements and starts the routing of the form. She will use this form from a private folder. When troubleshooting the form, it is much safer to keep the form in a private folder until it is ready.

You don't need to do anything special to use your Folder Forms Library. The form-installation procedure does this for you. If you were using a public folder, you would have to obtain permission from the Exchange administrator to create the public folder and write items into it.

Creating the Form

You are now ready to launch the Forms Designer and start drawing out your form. This section goes through the procedure step by step. Figures are used to walk you through each step. Each figure is the result of the step before it. For example, step one will yield the figure immediately following it.

1. Double-click the Forms Designer icon. The Microsoft Exchange Forms Designer dialog box appears (see Figure 33.1).

TIP

You can use any of the sample forms provided to familiarize yourself with the different kinds of forms.

2. Choose the Form Template Wizard and click Next (see Figure 33.2).
 3. Select To Another User (send) and click Next.
 4. Select To Send info and click Next (see Figure 33.3).
 5. Choose One Window and click Next (see Figure 33.4).
 6. Type **Website Button Form** in the Name field, and **This form is used to send detailed information to the technical staff to expedite Web site media buys** in the Description field (see Figure 33.5).
 7. Click Finish (see Figure 33.6).
 8. Our form does not require a "cc" field. Click the middle of the field and press the DEL key.
 9. We are now going to add the necessary fields to the form. First, select the Frame tool and click the right side of the form. A frame will be created that will house the StartDateEffective and EndDateEffective fields.
 10. Now you'll create the text entry boxes for the fields that will go inside the frame. The frame is just an easy way to group fields. To create a text entry field, click the Entry Field tool and drop the fields inside the frame. Then resize the fields as necessary by dragging on the border when the arrows appear.
- There are a few ways to create multiple fields. You can either create each one separately, or you can create one, size it, and copy and paste it.

You can replace the word Caption with the text describing the field. Just click in the box with the text of the caption and type over it.

11. You now create a listbox containing the names of the companies you usually deal with when you buy space. You can always add new companies easily.

FIG. 33.1

You can use the Wizard, open a template, or use an existing application.

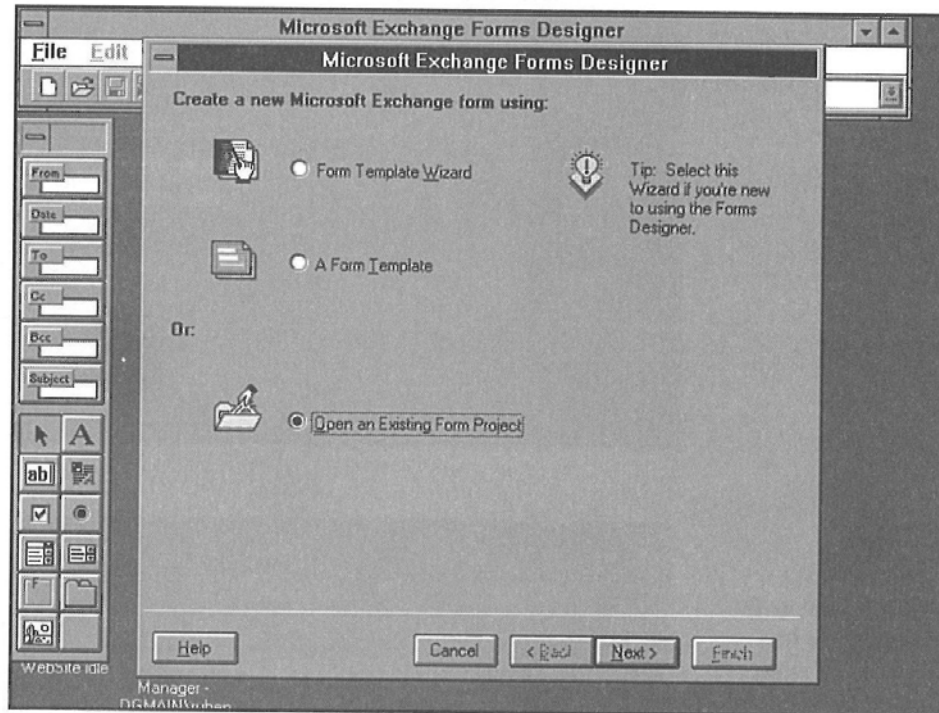


FIG. 33.2

The Wizard gives you the choice of using the form to send to another user or to post to a public folder.

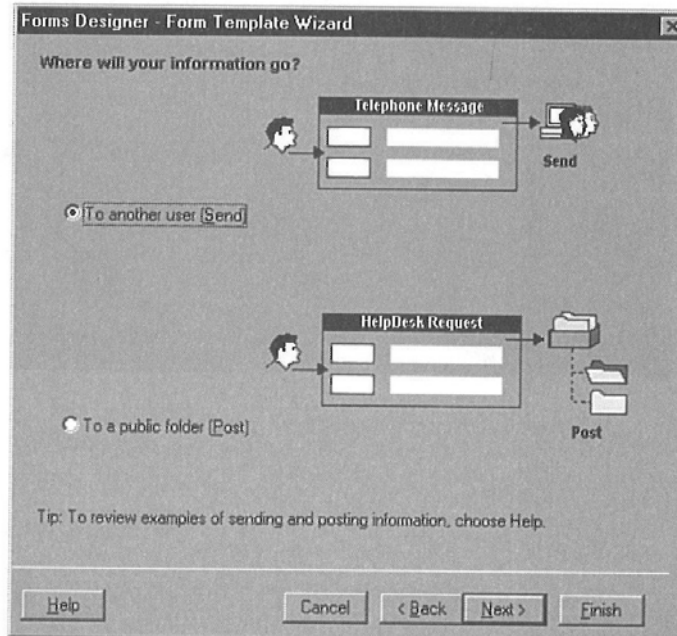


FIG. 33.3

You can either use the form to send information, or let the user enter a response to an existing item.

The screenshot shows the 'Forms Designer - Form Template Wizard' dialog box. The title bar reads 'Forms Designer - Form Template Wizard'. The main text asks 'How will your Send form be used?'. There are two radio button options:

- ☒ To Send information. To the right is a preview of a 'Telephone Note' form with two input fields and the text '(While you were out)' below it.
- ☐ To Send a Response. To the right is a preview of a 'Company Picnic' form with two input fields and the text '(Response)' below it. A note above this preview says 'Note: Choose this option to create a Response to a previously created Send form.' and a '(Send)' label is to the left of the preview.

 At the bottom, there is a tip: 'Tip: To review examples of using a Send or a Response form, choose Help.' and a set of buttons: 'Help', 'Cancel', '< Back', 'Next >', and 'Finish'.

FIG. 33.4

The name and description given to the form determines how the user sees it in the Viewer.

The screenshot shows the 'Forms Designer - Form Template Wizard' dialog box. The title bar reads 'Forms Designer - Form Template Wizard'. The main text asks 'Do you want one window or two windows in your form?'. There are two radio button options:

- ☒ One window. To the right is a preview of a 'Compose / Read window' form with two input fields.
- ☐ Two windows. To the right is a preview of two separate windows: 'Compose window' and 'Read window', each with input fields.

 Below the options, there is a note: 'Design the same window to compose and read information.' for the 'One window' option, and 'Design one window to compose and the other to read information.' for the 'Two windows' option. At the bottom, there is a tip: 'Tip: To review examples of designing a one or a two window form, choose Help.' and a set of buttons: 'Help', 'Cancel', '< Back', 'Next >', and 'Finish'.