

# Microsoft® Office™ 97 for Windows

## Building Outlook™ Solutions

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1.



## Microsoft Outlook

### Contents

Building Outlook Information-Sharing Solutions

Instant Groupware Using Built-in Modules

Calendar

Contacts

Tasks

Fast and Easy Application Development

Forms Design

The Outlook Forms Designer

Custom Form Design Based on Standard Forms

Folder Design

Create Outlook Folders for Better Workgroup Communication

Advanced Design Features

Scaleable Application Development

Extending Outlook Applications

Using VBA with Office Forms

Using ActiveX™ Controls for Database Access

Using the Internet Control Pack with Outlook

Sample Applications

Centralized Management and Security with the Exchange Server

Interoperability and Migration

Outlook Public Folders

Outlook Forms

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## Building Outlook Information-Sharing Solutions

Now more than ever before, corporate users are faced with an overwhelming volume of information. The arrival of the Internet on the corporate desktop has opened new vistas for users, enabling them to extend their reach beyond traditional corporate boundaries, but it has also brought an increased level of complexity to their everyday business life. Corporate users today don't need more information, they need solutions for managing, sharing, and analyzing information. Now, with Microsoft® Outlook™ 97, users can develop such solutions quickly and easily using the Microsoft Outlook application design environment—so information becomes useful, rather than unwieldy.

The rapid evolution of Internet technology has also clouded the future of corporate communications. In an uncertain and changing market, corporations can no longer afford to take the risk of committing resources to costly long-term business solutions, only to arrive at a dead-end solution. Plus, as corporations have downsized, IS resources have dwindled, leaving departments and workgroups to fend for themselves in terms of developing business solutions. With Microsoft Outlook 97, designers can build industrial-strength applications in days, instead of months, so corporations can get the solutions they need without spending time and money on expensive programming resources. In addition, the Outlook design environment is integrated with Office 97 and Microsoft Exchange Server, so application designers can build and implement solutions for proven technologies with the confidence that these technologies won't disappear tomorrow.

Finally, as corporations have decentralized their operations, system administrators are challenged with the task of managing an ever-increasing number of applications developed at the workgroup level. As such, they need a way to provide centralized storage and security for applications and information, as well as an easy way to integrate the applications into the overall business environment. As a workgroup client, Microsoft Outlook 97 runs on the Microsoft Exchange Server, so any applications developed with Microsoft Outlook 97 can take full advantage of the central administration, replication, and security features of the Microsoft Exchange Server.

The value of using the Outlook application design environment to build information-sharing, groupware, and mail-enabled solutions can be summarized in five key areas.

**Instant Groupware Using Shared Modules** Outlook ships with built-in Calendar, Task, Journal and Contacts modules that can be easily customized. When located in a public folder on the Microsoft Exchange Server, these full-featured modules allow workgroups to share calendars, schedules, task lists, or customer contact information across the enterprise, thus creating instant groupware.

**Fast and Easy Application Development** The Outlook design environment empowers end users because it provides a non-programming environment that enables them to quickly build information-sharing and mail-enabled applications. End users can base their applications on built-in modules, forms, or sample applications in the Outlook box (or supplied separately in the Office Resource Kit or the Microsoft Office Web site). In many cases, designers need only add or remove controls or fields to meet their design needs. Outlook also provides a variety of sample applications, such as Expense Reporting, TimeCard, and HelpDesk that can be implemented as-is or customized to meet the specific needs of a workgroup or organization.

**Scaleable Application Development** Many groupware applications grow in popularity and require additional functionality as their use becomes more widespread. Outlook provides for this situation by offering a scaleable application development environment. End users can design solutions without programming, while programmers and application designers can add advanced functionality to solutions using Visual Basic® for Applications (only when using Office 97 Document Forms), ActiveX™ controls, or Visual Basic Scripting Edition (VBScript).

**Centralized Management and Security** As a workgroup client, Outlook runs on the Microsoft Exchange Server, so any applications developed with the Outlook design environment can take full advantage of the central administration, replication, and security features of the Microsoft Exchange Server. For example, a designer can develop an application on his or her computer, and then turn it over to a system administrator who installs it on the Microsoft Exchange Server. Once the application is on the server, the administrator can set access permissions and replication properties for the folder, so the folder is both secure and replicated across the enterprise.

**Outlook Binds the Internet and Intranet (Extending Outlook Applications)**

All companies have a common need to integrate the Internet with their intranet. Outlook provides the glue that binds the Internet and the intranet because it provides Internet messaging capabilities, so schedules, documents, and forms can be mailed over the Internet. Plus it offers groupware capabilities, so these same items can be stored, organized, and shared among members of a workgroup. For example, a user could send a Product Feedback form over the Internet to a customer. When the customer returns the form, it can be automatically routed to a folder on the Microsoft Exchange Server where it can be reviewed by all members of the workgroup.

In addition, Outlook offers the ability to link forms to Web pages, so application designers have a great deal of flexibility in creating Internet/intranet applications. For example, a designer can link a “For More Information” form to a corporate Web page. This form can be preaddressed to a Potential Customers public folder, so that when a user who is browsing the Web opens and completes the form, the information is automatically routed to the Potential Customers public folder, where it can be shared and responded to by members of a workgroup or by the entire organization

As an application design environment, Outlook offers tight integration with Office 97, the groupware and administration capabilities of the Microsoft Exchange Server, and the messaging capabilities of the Internet. This white paper details the features of the Outlook application design environment and shows how it can be used to develop information-sharing and groupware solutions to streamline business processes and enhance communication in an organization.

## **Instant Groupware Using Built-in Modules**

As a workgroup client, Outlook provides several personal management tools, such as Calendar, Tasks, and Contacts, that can greatly add to a user's productivity. While these modules provide great benefit for the individual user, their value can be dramatically increased when users share information in these modules through the use of public folders and Internet connectivity.

Application designers can create a public folder on the based on a built-in Outlook module. Once located in public folders on the Microsoft Exchange Server, built-in modules become *instant groupware* because the information in their folders can be shared among the workgroup. Also, custom code and custom forms are not necessary – the instant groupware application can take advantage of the existing forms and behavior of the built-in module. As a result, built-in modules can be used for scheduling group events, managing group tasks, and for sharing and maintaining a customer contact list among a workgroup.

Calendar, Tasks, and Contacts modules can be customized — without programming — to meet the specific needs of a workgroup or organization. For example, an application designer can create a generic Calendar public folder, and then add custom views to the Calendar folder so the module can be used specifically for entering and viewing the schedule of training classes for a workgroup.

The following sections provide a brief overview of how the built-in modules can be customized and used in an organization to improve workgroup communication.

## Calendar

The Outlook Calendar module combines the functionality of Schedule+, plus additional features, with the groupware capabilities of Outlook. When located in the Mailbox or Personal folder, the Calendar module enables users to create personal schedules, create reminders, or set up meetings. When the Calendar module is copied to the Microsoft Exchange Server, however, it can be used for sharing group schedules, posting the significant events in a marketing kickoff campaign, making a class schedule publicly available, or posting company holidays in a public folder.

*Figure 1.1: The Calendar Module is located in the public folders so the class schedule can be viewed by all members of the organization. In addition, users can copy specific appointments to their personal Calendar.*

*Figure 1.2: The instructor can double-click an item and update class information, while the user can open the item and get more detailed information about a particular class.*

## Contacts

When a Contacts folder is created in public folders on the Microsoft Exchange Server, workgroup members can add to, update, and share a list of contacts. For example, the sales department can share a list of leads, or the entire company can share a list of vendor contacts.

In the following example, a custom Marketing Materials Tracking view is created by adding two fields—Not Interested and Materials Sent—to the view. This view lets members of the Marketing department track correspondence with potential customers without ever opening a form. As shown in Figure 1.3, if a prospective customer wants to receive information from the Marketing department, the user can enter the date she sent it in the Material Sent column in the view. If the customer is not interested in the material, the user can click a Not Interested check box directly in the view to notify other users not to contact the customer.

*Figure 1.3: The Contacts module is transformed into a Marketing Material Contacts application.*

## Tasks

The Task module lets users keep track of their personal to-do lists and project schedules. When the Task module is created in public folders, a workgroup can share a common task list that shows who's responsible for tasks, as well as the status of tasks.

Using the task module, a project manager can create a public Task folder. Individual users can then enter the tasks that they are required to complete as their part of the project. When users finish a task or make significant progress on it, they can update the task item in the public folder, thus allowing the product manager to get an overall view of the progress of a particular project.

## Fast and Easy Application Development

In the past, when application development was the domain of IS departments, end users often waited forever for a custom solution, only to discover that when it arrived, it wasn't what they asked for and it was next to impossible to change. Now with the easy-to-use Outlook application design environment, designers can develop their own solutions — without programming. Making changes to views and forms is usually both fast and simple.

## Forms Design

The Outlook Forms Designer is a 32-bit environment that's built directly into the product, so opening the Forms Designer is as easy as opening a form in Outlook and clicking **Design Outlook Form** on the Tools menu. In addition, users can easily switch between Design and Run mode while working on a form. Outlook also provides a variety of features that provide a significant improvement over the current Microsoft Exchange Forms Designer environment, including:

**Outlook Forms Are Fully 32-Bit Forms** So they're fast, and perhaps equally important, they're small, averaging about 10K.

**Outlook Forms Are Not Compiled** So they're easy for users to keep track of and update. With Outlook forms, users don't need to worry about searching through folders or directories to find uncompiled source files to make changes to a form. In fact, Outlook's simple .OFT file format lets users make changes to forms and then publish them to a forms library as easily as they save a document file in Word or Microsoft Excel.

**Outlook Forms Provide Built-in Functionality** When building an application, users always start with either a built-in module, sample application, or one of the standard message, post, or office forms. Because most of the functionality is already supplied for users, they can often build high-quality applications in days, sometimes hours.

**Outlook Forms Can Be Linked from a Web Page** Outlook forms are stored in a simple .OFT file format and can be linked to from Web pages and other Office documents, so organizations can create repositories of custom groupware forms that can be accessed via an Internet browser.

## The Outlook Forms Designer

The Outlook Forms Designer, as shown in Figure 1.4, provides a wide assortment of layout features to speed application development and give forms a professional appearance.

**AutoLayout** With the Forms Designer AutoLayout feature, controls are automatically positioned on the form in the best possible location. For example, if a new control is dragged below an existing control, the new control is automatically left-aligned with the existing control.

**A variety of alignment options** With the Outlook Forms Designer alignment options, controls can be aligned in a number of ways, including Left, Center, Right, Top, Middle, Bottom, or To Grid.

**Adjustable grid size** The Outlook Forms Designer provides an adjustable grid so designers can easily and accurately position controls on a form.

*Figure 1.4 With the Outlook Field Chooser, designers can use built-in fields or they can create new User-Defined fields. Outlook provides a full-featured toolbox to which the designer can add a full complement of custom or ActiveX controls.*

## Custom Form Design Based on Standard Forms

When creating applications, designers can based their forms on one of four standard types of form:

**Mail Message Form** Lets users send and receive items, and respond to items. Items can be sent to another user, to a distribution list, or to a public folder.

**Post Form** Lets users post, view, and respond to items in a folder. The Post form serves as the foundation for discussion applications with threaded conversation views that enable users to conduct and view online conversations.

**Office 97 Document Form** Combines the power of Microsoft Excel, Word, or PowerPoint® with the groupware and mail capabilities of Outlook. With Outlook, a form is essentially wrapped around an Office document so it can be sent as a mail message or shared in a public folder.

**Contact, Task, and Calendar Forms** These built-in forms can be modified by showing additional pages on the form. Designers can then add controls to the additional pages to suit their particular needs.

*Figure 1.5: The standard appointment form is transformed into a Technician Schedule form for a corporate Help Desk application.*

Because the Contacts, Tasks, and Calendar forms are covered earlier in this white paper, this section will focus on Message, Post, and Office 97 Document forms. Each of these three forms support all the features of standard Microsoft Exchange forms, so designers can build forms with the certainty that the functionality they need, including digital signature and encryption, will be available. Details of the features of these three types of forms is provided in the following sections.

### **Mail Message Forms Automate Traditional Processes**

Using the Mail Message form as a base, application designers can build custom forms for structuring information, requesting services, or collecting information from coworkers or from customers. Users can send and receive mail message forms within the enterprise or across the Internet.

When used with a public folder, the message form provides a powerful tool for collecting customer information. For example, designers can create a Product Feedback form and specify a public folder as the return address. They can then send the form to customers who can install it in their form library. When customers have product feedback, they can open the form, fill it out, and automatically return it via the Internet to the company's Product Feedback public folder.

Here are a few other ideas for creating Mail Message forms using the Outlook Forms Designer.

**Request Forms** Electronic forms provide a great way to automate a request process in an organization. For example, designers can create forms for purchase orders, copier services, business cards, or travel requests.



In the following example, shown in Figure 1.5, the Vacation Request form is filled out by a user and sent to a supervisor. When the supervisor receives and opens the Vacation Request item, he or she can click a button on the Vacation Request form to approve or deny the request and automatically route the response to the sender. Note also that the form takes advantage of several features of the Outlook design environment, including AutoName Check for the To box and automatic calculation of Total Days based on a formula defined with the Access Expression Service.

*Figure 1.6 The Vacation Request form is based on the Mail Message form and lets the user mail a request within the company or across the Internet.*

**Feedback or Survey Forms** Survey or Feedback forms can be used to collect feedback from customers or coworkers. For example, you could link an Employee Satisfaction survey form to your company's Web page. Outlook users browsing the company's internal web can click the link to open the form. They can then fill it out and route it to an Employee Satisfaction public folder.

**Report Forms** Report forms can be used to structure and distribute information. For example, remote workers can send weekly status reports back to the main office. Temporary employees can send Weekly Time Sheet forms to their employment agency, or members of the Sales force can submit their Mileage Report to a supervisor for approval.

*Figure 1.7 The Help Ticket form is also based on the Mail Message form but this time the Read Page formatting has been totally customized to create a completely different look from the Help Ticket compose form.*

### **Discussion Forms Break Down Communication Barriers**

Discussion forms, also known as Post forms, can be used in conjunction with a public folder to build participatory applications that help break down traditional time and space boundaries between members of an organization. Using the Discussion form as a base, designers can build applications that allow users to conduct online discussions, which can be especially useful for virtual corporations, or flexible workgroups where members work together on a project, but work different hours.

For example, let's assume three people, all in different cities, are working together on planning a new product. A user in Seattle can submit a product suggestion to a Wish List folder on the Microsoft Exchange Server. A user in Chicago can then use a customized Discussion form to post a response to the suggestion. Meanwhile, another user in Denver can follow the conversation because the items are arranged in the folder by Conversation Topic.

Here are a few ideas of the types of discussion forms designers can build.

**Forms for a Technical Users Group** Users can submit problems and solutions to problems, as well as review and respond to submitted problems.

**Job Candidate Forms** A supervisor or human resource administrator can submit a job candidate item to a public folder. After each user interviews the candidate, he or she can submit hiring recommendations to the Job Candidate folder, where the summary of opinions can be reviewed by the supervisor.

**Product Wish List Forms** A designer can create one form for submitting items to a folder for suggestions, and another form for responding to suggestions. Product planners can review the folder for new ideas for their product.

*Figure 1.8 The Post form is modified to conduct conversations about new product ideas.*

### **Build Office Document Forms Based on Existing Templates**

With Office Document forms, you can build forms based on existing templates in your organization. For example, assume you already have Microsoft Word templates in your organization, such as Beta Agreements, Contractor Agreements, or Job Estimates. With the Outlook Forms Design environment, designers can essentially wrap these templates in an Outlook form wrapper, so the template's document properties can be promoted in a public folder. This enables designers to create document library folders for a wide variety of purposes, such as storing Contracts, Product Specifications, Job Estimates, Microsoft Excel worksheets, or PowerPoint presentations.

In the following example, the Office form contains a Microsoft Word Beta Agreement template. To send a Beta Agreement to a customer, a user opens the Beta Agreement form from the Contract Library folder. She can then fill out the appropriate fields in the Word template, and send the document form over the Internet to the customer.

*Figure 1.9 The Beta Test Agreement form is composed of the Outlook form combined with the Microsoft Word Beta Test Agreement template.*

When the form is returned, it can be routed to the Contract Library public folder, where its fields can shown in a public folder. In addition, the fields can be used to organize documents in a custom view, as shown in Figure 1.8.

*Figure 1.10 The Custom Properties in the Beta Agreement template, including Customer, Date, and CoLocation, are used to create column headings in the Beta Test Agreement view.*

## Folder Design

The Outlook workgroup client provides a Folder Design environment that improves upon many of the design features offered in the Microsoft Exchange client. With Outlook, designers can do most of the design work for views directly in the folder. For example:

**Drag and Drop Columns Adjustment** With the Outlook client, designers can arrange columns by dragging the column header to the desired position. The designer never needs to open a dialog box.

**Add Columns Using the Field Chooser** Using the Field Chooser, designers can automatically add columns to a view by simply dragging fields from the Field Chooser to the folder.

**Group By Box** Designers can dynamically create groups for views by simply dragging the Column Heading into the Group By box, as shown in Figure 1.9.

**Best Fit Feature** With this feature, designers right-click the column, then click Best Fit. Outlook automatically arranges the column size to fit the text in the field.

**In-cell editing** Oftentimes users want to change values in an item without actually opening the form to display the item. The Outlook client provides this option by enabling the designer to specify In-cell editing for a view. When In-cell editing is selected for a view, users can select checkboxes and edit text fields in the folder.

*Figure 1.11 The Views Design Environment provides features that allows designers to construct views without opening a dialog box.*

## Create Outlook Folders for Better Workgroup Communication

Research studies report that groupware is most commonly used for on-line discussions, tracking, or document library applications. Therefore, Outlook is strategically focused on these three most-frequently-used types of applications. Each of these types of applications is discussed in more detail in the following sections.

### Discussion Applications

Discussion folders are often referred to as “on-line bulletin boards.” These folders serve as a central location for users to submit, share, and respond to ideas and information. One of the most valuable features of a Discussion folder is known as Conversation Threading and it enables designers to create rich views that show the history of responses to a particular item. The usefulness of Conversation Threading is demonstrated in the Job Candidate folder, as shown in Figure 1.10, where interviewers’ hiring recommendations for a candidate are organized and posted in a public folder, so the person in charge of hiring can get an overall view of the workgroup’s impression of the candidate.

*Figure 1.12 The New Job Candidate item is posted to the Job Candidate folder. After workgroup members interview a candidate, they submit their hiring recommendation by responding to the Candidate item. The responses, as shown in the illustration, create a Conversation Thread.*

Here are a couple of other folder ideas that might help a company improve relations with its customers.

**Technical Users Group** Users, either customers or internal users, can submit solutions, ideas, and problems, as well as review and respond to submitted solutions.

**Customer Support Bulletin Board** This application records customer questions, the preferred response, and how the call was resolved. The information can be organized in a number of ways, such as by product or by customer.

## **Document Library Applications**

Outlook folders are not limited to storing mail messages, so users can store graphic images, OLE objects, URLs, voicemail, and documents in a Reference folder. For example, a development workgroup can create a Specification Library for storing, organizing, and reviewing product specifications. In addition to documents and mail messages, users can store Web-site references in folders, so a list of useful Web sSites can be shared and updated by a workgroup. In the following example, the Aero Web folder is used to store Web sites for the aircraft industry. From the Microsoft Internet Explorer, users can save their favorite Web sites as URL files, then drag the files into the Web Reference folder. Other users can then simply click the item in the public folder to go to the Web site.

*Figure 1.13 Web Reference Folder. The user clicks an item in this folder to activate the Internet Explorer and go to the Web URL.*

## **Tracking Applications**

Tracking applications let the user record and view information that is constantly updated. The following example shows a Customer folder that lets a Help Desk worker log and track Customer Service Request items. Notice the All By Status view is selected in the view box so that Customer Service Request items are grouped according to whether they're open, on hold, or closed.

*Figure 1.14 Customer Service Items are posted in the folder. When the status of a job changes, the user can open the folder, change the status, and then save the item in the folder.*

## **Advanced Design Features**

The Outlook Forms Design Environment provides powerful tools that enable the designer to add intelligence and automation to forms and views. These tools include:

**The Access Expression Service** Is built into the Outlook Forms Design environment, enabling designers to easily create validated, formula, and combination fields. For example, with the Access Expression Service, the designer can create a Formula Field for a TimeCard form that automatically calculates the total number of hours worked in a week.

**Visual Basic Scripting Edition (VBScript)** Is built into the Outlook Forms Designer, offering the designer the full capabilities of VBScript, a subset of Visual Basic Applications Edition. Using the Outlook Object model and VBScript, designers can add additional functionality to standard methods such as Open and Close, automatically create items and set properties on them, and add intelligence to forms so fields are automatically filled in for the user.

Both the Expression Service and VBScript Editor are described in more detail in the following sections.

## **Validated, Formula, and Combination Fields**

Using the Access Expression Service, the designer can add functionality to fields, for example:

**Field Validation** Can be built into forms to ensure that a specific value or a value range is entered into a field, or to ensure that a field value is not exceeded. For example, for a Purchase Order form, if the value of the Total box exceeds \$2000 dollars, the form can open a dialog box that explains to users that they must first submit the purchase order request to their supervisor for approval. To add validation to a field, the designer can use the Access Expression Service provided with the Outlook Forms Designer.

**Formula Fields** Are great for forms that require total values, such as timesheets, mileage reports, and sales reports. The process of creating formula fields is greatly simplified for the designer through the use of the Access Expressions Service. As shown in Figure 1.13, the Expression Service is used to create a formula for the TotalDays field that automatically calculates total vacation days based on the dates the user enters in the StartDate and EndDate fields.

*Figure 1.15 The value in the Total Days field is automatically calculated by a formula.*



**Combination Fields** Can be used to combine string values in controls. For example, in the Microsoft-supplied While You Were Out form, the string value of the Message box is formed by concatenating the string values from several other fields.

### **Add Flexibility to Forms with VBScript**

Using VBScript and the Outlook Forms Designer Script Editor, designers can automate forms to save users time and to make forms easier to use. For example, in the Business Card Request Form shown in Figure 1.14, when the user clicks the Corporate Address checkbox, the address is automatically added to the lower business card portion of the form. In addition, when users enter their Name and Title in the form, these values are also automatically filled in the business card portion of the form. Figure 1.15 shows the Visual Basic script in the Script Editor window that automatically fills in the fields in the lower portion of the form.

*Figure 1.16 The Business Card Request form utilizes VBScript to automatically fill in the bottom portion of the form for the user.*

*Figure 1.17 Using the Script Editor, VBScript is added to the form to automatically fill in the lower portion of the form for the user.*

## Scaleable Application Development

Often in organizations, applications follow a progressive path. First they're developed at the workgroup level to solve a specific problem. Then the application becomes adopted by other workgroups and requires additional functionality. Finally, the application is implemented enterprise-wide, and requires even more functionality to meet the broader needs of the organization. Outlook provides for this kind of scenario by offering a flexible approach to application development. With the broad range of tools and capabilities in Outlook, designers of all skill levels can meet their business solution needs.

The following shows the different levels of Outlook application development, starting with the easiest level and progressing to the most advanced level.

**(Non-programming) Create a new instant groupware folder** Designers can create Calendar, Contacts, or Tasks folders in public folders, enabling users to share schedules, contacts, or task lists across the organization.

**(Non-programming) Add a custom view to a folder** At the simplest level, designers can add fields to a public folder view, or they can add new custom views to the folder. Often this is sufficient, especially since in-cell editing enables users to enter information without opening a form.

**(Non-programming) Modify Built-In Forms with the Forms Designer** Designers can hide standard pages or show additional pages in Calendar, Contacts, and Task forms to create mission-specific applications. For example, for a Beta Contacts form, a designer might want to add an additional Company Profile page to the form.

**(Non-programming) Modify Message, Post, or Office Forms** Send, Post to Folder, and Office Document forms are fully customizable, so users can add or remove controls from their pages and they can set Action Properties to define how the form handles responses.

**Use VBScript to Add Intelligence to Forms** Designers can use the full power of VBScript to add intelligence and a professional quality to their forms. They can hide controls and make them visible, launch applications from a button, perform field validation, set properties on items, automatically update fields, and build logic behind graphic elements and buttons.

**Add Custom Controls and ActiveX Controls to the Form** For forms that require database access or a grid control, designers can use Outlook's Edit, ListBox, or ComboBox ActiveX controls for reading from or writing to an ODBC-compliant database. Designers can also use any third-party ActiveX controls.

**Use VBA with Office 97 for the ultimate in flexibility** Using VBA, designers can add macros to documents to automate tasks and make applications easier to use. For example, designers can add macros to an Expense Report template embedded in an Office Document form that automatically write expense report totals to a Microsoft Access database.

## Extending Outlook Applications

Outlook forms can be extended using ActiveX controls, the Internet Control Pack, or VBA.

## Using VBA with Office Forms

Designers can add VBA code to Office documents, and then drag the document into an Outlook folder to wrap the document in a form. For example, a designer can create a Mileage Report worksheet in Microsoft Excel that calculates total miles and the reimbursement amount due. In addition, the designer can add VBA macros to the worksheet that writes the mileage record to a Microsoft Access or other ODBC-compliant database. Next the designer can drag the worksheet into an Outlook folder to wrap the worksheet in an Outlook form. The designer can then add a Cover page for user information and Status page to the Mileage Report form.

At run time, users can open the Mileage Report form from the Organization forms library. They can then fill it out and submit it to a supervisor for approval. When the supervisor approves the report, VBA code can automatically write the mileage report record to a database.

## Using ActiveX Controls for Database Access

In many cases, designers will need to create applications that integrate database information into forms. For example, a designer might want to create a Library Materials Order form that enables the user to query the Library Materials database for books or magazine on a particular subject. To accomplish this, the designer can drop an ActiveX control on the form, and then set the properties for the control to perform queries on the SQL Library Materials database.

At run time, when users open the form, they can then use the ActiveX control(s) to query the database. After users have selected the materials they want, they can send the request to the library for processing.

## Using the Internet Control Pack with Outlook

With the Internet Control Pack, a set of Internet ActiveX controls allows designers to rapidly integrate Internet functionality into their Outlook applications. For example, a designer can create a research form by placing an HTML ActiveX control on a Mail Message form, thus enabling users to browse the Web from within a form. The designer can then add VBScript to the form to save the Web page address to a form field. At run time, a researcher can open the Mail Message form, browse the Web and save the addresses of the Web pages that are relevant, and then send the Mail Message item to another user. The recipient of the Mail Message item can then view the Web pages by clicking the Web page addresses on the Mail Message form.

*Figure 1.18 The selection of the manufacturer and model type in the computer field in the Equipment Request form, determines which exact web page will be displayed in IE 3.0 inside of the Outlook form.*

## Sample Applications

In many cases, organizations or workgroups can solve business problems or increase productivity simply by installing one of the sample applications that ships with Outlook. Although these applications are fully customizable, they are designed to be run “out of the box” and can be quickly installed and implemented in an organization.

The following provides examples of some of the sample applications (subject to change) that will be available with Outlook.

### Message Applications

- **Vacation Report** Enables employees to request vacations and mark vacation time on their calendars, supervisors to approve vacations, and employees to confirm the actual amount of vacation and sick time taken upon their return.
- **While You Were Out** Allows anyone to take a message for another employee using a form modeled on the standard “While You Where Out” form in common usage, and then send the message to the employee’s inbox.

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#### **Discussion Applications**

- **Job Candidate** Lets managers or human resource personnel post a job candidate item in a public folder. Users who interview the candidate can post their recommendation whether to hire or not hire the candidate in the Job Candidate folder. Custom views in the Job Candidate folder let the supervisor easily view interviewers recommendations.
- **User Group** Provides a forum for users to conduct on-line conversations. Users can post, read, and respond to ideas, problems, or solutions in a public folder. Items in the folder are organized by conversation thread, so the history of a conversation can be easily followed.

#### **Tracking Applications**

- **Help Desk** Submits Help and Equipment Requests, schedule technician appointments, and track the status of Help Request.
- **Sales Management** Manages the Sales process and features Contact Management, automatic booking of meetings, and automatic journaling of all communications with the client.

#### **Office Forms**

- **Expense Report** Features a public folder for filing and viewing expense reports, and an Expense Report form based on a Microsoft Excel worksheet. Summary properties such as subtotals and expense categories are used to create fields to view expense report information in the folder.

## **Centralized Management and Security with the Microsoft Exchange Server**

With the proliferation of application development at the workgroup level, organizations need a standard platform for application development, as well as a way to centrally manage applications. The Microsoft Exchange Server provides this for Outlook applications by offering Internet connectivity, a reliable messaging infrastructure, integrated groupware capabilities, and centralized storage, security, and administrative capabilities.

**Central Application Management** The Microsoft Exchange Server provides a public folder object store where folders, forms, and items can be centrally stored for enterprise-wide access. Application designers can make their applications available throughout the company simply by copying a folder to the public folder area on the Exchange server.

**Microsoft Exchange Server Security** Using the Microsoft Exchange Server Administrator Program, administrators can define who has access to organizational forms and public folders. In addition, either the administrator or the application designer can set permissions on a public folder to define what rights an individual user has on that folder. Also, because Microsoft Exchange Server runs on Windows NT®, corporations get the authentication capabilities of the NT server, further ensuring that only authorized users have access to a company's sensitive information.

**Forms and Folder Replication** Exchange administrators can use the Microsoft Exchange Server replication engine to distribute forms and folders (including calendar, task, and contact folders) throughout the enterprise. The server replication engine manages the distribution of the application and ensures that any changes to forms or folders on one server are automatically reflected on the replicated servers.

**Offline Use of Applications** Users can run Outlook applications offline while working in remote locations. For example, a sales person can use a Contacts folder offline while travelling to view contact information, and to enter new information. Remote users can take advantage of the local replication feature of Microsoft Exchange to synchronize their Favorite Folders with the folders on the Microsoft Exchange Server.

## Interoperability and Migration

Before designing and implementing forms in their environment, application designers should be aware of the following issues.

For detailed information about interoperability and migration, see the following white paper: *Microsoft Outlook 97: Interoperability With Microsoft Exchange Client, Microsoft Mail Version 3.x, Microsoft Schedule + 95, and Microsoft Schedule + Version 1.0.*

## Outlook Public Folders

Outlook supports all the custom public folder view features of Microsoft Exchange Server. Microsoft Exchange Server does not distinguish between Outlook and the Microsoft Exchange client when users open a public folder, so Outlook and Microsoft Exchange client users can have access to a common set of folders

MS Mail 3.x users cannot access Outlook public folders.

**Non-table views** Microsoft Exchange client users can display Outlook "table" views (views that consist only of rows and columns) if the **Convert To Exchange Views** check box is selected in **Folder Properties** for the Outlook folder. However, Exchange client cannot display Outlook's non-table views such as the day, week, and month view in the calendar. Nor can it display the card, icon, or timeline views. When Outlook users and Microsoft Exchange client users access the same set of public folders, Microsoft Exchange client users cannot display any non-table views created by Outlook users.

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## Outlook Forms

Outlook users can run forms created with the Microsoft Exchange client Forms Designer, but Microsoft Exchange client users cannot run forms created with the Outlook Forms Designer.

In a mixed client environment (Microsoft Exchange client — 16-bit and 32-bit Windows®—and Outlook), designers must carefully consider which clients will be using the forms they create.

**If forms will be run by both Microsoft Exchange client and Outlook users**, then forms should be developed using the Exchange Forms Designer.

**If forms will be run only by Outlook users**, then the forms should be developed using the Outlook Forms Designer.

### Advantages of using Outlook Forms

- Forms are fully 32-bit.
- Forms are small (about 10K).
- Forms support all features of standard forms, including digital signature and encryption.
- Built-in modules can be modified and copied to a public folder for shared calendar, tasks, and contacts.
- Forms can contain Office templates.
- Forms can be easily embedded in e-mail messages.
- Forms support formula fields, combination fields, and validated fields.
- Forms can contain ActiveX controls like Grid and Database Lookup.
- Forms can contain Host Internet Control Packs controls so designers can put Web Pages right on the form.
- Forms are programmable using VBScript.
- Forms are interpreted. No compilation step or Visual Basic runtime files. No EFPs, CFGs, and .EXEs. Form source stays with .OFT file.
- It's possible to switch instantly between run and design mode.
- Enhanced layout tools, including a grid and an AutoLayout feature that automatically positions controls on the form.
- Forms can be saved as templates and launched from the desktop, a document, or a Web page.

### Disadvantages of using Outlook Forms

- Forms require Outlook to run.
- Outlook forms cannot be migrated to Visual Basic.
- You cannot disable standard form features.

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**Note** At this time, Outlook forms are not supported on the Macintosh.

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## Migrating Forms

It is not possible to convert 16-bit Microsoft Exchange forms to 32-bit Outlook forms. These forms will need to be rebuilt using the Outlook Forms Designer, or run as-is.

