TrackRecord

User's Guide

Release 06.02.02

COMPUWARE

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Technical Support Hotline:
1-800-538-7822

FrontLine Support Web Site:
http://frontline.compuware.com

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About This Guide

The *TrackRecord User's Guide* is intended for users of TrackRecord. It includes information designed to aid users by providing information about TrackRecord's concepts and user interface, instruction on entering information into TrackRecord, using predefined reports to display the contents of the TrackRecord database, and formatting custom Track-Record reports. You can find additional information in the online help facility and documentation set. See "Related Publications" on page 8.

Compuware assumes that you are familiar with basic Microsoft Windows navigation. If this is not the case, familiarize yourself with the documentation for Microsoft Windows before reading this guide.

Product Enhancements

For a detailed listing of product enhancements made in TrackRecord Release 06.02.01, refer to the "What's New" in the TrackRecord Release Notes. In addition to the most recent release, the Release Notes also list enhancements included in several previous releases for your reference.

Related Publications

The TrackRecord documentation set contains:

◆ *Installation Guide*— PDF file containing system requirements and instructions for installing and configuring Compuware products.

◆ *Licensing Guide*— PDF file containing licensing procedures and overview.

◆ *TrackRecord Administrator's Guide*— Description of various administrative tasks that must be performed before TrackRecord can be used and the actions required to create and maintain the TrackRecord database and AutoAlert. It also includes reference material for programmers writing modules to access the TrackRecord databases.

◆ The TrackRecord **online help**— Field descriptions, operating procedures, and reference information relating to TrackRecord. In the Web-Server, click **Help** to see an outline of available topics. In the Windows Client, click **Help** or press **F1**.

◆ TrackRecord **Release Notes**— HTML file that contains technical information that may affect how you use the product and known issues related to the current release of TrackRecord. You can find the Release Notes in the TrackRecord program files.

◆ TrackRecord **Guided Tour**— A quick tour of the product containing product overview information, user interface descriptions, and an overview of the basic tasks that can be performed with the product. You can access the tour by choosing **Guided Tour** from the Track-Record program files or from the **Help** menu within the product.

You can access the online versions of the PDF files from the installation bookshelf on the TrackRecord CD browser or from Compuware's Front-Line technical support Web site at: http://frontline.compuware.com.

Viewing and Printing Online Books

TrackRecord's online books are provided in PDF format, so you need Adobe Acrobat Reader to view them. It is recommended that you install Acrobat Reader 4.0 or above to get the best results when viewing the online books. To install the Adobe Acrobat Reader, go to Adobe's Web site at www.adobe.com.

Because PDF is based on PostScript, a PostScript printer is the most reliable way to print the online books. In most cases, you can also print PDF files to PCL printers. If you cannot print the PDF files to your printer, refer to Adobe's Web site for trouble-shooting information.

World Wide Web Information

To access Compuware Corporation's site on the World Wide Web, point your browser at http://www.compuware.com. The Compuware site provides a variety of product and support information.

FrontLine Support Web Site

You can access online technical support for Compuware products via our FrontLine support Web site at http://frontline.compuware.com. FrontLine provides fast access to critical information about your TrackRecord product. You can read or download documentation, frequently asked questions, and products fixes, or email your questions or comments. The first time you access FrontLine, you are required to register and obtain a password.

Getting Help

At Compuware, we strive to make our products and documentation the best in the industry. Feedback from our customers helps us maintain our quality standards. If you need support services, please obtain the following information before calling Compuware's 24-hour product support hotline:

*Tip: To display the TrackRecord About window, choose **Help>About Compuware** TrackRecord. Click **OK** when you are finished.*

◆ The name and release (version) number of the TrackRecord product. This information is found on the covers of the product documentation or the About Compuware TrackRecord window.

◆ Installation information including:
  ◇ Installed options
  ◇ Whether the product uses local or network databases
  ◇ Whether it is installed in the default directories
  ◇ Whether it is a standalone or network installation
  ◇ Whether it is a client or server installation

◆ Environment information, such as the operating system and release on which the product is installed, memory, hardware/network specifications, and the names and releases of other applications that were running.

◆ The location of the problem in the TrackRecord product software, and the actions taken before the problem occurred.

◆ The exact product error message, if any.

◆ The exact application, licensing, or operating system error messages, if any.

◆ Your Compuware client, office or site number if available.

TrackRecord Technical Support

Compuware Corporation

One Campus Martius

Detroit, MI 48226-5099

(800) 538-7822

Chapter 1
Introducing TrackRecord
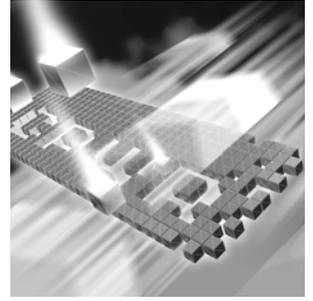
◆ Overview of TrackRecord

◆ Process at a Glance

◆ About the TrackRecord Database

◆ Understanding Data Type Inheritance

Overview of TrackRecord

Note: This chapter provides a summary of Compuware TrackRecord®. Because it provides an overview of TrackRecord functions and concepts, you should read this chapter carefully before you use TrackRecord for the first time.

Compuware TrackRecord is a defect and project tracking tool designed to record and report information about products being developed or supported. TrackRecord records all the information relating to a project-project Team Members and testers, schedules and milestones, bug reports and feature requests- in a database. You can then use TrackRecord's query and reporting features to retrieve and format the information you need to keep your project on track.

TrackRecord is very customizable and can adapt to virtually any environment. With TrackRecord, you can track many types of information, implement full workflow to ensure a repeatable process, create multiple reports, and even generate graphs.

Product Integration

TrackRecord is part of the Compuware DevPartner Studio suite of software debugging tools and the Compuware QACenter family of automated testing tools. Interaction with these families of products is

described in Chapter 8, "Integrating TrackRecord with Other Applications".

Types of Users

Figure 1-1 illustrates how TrackRecord users, administrators, and WebServer users interact with the TrackRecord server and database.

If you have a license to use TrackRecord on multiple PCs, you can install TrackRecord on a dedicated PC to act as your server. The server will house the database and will share it with the client workstations.

As information is entered in TrackRecord, the information is stored in a database. Interaction with this database occurs through queries and reports, as described in "Process at a Glance" on page 13. For more information about the database, see "About the TrackRecord Database" on page 15.

Figure 1-1. TrackRecord Users and Components
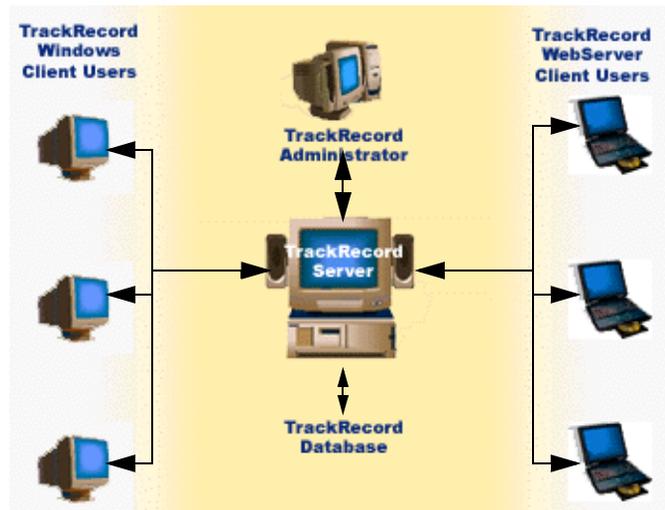
There are three types of TrackRecord users:

◆ TrackRecord **Administrator** — TrackRecord includes administrative functions that can only be performed by authorized users, such as setting up user groups, importing and exporting information to and from other applications, and editing the data types used by Track-Record. When a TrackRecord administrator logs in, he or she sees an additional menu (the Administrator menu) on the TrackRecord menu bar. For additional information, refer to the *TrackRecord Administrator's Guide*.

- ◆ TrackRecord **Windows Client User** — A user running the Track-Record client software accesses the TrackRecord database by logging in from client machines anywhere on your network. Whether a user can add or modify database information, including items and reports, depends on the groups to which the user belongs. The administrator determines the access and editing privileges of each user.

- ◆ TrackRecord **WebServer User** — WebServer users access the database by logging in using standard Web browsers, such as Microsoft Internet Explorer. Refer to Chapter 6, "Using TrackRecord's WebServer" for information on the WebServer interface.

Process at a Glance

TrackRecord can be used to enter information about projects and to retrieve and view that information. This section provides an overview of those fundamental tasks. The example shown in Figure 1-2 depicts a

visual overview of task to create a report of all defects in the database that are assigned to Your Project and have a priority of 1 (Critical) or 2 (High).

Figure 1-2. Process at a Glance. Note that your screens may be different than shown.

1. Enter data by opening a Defect Item View (a form on which you enter or modify information about a item such as a defect or a person). This defect is for Your Project and is a priority 1. For more information, refer to Chapter 3, "Entering and Editing Data".

2. Retrieve data by creating a query. This query is set to retrieve data for Your Project that is a priority of 1 or 2. See Chapter 4, "Retrieving Data" for more information.

3. View data that has been retrieved by a query. Four formats are available: Outline Report, Graph, Milestone Status, or a Calendar. In this example, an Outline Report has been used to display the information. Refer to Chapter 5, "Viewing Data" for complete information.

About the TrackRecord Database

Understanding how the TrackRecord database records, links, and displays information is an important step toward using the product more effectively.

When you enter information using TrackRecord, the information is stored in a database. TrackRecord automatically opens its database when you start the program, and automatically closes your connection to the database when you exit. You interact with this database through item views, queries, and report views, as described in "Process at a Glance" on page 13.

Types, Items, Links, and Fields

The TrackRecord database organizes information into *types*, such as Person, Company, Defect, or Project. For each type of information stored in the TrackRecord database — defects, tasks, Team Members, and so on — you will want to store different pieces of information.Each data type functions like a database table, establishing the properties (fields) Track-Record expects for an item of that type. Visually, a data type is a form, with fields and controls to enter or display information. These types are extremely customizable and many different fields can be added or removed very easily. For example, you might want to store a name and phone number for a Team Member and a summary and description for a defect.

A data *item* is one record of a specific type that has its own data entry form, which is composed of fields appropriate to that item type. For example, Abraham Lincoln and Harry Truman would be two items of the type Person in a TrackRecord database.

Each data item consists of *fields* and *links*. Fields hold specific facts about an item, such as a person's address or the name of a project; links connect one item in the TrackRecord database to another to capture the relationships between items. For example, a Team Member item (John Doe) might be connected to Project items (as a Team Member), Defect items (as the person reporting them or responsible for fixing them), and Company items (as an employee).

Figure 1-3 illustrates how a Team Member item links to a Company item and to several Project items. These links make it easy to retrieve informa-

tion, such as all Team Members assigned to a Project or all Projects with open defects.

Figure 1-3. Links Between Database Items
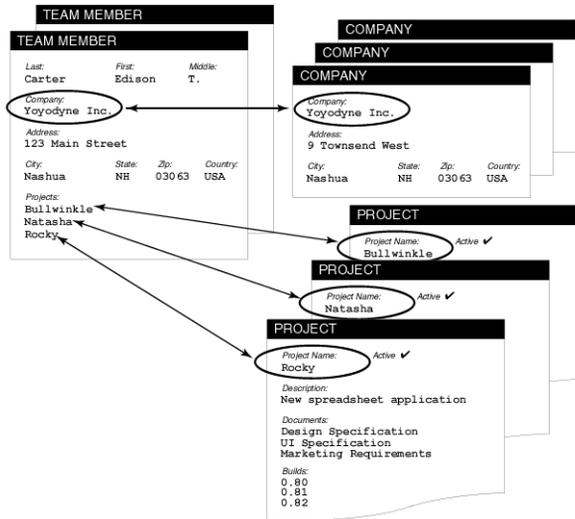
When an object is entered in a field, that field is automatically **linked** to the original item. When you change the item, no matter where it appears, all references to that item change **automatically**. For example, if you change the spelling of the Person's name, that change is reflected in all other items that contain a link to that Person.

In addition to the obvious information types, such as Projects or People, the TrackRecord database can store special types of information, such as executable commands and database queries.

The limit on the maximum number of "Types" a TR database can hold is 485 user defined types. There are 27 reserved types, eg. query, outlines, etc. in addition to this number.

Change History

As database items are created and modified, TrackRecord captures the time and date of each change, the person adding or changing the item, and the information that was added or changed. For more information regarding change history, refer to "Change History Tab" on page 43.

Client-Server Technology

The TrackRecord database resides on a central server on your network. The TrackRecord server software accepts simultaneous input from multiple users on client machines; the TrackRecord server periodically checks

the database for new information during a session and forwards updated information to clients when necessary.

Understanding Data Type Inheritance

TrackRecord information types, such as the Person type, Defect type, and so on, provide the framework on which the TrackRecord database is built and is organized into a data *hierarchy*.

When one type inherits from another, the inheriting type (the *child*) receives all the attributes of the original type (the *parent*). In the example (Figure 1-4, Data Type Inheritance, on page 17), Bugs is the parent of Open Bugs, and Open Bugs is the parent for Priority 1 and Priority 2; Open Bugs and Closed Bugs are the child of Bugs, and Priority 1 and Priority 2 are the child of Open Bugs.

Figure 1-4. Data Type Inheritance

"Open Bugs" inherits attributes of "Bugs"

Children of "Open Bugs" and inheritors of its attributes

"Closed Bugs", the child type, inherits attributes of "Bugs", the parent type
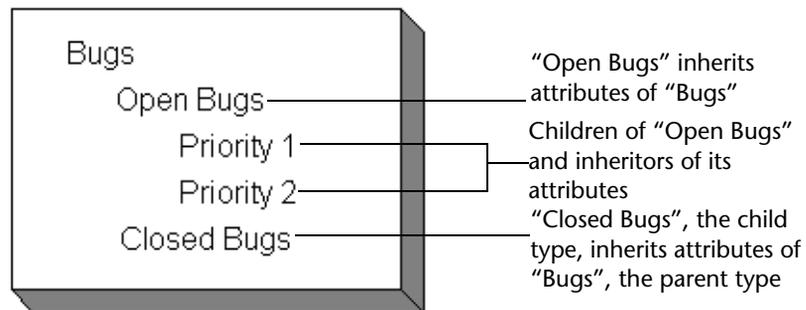
After the child inherits fields from the parent, it can add fields of its own. Figure 1-5 illustrates how the Person data type is the parent to the Developer and Beta Tester data types; each child type starts with the fields it

inherits from the Person type, and adds its own fields below the inherited fields.

Figure 1-5. Child Items Inherit Fields from Parent

The Developer and Tester types inherit from the Person type, taking all of the fields from Person before adding others.
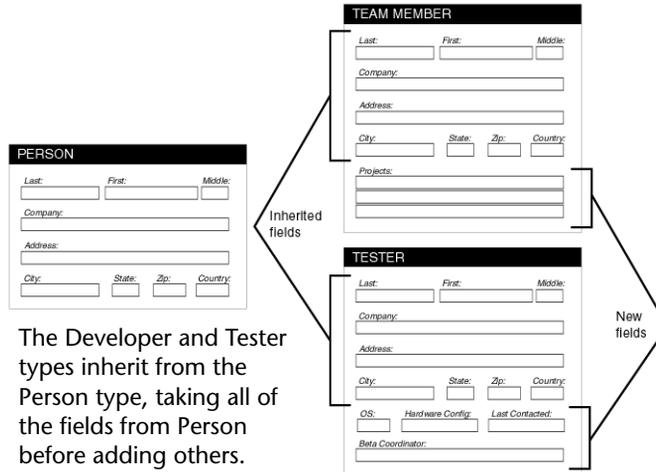
This type of inheritance allows items of any child type to be used anywhere in TrackRecord where an item of its parent type is expected. For example, Figure 1-5 illustrates that the Team Member type inherits from the Person type, so all Team Member items are also Person items. Therefore, Team Members and Testers can be used to fill fields where Person items are expected. Note, however, that the reverse is *not* generally true: Person items that are not Team Members cannot be used in fields where Team Members are required.

One of the benefits that type inheritance provides is the ability to add another identity to an item of one type. For example, a person in a database changes roles on a project and must be changed to a Team Member. If Team Member is a child type of the Person type, an administrator does not need to remove and reenter information about that individual.

Type inheritance also permits querying on a parent type to retrieve information about all items of that type, including its child types. For example, a query that looks for defects will retrieve items of the parent as well as the child.

Where to Go Next

Now that you have a general understanding of TrackRecord concepts, you are ready to get up and running with TrackRecord. Refer to Chapter 2, "Getting Started" for more information.

Chapter 2
Getting Started
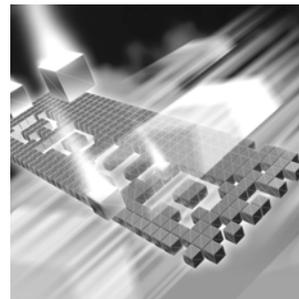
Before You Begin

Before you begin using TrackRecord, you will need to obtain the following information from your TrackRecord administrator:

◆ **What user name and password should you use?**

Before you can log in to TrackRecord, you must have a valid user name and password.

◆ **What database should you use?**

If your site has several development projects running concurrently, your TrackRecord administrator might create separate databases. You will need the name of your database.

◆ **What project should you use?**

A database can include multiple projects. Your TrackRecord administrator can tell you what project name you should use to display and enter project information.

Note: TrackRecord Administrators should refer to the *TrackRecord Adminis-trator's Guide* for information about setting up the database before users begin creating items.

Note: For information on using the TrackRecord WebServer, refer to Chapter 6, "Using TrackRecord's WebServer".

Starting TrackRecord

Follow the instructions below for quickly getting started with Track-Record.

1 Open TrackRecord by clicking the task bar's **Start** button on your Windows desktop and choosing TrackRecord from the program files.

The TrackRecord Login dialog box (Figure 2-1) appears. If your Track-Record user information has been set to automatically log in to Track-Record, the dialog box will not be displayed.

Figure 2-1. TrackRecord Login Dialog Box

2 On the TrackRecord Login dialog box,

◇ Enter your TrackRecord login name and password. Note that they may be different from your Windows login name and password. Passwords are case-sensitive.

◇ Identify the database you want TrackRecord to use in the **Data-base** field by selecting a name from the drop-down list or by entering a new name.

If you have used TrackRecord before, the names of the databases you have used previously appear in the **Databases** list. You do not need to enter the path to the database, just the database name.

3 Click **OK**. The main TrackRecord window (Figure 2-3) appears and displays any subwindows left open from your previous session. If

your TrackRecord Administrator has created a Home page, the Home page appears.

Changing Your Login Password

To ensure the security of the information in a TrackRecord database, the first task you should perform with TrackRecord is to change your login password.

Note: If you or your Administrator has created your user profile to allow you to automatically log in when you start TrackRecord, this task is not necessary.

You can change your TrackRecord login password at any time. To change your password:

1 From the **Tools** menu, choose **Change Password**. The Change Password dialog box (Figure 2-2) appears.

Figure 2-2. Change Password Dialog Box
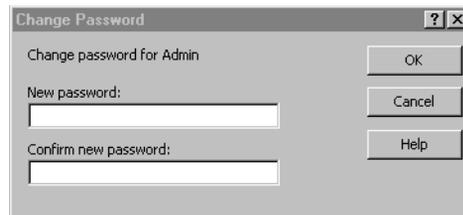
2 Enter your new password in the **New Password** field and the **Confirm New Password** field.

Tip: If you do not wish to use a password, leave the password fields blank.

To prevent anyone from observing what you type, TrackRecord displays an asterisk for each character you enter. Passwords are case-sensitive.

3 Click **OK**. Your new password takes effect immediately.

Exploring TrackRecord's User Interface

Before you begin using TrackRecord, you should take a few minutes to explore its windows, tool bar, and status bar.

Figure 2-3. TrackRecord Main Window. Since various aspects of this window can be customized, yours may vary from the example.
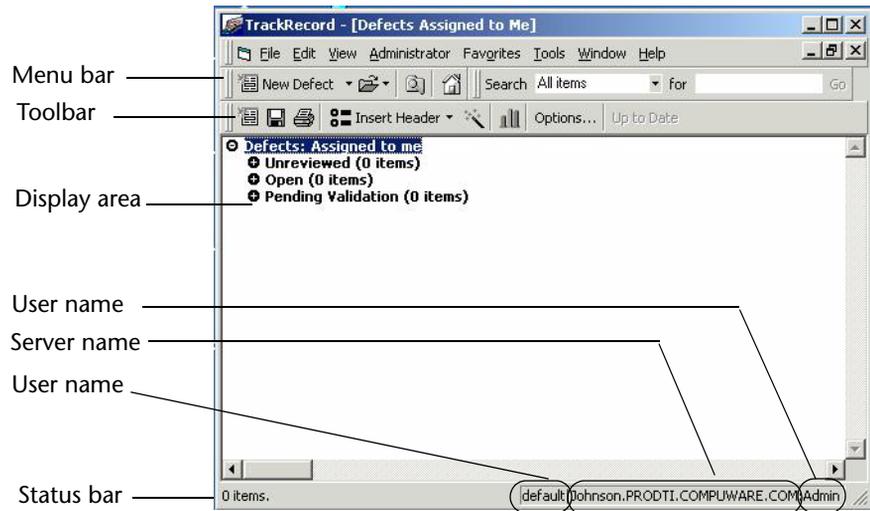
Menu Bar

The main TrackRecord window (Figure 2-3) displays a menu bar below the window title.

Table 2-1. TrackRecord Menu Bar

Menu Item	Functionality
File	Create new items and reports, open and manage predefined reports, queries, and templates, and lists items you have recently worked with. Also includes standard File menu entries, such as Print Setup, Print, and Exit.
Edit	Copy and paste text and graphs from one place to another. Availability depends upon which window is active within Track-Record.
Administrator	(Displayed only if you log in with Administrator access). Create users and user groups, edit data types and user defaults, and import and export data and type descriptions.

Table 2-1. TrackRecord Menu Bar

Menu Item	Functionality
Favorites	Specify frequently used reports. After adding a report to the Favorites menu, run it by choosing its name from the menu. Also specify one report as your Home Page to open automatically when you log in.
Tools	Search the database for items that meet specified criteria, log in as another user, browse items, and modify options.
Window	Position windows and switch from one window to another.
Help	Access online documentation, the Guided Tour, and the About TrackRecord dialog box, which displays registration and software release information.

Toolbar

The tool bar (Figure 2-4) contains shortcuts to your most commonly performed tasks. It lets you create a new item or view, open an existing

item, display the Item Browser, open your Home Page, or search for items.

Figure 2-4. Toolbar
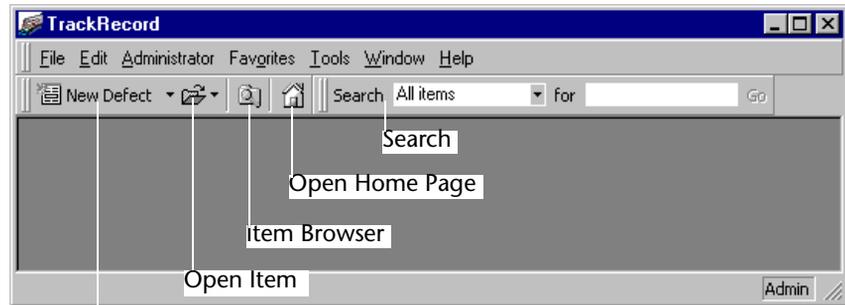
Table 2-2. TrackRecord Tool bar

Toolbar Item	Functionality
New Item	• Create a new item or view. The item types listed on the drop-down list are determined by your Favorite Types list (as described in the *TrackRecord Administrator's Guide*). • Control the new item type shown on the Toolbar with your Favorite Types list. For example, if you most often create new Tasks, you would move Task to the top of your Favorite Types list and the Toolbar would show New Task rather than New Defect, which is the default.
Open Item	Open an existing item or view. The Open dialog box is described in "Opening, Modifying, and Deleting Views" on page 62.
Item Browser	Displays the Item Browser. The Item Browser is described in "Working With the Item Browser" on page 25.
Open Home Page	Opens your Home Page report. Setting a Home Page is described in "Identifying Favorite Reports and Home Pages" on page 37.
Search	Search items in the TrackRecord database for a specified string. Control whether TrackRecord displays the Search tool by right-clicking anywhere in the Tool bar area and toggling Search off. To display the Search tool, right-click in the Tool bar area and toggle Search on. Refer to "Searching the TrackRecord Data-base" on page 33 for additional information on searching.

The left side of the Status bar (Figure 2-3) provides suggestions for the actions you can perform with a tool or on a selected object. If you are working in an Outline Report, the status bar identifies the sequence number of the item you have selected and the number of items in the sequence.

The right side of the status bar displays the database name, server name, and the login name of the current user. For example, the database "default", the server name "sfa10072", and the username "Admin" would appear as: `default|sfa10072:Admin`

Working With the Item Browser

The Item Browser window (Figure 2-5) provides access to information in your TrackRecord database. With the Item Browser, you can access existing database items of any type or create new items.

Figure 2-5. Item Browser Window
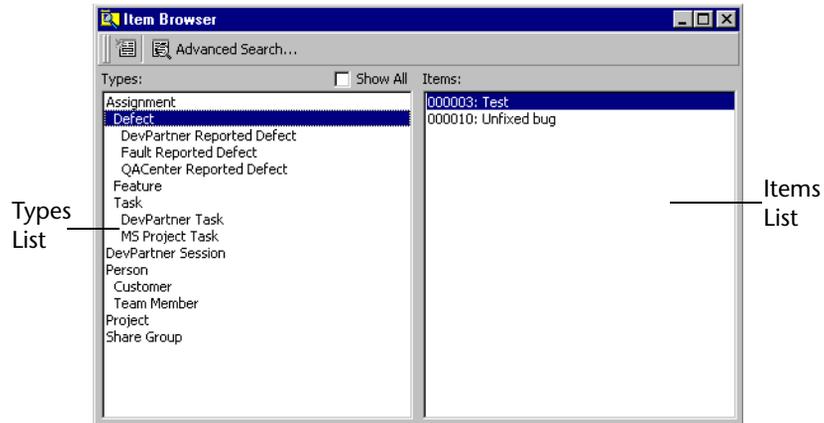
The Item Browser window includes two lists:

◆ The **Types list** identifies the basic types of information in the Track-Record database. If one type of information is a subtype of another, it appears indented below that type. For example, Team Member is a subtype of the Person data type in Figure 2-5.

◆ The **Items list** identifies all of the items of the selected type. When you select a type that has subtypes, the names of all the members in the subtypes appear. For example, if you choose Person, the Items list will include the names of all Team Member items (subtype of Person) as well as all Person items.

Using the Item Browser

To use the Item Browser, perform the following steps:

1 Click the **Item Browser** button (Figure 2-6) on the tool bar to open the Item Browser window.

Figure 2-6. Locating Item Browser Button on Toolbar

*Tip: TrackRecord often presents several ways to accomplish a task. For example, you can open the Item Browser with the Tool bar button, from the **Tools>Item Browser** option, or from the **File>Open>Other** option.*

2 Select the type of item about which you want information.

For example, select Person to see the list of all Person items in the TrackRecord database. Note that the list will include all items linked to the type you selected; therefore, selecting Person will show a list of Persons, Customers, and Team Members in the Item list.

3 Double-click an entry in the **Items** list to display the item's contents.

For example, double-clicking the name of a Person in the Items list opens the appropriate item view, letting you view and modify the information recorded for that Person.

Note that if you select an item that belongs to a child type of the data type you chose, TrackRecord opens the item view for the child. For example, if you choose Person and then double-click the name of someone who is a Team Member (child of Person), TrackRecord opens the Team Member item view instead of the Person item view.

Accessing TrackRecord Online Help

TrackRecord's online help facility is a convenient way to find information about a task you are performing, a feature you would like to know more about, or a command you want to use. It also contains complex information for an administrator that is not contained in the TrackRecord *User's Guide*.

◆ While performing certain tasks, you may press the **F1** key to open the online help system and display a help topic appropriate for the task you are performing.

◆ Selecting the TrackRecord **Help** option on the **Help** menu displays a window containing TrackRecord's help system. You can located information quickly through the Contents, Index, or Search tabs.

Topics may contain links to other topics or links to popup frames. To close a popup frame, click anywhere inside the popup.

Using TrackRecord's Default and Sample Databases

A default database is installed with TrackRecord and is accessible immediately for tracking defects and issues. In addition, a sample database is shipped with TrackRecord. This must be installed first.

These databases can be modified and customized. A database administrator must configure the default database before it can be accessed and a defect can be created. For information regarding configuring databases see "Creating and Maintaining TrackRecord Databases" on page 23, and "Administering TrackRecord" on page 57 of the TrackRecord Administrator's Guide. Administrator privileges to the database are required to create and modify databases.

To access the default database, open and log in to TrackRecord. See "Before You Begin" on page 19. Select Default from the drop-down list in the Database field and click OK. Click New Defect. A defect item appears.

The sample database is simpler than the default database and is shipped with TrackRecord. The sample database must be installed. For information on installing the sample database, see "Creating a New Database" on page 30 of the TrackRecord Administrator's Guide.

After the database is installed, log in to TrackRecord. Select Sample from the drop-down list in the Database field and click OK. Click New Defect.A defect Item appears.

Defect Item Fields

The following lists the fields and drop-down lists used in both the Default and Sample defect items. They are listed here in alphabetical order:

Field	Description	Field Instructions
Action	Controls the Status. The Status details what stage defect is in. This is set to Unreviewed as a default.	Click Action and choose Close to close the defect. Choose Review to change the status to Open. This indicates that the item is open and must be reviewed.

Field	Description	Field Instructions
Assigned to	Person responsible for a defect.	Choose from the drop-down list. A project must be entered in the Project field to enable this field.
Attachments	Attach a design document, defect etc. associated with a defect.	Click the Add button to browse directories for the appropriate attachment. The attachment is added to the field.
Build/Release Fixed	The name or number of the build and/or release in which a defect is resolved.	Click the drop-down list to select an item. Right click inside the field to create an item. Build/Release Found: Click the drop-down list to select an item. Click the Add button, or right click inside the field, to create an item.
Configuration	The PC system that recreates the defect.	Click the drop-down list to select an item. Click the Add button, or right click inside the field, to create an item.
Date Tested	Date QA testing is per-formed verifying that this defect is resolved.	Enter the date or click on the calendar and choose the appropriate date.
Date Entered	Date that this defect is entered.	Enter the date or click on the calendar and choose the appropriate date.
Description	Description of the defect including any pertinent info-mration necessary for its eventual resolution.	Describe any necessary infor-mation such as the nature of the defect, how it can be rec-reated, and suggested resolu-tions, etc.
Documenta-tion ID#	An ID number previously assigned to a document that may have to be modified to resolve a defect	Enter a number for the docu-mentation.
Duplicate Defects	Defect already has a defect assigend to it	Click the Add button to add an item, or right click within the field to create an item.
Entered by	Name of person entering a defect	Choose from the drop-down list.

Field	Description	Field Instructions
Fix by Mile-stone	The project milestone by which a defect must be resolved	Choose from the drop-down list.
Functional Areas	Major area of the product affected such as Help, Data-base, GUI, etc.	Click the Add button to add an item, or right click within the field to create an item.
Integration Resource:	The resources performing the resolution integrations.	Click the drop-down list to select an item. Right click inside the field, to create an item
Identifier	This is the defect number. A defect can be searched by this number within Track-Record.	A distinct number automati-cally assigned to the defect beginning with 000001
Impacts Docu-mentation	To resolve a defect documen-tation must be created or modified.	Check this box if the defect requires documentation modifications.
Imported ID#	An ID # assigned from a pre-vious database.	Enter any related numbers associated with defect.
Integration Project	A project for a product that is also effected by a defect.	Click the drop-down list to select an item. Right click inside the field, to create an item.
Notes	Any further information nec-essary for the resolution of a defect.	Enter any notes for the issues or defect.
Keywords	A word or phrase entered on a defect so that all defects with this keyword can be grouped together by sorting. For example, Beta Required	Click the Add button to add an item, or right click within the field to create an item.
Known Issues	A defect which has been pre-viously acknowledged by the appropriate parties.	Known Issues: Check this box if the defect is a known issue.
Operating Sys-tem	The Operating System of the machine on which the applic-aiton is running. For exam-ple, Windows 2000 or Windows XP	Click the drop-down list to select an item. Right click inside the field, to create an item.

Field	Description	Field Instructions
Priority	A number or letter expressing the decet's order of precedence.	Choose a priority
Project	The name or number, etc. of the project with which a defect is associated.	Choose the appropriate project, or add a project by clicking the Add button.
Project Resource	The resources performing the project resolution.	Click the drop-down list to select an item. Click the Add button, or right click inside the field, to create an item.
Related Requirements	Any related requirement affected by a defect. For example, test cases to be added, documentation, etc.	Click the Add button to add an item, or right click within the field to create an item.
Release Resolved	The release number associated with the resolution of a defect.	Click the drop-down list to select an item. Right click inside the field, to create an item.
Reported by	The client who reported a defect.	Click the Add button to add an item, or right click within the field to create an item
Resolution	The actions performed to resolve a defect.	Click the drop-down list to select an item. Right click inside the field, to create an item.
Resolution Details	Explanation of the work performed to resolved defect.	Enter details of the work performed.
Service Pack	The system service pack installed. For example, Windows XP SP1, etc.	Click the drop-down list to select an item. Right click inside the field, to create an item.
Source Files	Files containing the resolution for a defect.	Click the Add button to add an item, or right click within the field to create an item.
Summary	A summary of a defect adding pertinent information necessary to its resolution.	Enter the summary
Status	The current status of a defect.	This automatically reflects the same status that is in the Action section.

Field	Description	Field Instructions
Severity	Determine the impact of a defect.	Choose from the list of severity terms
Test Case ID #	A number or letter, etc. of a test case with which a defect is associated.	Enter a test case number.
Test Resources	The resources performing QA testing	Click the drop-down list to select an item. Click the Add button, or right click inside the field, to create an item
Type Code	The type of issue. For example, Bug, Enhancement, etc.	Click the drop-down list to select an item. Right click inside the field, to create an item.
WorkAround Instructions	Instructions that make it possible to complete a task bypassing the defect associated with this task.	Enter detailed instructions for the workaround

Using the Workflow

A defect, task, or other item can pass through a series of states between the time it is entered and the time it is closed. For example, when a defect is entered it is generally in an Unreviewed state. It might then be assigned to someone, resolved, and validated. This series of actions, and the states resulting from these actions, is called a workflow.

To view the workflows for the default and sample items, select Edit Workflow from the Administrator Menu.

The following is an example of a workflow created in TrackRecord.
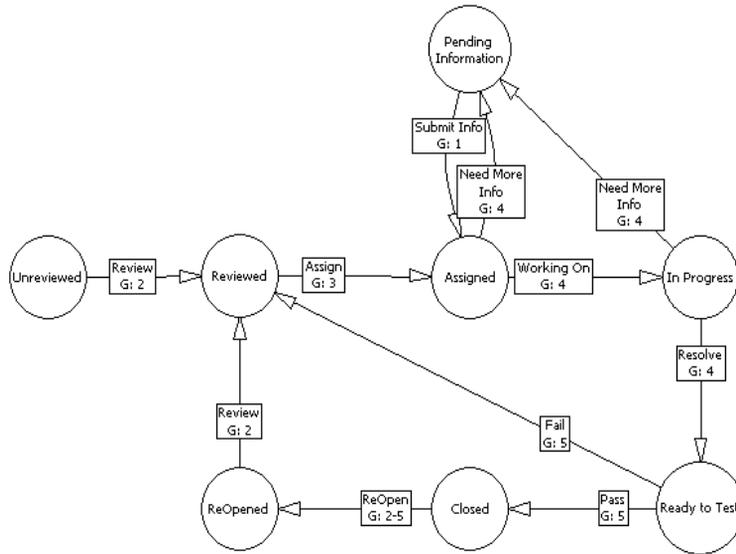
This workflow illustrates the movement of the defect, through various stages of development. The following examples uses the above workflow to move a defect through various actions and states:

1 Joe Developer enters a defect. *State: Unreviewed.*

2 Jane QA Manager reviews the defect. *Action: Review. State: Reviewed.*

3 Jane QA Manager assigns the defect to Dave Development Lead who assigns the defect to Debbie Developer. *Action: Assign. State: Assigned.*

4 Debbie Developer determines that the defect requires more information for its resolution. She assigns it back to Dave Development Lead. *Action: Need More Info. State: Pending Information.*

5 The necessary information is retrieved and Dave Development Lead reassigns the defect back to Debbie Developer. *Action: Assign. State: Assigned.*

6 Debbie Developer works on the defect's resolution. *Action: Working On. State: In Progress.*

7 Debbie Developer may decide more information is needed. Again, she may give the defect back to Dave Development Lead. Steps 4- 6 are repeated. *Action: Need More Info. State: Pending Information.*

Or

8 Debbie Developer may work on the defect until its resolution when QA will test it. *Action: Resolve. State: Ready To Test.*

9   QA tests and the test fails. Jane QA Manager again reviews the defect and steps 3 on are repeated. *Action: Fail. State: Reviewed.*

Or

10 QA tests and the test passes. *Action: Pass. State: Closed.*

11 The defect may be reopened if necessary. *Action: Reopen. State: Reopen.*

12 Jane QA Manager reviews the defect again. *Action: Review. State: Reviewed.* It may enter the process again and repeat steps 3 on.

For information on workflows, see "Workflow Administration" on page 60 of the TrackRecord Administrator's Guide.

Searching the TrackRecord Database

To find database information quickly, you can perform a search rather than create a query and view. Simple searches find text strings that occur in an item; advanced searches find text strings in specific fields.

Performing a Simple Search

A simple search lets you find items of a specified type that contain a specified text string. For example, you can search for all defect items that contain a specific name in any field.

1   From the **Tools** menu, choose **Search** to open the Search dialog box (Figure 2-7).

You can use the Search tool on the main TrackRecord window to perform the same function as the Search menu option.

Figure 2-7. Search Dialog Box
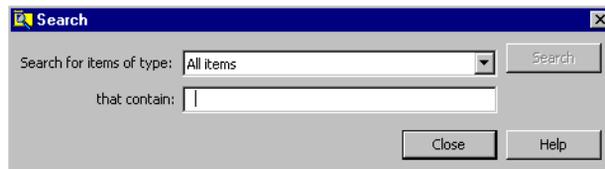
2   To search for a specific type of item, select the type from the **Search for Items of Type** drop-down list.

To search through the entire database, select **All Items** from the **Search for Items of Type** drop-down list.

3   Enter the text string you want to find in the **That Contain** field.

Any item that contains the specified text string in any field will be displayed. You can enter partial words to find wording variations. For

example, you can enter `veri` to find all items that include the words *verification, verify, verified,* or *unverified.*

4   Click the **Search** button. A counter displays in the left corner of the status bar, indicating the progress of the search. As items containing the search text are identified, they are listed in the Search Results dialog box (Figure 2-9). If the desired item appears, click **Stop** to end the search. Click on the desired item and click **Open**, or double click on the item, to display its contents.

5   When you are finished, click **Close**.

Performing an Advanced Search

Advanced searches let you refine the criteria you want TrackRecord to use to search in the database. Unlike a standard search, an advanced search lets you specify the fields to check for text strings and lets you construct multiple search criteria. For example, you can perform an advanced search to find all defects where the project name is YourProject, the severity level is 3, and the description includes the phrase "only happens."

Complete the following procedure to perform an advanced search:

1   From the **Tools** menu, choose **Advanced Search**. The Choose a Type dialog box (Figure 2-8) displays your list of standard database types.

Figure 2-8. Choose Type Dialog Box
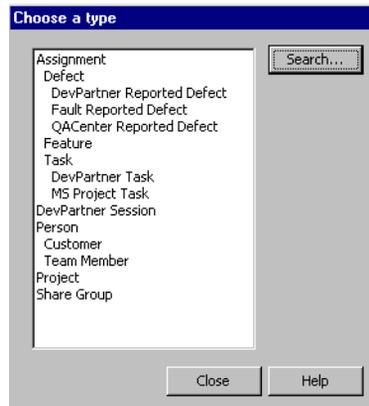
2   Select the type of information you want to find and click the **Search** button.

TrackRecord opens the form associated with the type of information you selected. For example, if you selected Defect, TrackRecord would open the Defect form.

3   Use the fields and controls on the item form to specify your search criteria.

For example, you can use the Project list to select the project for which you want to find Defect items. Similarly, you can enter a text string in the Description field to find all defects whose description starts with those words. If you specify more than one search criterion, TrackRecord finds all items that meet *all* of the search criteria.

4   Click the **Search** button. TrackRecord displays the Search Results dialog box (Figure 2-9), which lists the items that meet your search criteria.

Figure 2-9. Search Results Dialog Box
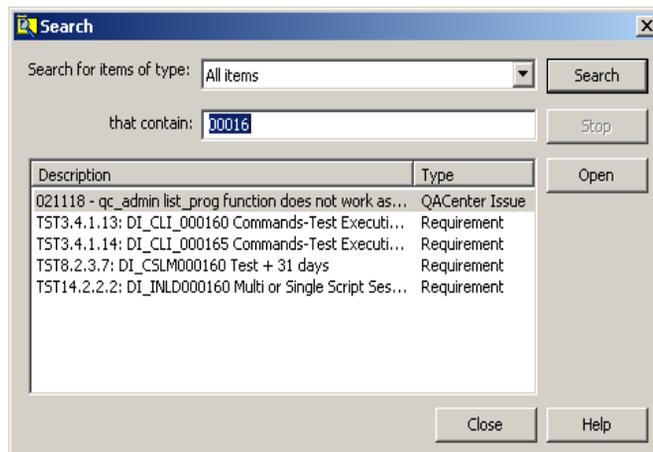
5   As items containing the search text are identified, they are listed in the Search Results dialog box. If the desired item appears, click **Stop** to end the search. Click on the desired item and click **Open**, or double click on the item, to display its contents.

6   Click **Close** to close the dialog box.

Customizing User Preferences

After you become familiar with TrackRecord, you will probably want to customize your user options to suit your style of work. TrackRecord user preferences fall into three categories:

◆   Configuring General Options — Configure your system to control how TrackRecord behaves at startup, database-polling frequency, and how it interacts with DevPartner tools.

◆ Identifying Favorite Reports and Home Pages — Information on adding reports to a favorites menu and changing a home page.

◆ Specifying Favorite Data Types — Simplify data entry by setting up a list of your favorite data types.

Configuring General Options

The General tab on the TrackRecord Options dialog box controls how TrackRecord behaves at startup and how frequently it polls its database. To configure general options, execute the following procedure:

1 From the **Tools** menu, choose TrackRecord **Options**. The TrackRecord Options dialog box (Figure 2-10) appears.

Figure 2-10. TrackRecord Options Dialog Box – General Tab
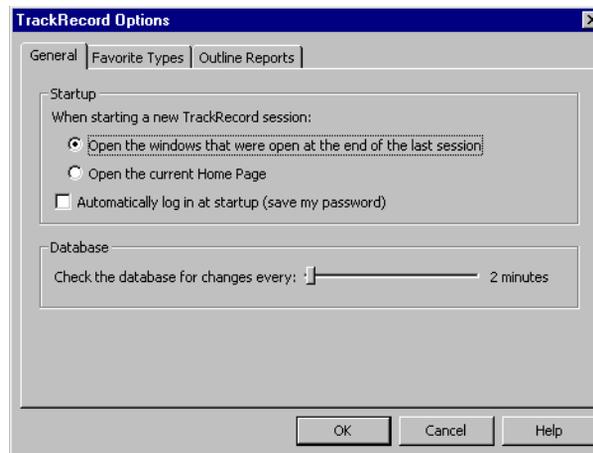
2 On the **General** tab, specify what TrackRecord should do when you open a new session.

◇ To preserve your window layout from one session to the next, select the **Open the windows that were open at the end of the last session** option.

◇ To display your Home Page at the start of a session, select the **Open the current Home Page** option.

3 If you want to log in to TrackRecord without entering your user name and password, select the **Automatically log in at startup** checkbox.

If you activate this checkbox, whenever you start TrackRecord you will be automatically logged in and, since you will not be prompted for a database name, you will always access the same database. Anyone running TrackRecord on your computer will automatically

be logged in to the last TrackRecord account and database that you used from TrackRecord or from one of the integrated tools.

4   Use the **Check the Database for Changes** slider to specify how frequently TrackRecord should poll its database for changes.

Polling the database frequently ensures that TrackRecord is working with current information but may slow other operations on your computer. If your network link is slow or if you are using Outline Reports that are not likely to change frequently, you may want to check the database less often.

5   Click **OK**.

Identifying Favorite Reports and Home Pages

Favorite Reports are reports or views that you use frequently. Identifying a view or report as a Favorite Report lets you open it from the **Favorites** menu instead of through the **File** menu.

A Home Page is a report that opens automatically when you start TrackRecord, and can be accessed quickly through the **Home Page** button on the Tool bar. If you are using the WebServer browser interface, your Home Page is accessible through a button in the control area.

Project administrators can create one or more favorite views for new users during TrackRecord setup and can set default Home Pages. You can modify these settings.

Adding a Report To Your Favorites Menu

1   Open the report or view you want to identify as a favorite.

2   With the Report dialog box active, from the **Favorites** menu, choose **Add to Favorites**. The title of your report appears on the Favorites menu.

Changing Your Home Page

1   Open the report or view you want to identify as your Home Page.

2   With the Report dialog box active, from the **Favorites** menu, choose **Set as Home Page**.

Specifying Favorite Data Types

TrackRecord lets you create a list of your favorite data types to simplify data entry. It controls which data types appear in the **File>New**

submenu, in the **New** list on the tool bar, and in the **Search Types** list. The list of your favorite types appears in three places in TrackRecord:

◆ When you choose **File>New**, your list of favorite types appears at the top of the resulting submenu.

◆ When you use the **New Item** list on the Toolbar, your list of favorite types appears at the top of the resulting list.

◆ When you use the **Search Types** list, your list of favorite types lets you select a specific type to search.

Perform the following procedure to identify a data type as a favorite:

1 From the **Tools** menu, choose TrackRecord **Options**.

2 When the TrackRecord Options dialog box appears, click the **Favorite Types** tab. The Favorite Types tab (Figure 2-11) appears.

Figure 2-11. TrackRecord Options Dialog Box – Favorite Types Tab
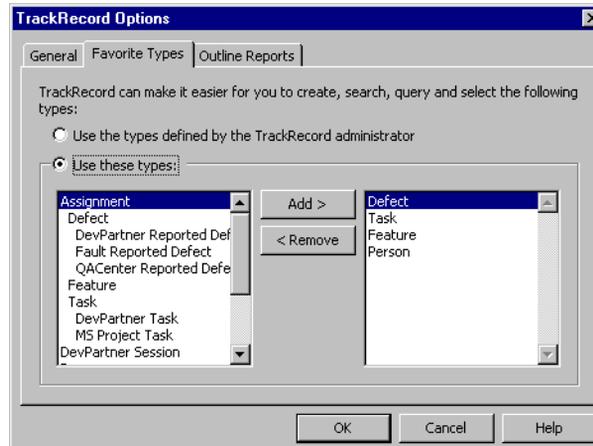
3 Identify the data types you want to appear in your Favorite Types list.

◇ To use the default list of favorite data types, select the **Use the types defined by the** TrackRecord **administrator** option.

◇ To customize your favorite types list, select the **Use these types** option. Select each data type you want in your list from the list on the left, and click the **Add >** button. To remove an entry from your list of favorite types, select its name in the list on the right and click the **<Remove** button.

4 Specify the order for favorite types by dragging entries in the list on the right up and down. The first entry in the Favorite Types list appears as the label for **New Item** on the tool bar.

5 When you are finished, click **OK**.

Where to Go Next

You use TrackRecord to enter information about projects and to retrieve and view that information. Although there are many tasks performed with TrackRecord, the three primary tasks – entering, retrieving and viewing data -– provide the framework for all other tasks. For a description of each of these tasks, consult the following chapters:

◆ Chapter 3, "Entering and Editing Data"

◆ Chapter 4, "Retrieving Data"

◆ Chapter 5, "Viewing Data"

Chapter 3
Entering and Editing Data
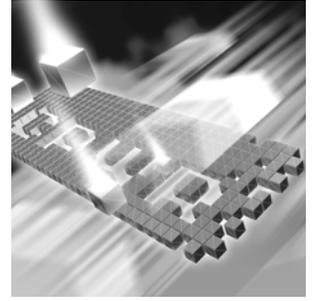
◆ Using TrackRecord Forms
◆ Entering TrackRecord Data
◆ Changing Item Status
◆ Merging Items

Using TrackRecord Forms

For each type of information stored in the TrackRecord database — Defects, Tasks, Team Members, and so on — you will want to store different pieces of information. For example, you might want to store a name and phone number for a Team Member and a summary and description for a Defect. Each item type has its own data entry form, which is composed of fields appropriate to that item type.

Figure 3-1. Tab Location on Defect Form

To make data entry even easier, you can create item templates that store default values for fields. Information about how to construct and use templates is provided in Chapter 7, "Working With Templates".

Although the Team Member form contains additional tabs, most Track-Record forms include three tabs: Item, Links, and Change History.

Item Tab

To enter or change information, you open an item view, a form on which you can enter or modify information about one item, such as one Defect or one Person. Each type of item uses a different form, since each type requires different information.

Item views use standard Windows controls, such as text fields, drop-down lists, scrolling lists, check boxes, and radio buttons, to display and update information about specific items. They also use some unique controls, such as the Calendar and Add Item buttons.

The Item tab on a TrackRecord form (Figure 3-2) lets you enter information about the item you are adding or updating. The fields displayed on the item tab depend on the type of item with which you are working.

Figure 3-2. Item Tab for Task Item

Drop-down lists let you link one database item to another.

Enter descriptions and other text in fields.

Retrieve items in the database by date or other fields.

To clear a drop-down list, click the **Delete** key or choose <None>.

Scroll to display more fields.
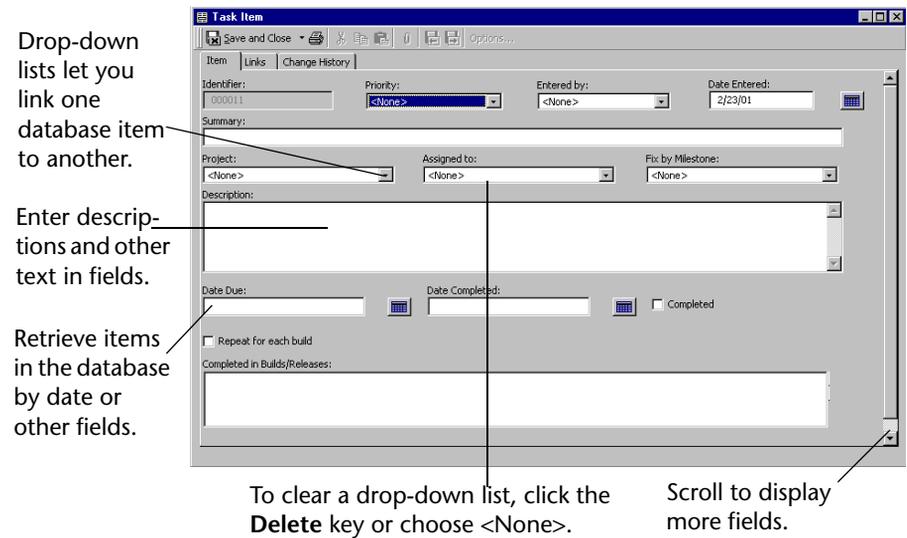
Links Tab

As you add information to the database, TrackRecord creates a network of links between items. The Links tab (Figure 3-3) displays a list of all the

items in the TrackRecord database that refer to the item with which you are currently working.

Figure 3-3. Links Tab allows you to navigate through your network of linked items by selecting a link.

Opens item in new window

Follows link to determine what other database items are linked to that item

Returns to previous item
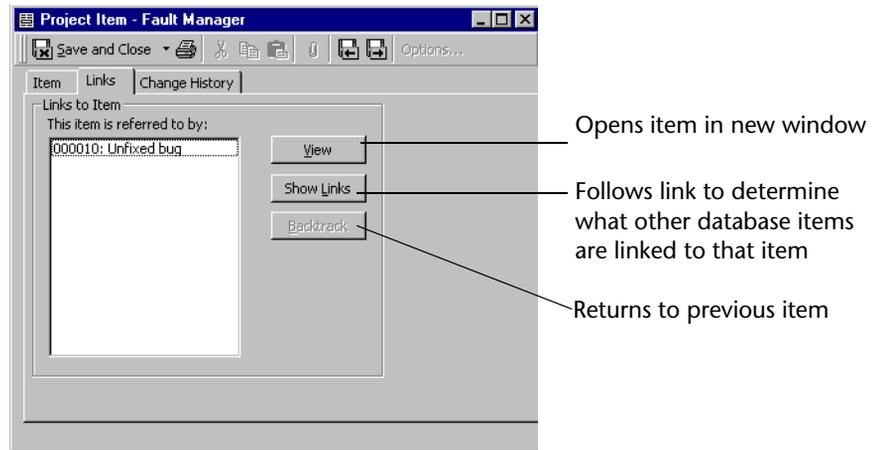
Change History Tab

The Change History tab (Figure 3-4) provides an audit trail of the changes made to an item over time. When an item is created, modified, or deleted, an entry is added to the change history list for that item. If a person made several changes to an item during a single session, each change will be noted separately.

Note: For information about the WebServer's change history window, refer to the "Viewing Change History" on page 97.

Figure 3-4. Change History Tab in the Windows Client

Date and time of change

Login name of user

Modified item
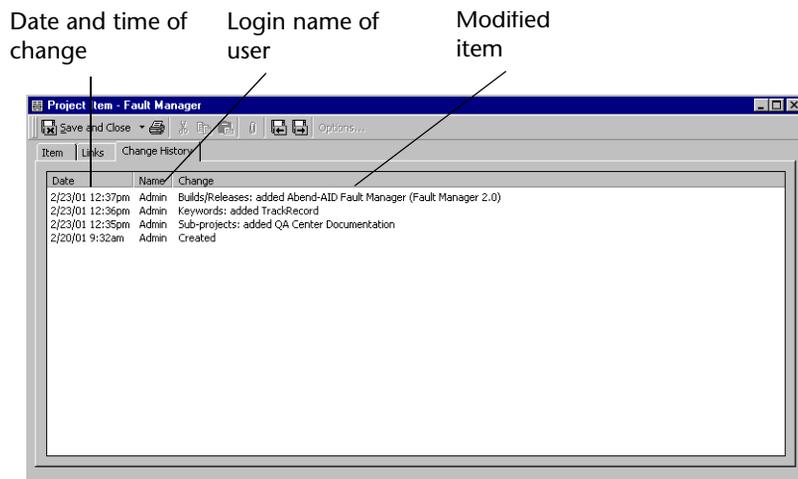
Expand Item Button

As you learned earlier, fields in one type of item can be links to other items in the database. For example, in a Defect item the Project field might be a link to an item of the Project type. The Project field's drop-down list would display a list of all Project items in the database, allowing you to select an existing Project. The selected Project would then be "linked" to this defect.

The Expand Item button lets you expand a link to another item. You can display and update the fields belonging to that linked item. For example, clicking the Expand Item button beside the Priority list in Figure 3-5 causes the window to display more fields for the selected Priority. If you have appropriate privileges, you can add new items or modify the items displayed. If you make changes, these changes will be reflected in all other items that are linked to the changed item.

Figure 3-5. Using Expand Item Button

Clicking the **Expand Item** button beside an item...

...lets you see the fields associated with that linked item.
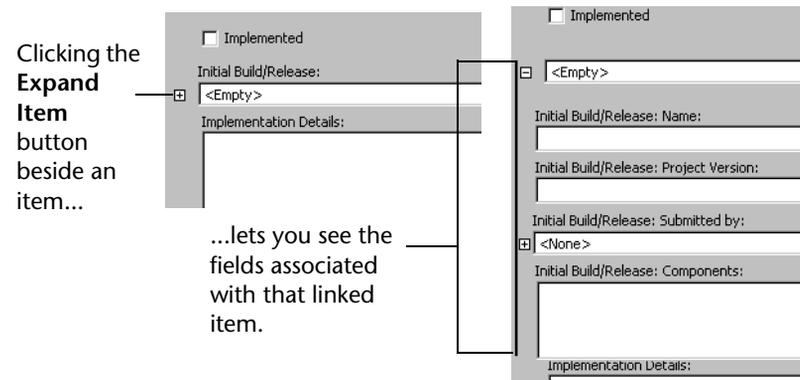
Calendar Button

The Calendar button (Figure 3-6) lets you specify dates from a graphical calendar instead of entering a date with the keyboard. Click the Calendar button to open the calendar and double-click a date to select the day you want to enter.

To choose a date on a past or future month, click the left (past) or right (future) arrows at the top of the calendar. The single triangles move one month at a time. The double triangles move one year at a time.

Figure 3-6. Using Calendar Button

Clicking the **Calendar** button beside a date field...

...lets you choose a date from a graphical calendar.
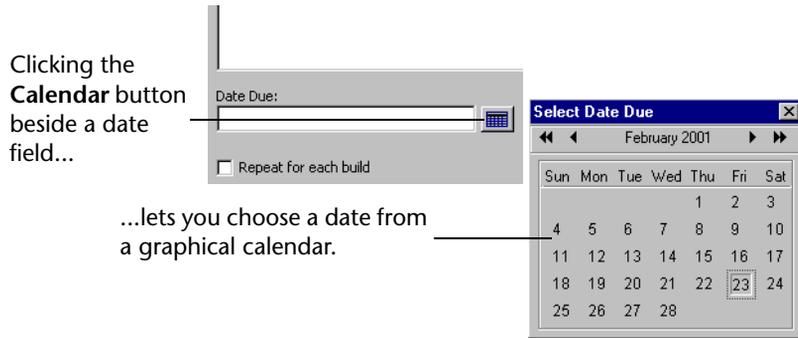
Add and Delete Item Buttons

The Add and Delete Item buttons (Figure 3-7) let you add and delete items in the TrackRecord database in the course of maintaining other types of items. For example, if you want to enter a new telephone number while adding or editing a Person item, you would click the Add Item button beside the Phone Number field, create the item you want, and click Save and Close. (Note that the behavior of the button is configurable. Some fields display a list of existing items, allowing you to pick one or to click New Item to create a new item of that type.)

Clicking the **Add Item (+)** button...

...lets you link a new item with the one you were updating.
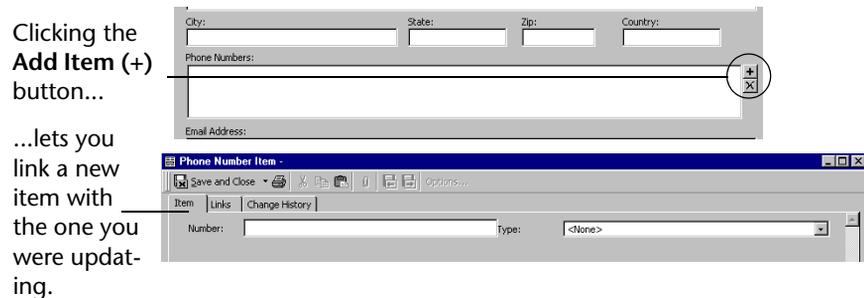
Figure 3-7. Using Add Item Button

To delete an item from one of these lists, select the item and click the X button. Depending on how this field was defined when the type was created, deleting an item from a list may remove it from the database. You will be prompted to confirm the deletion. If the field was not defined to allow deletion from the database with the X button, you can delete it from the database by right-clicking on the item and choosing Delete itemname from the shortcut menu.

Expand Text Field Button

The Expand Text Field button (Figure 3-8) identifies resizeable text fields. When you click the Expand Text Field button, the text field area expands to the bottom of the window to let you display the complete text of an extended description or note about an item. You can click the Collapse Text Field button to collapse the text field to its original size.

Figure 3-8. Using Expand Text Button

Clicking the **Expand Text** button above a text field...

...expands the text field to fill the available window space.

Clicking the **Collapse Text** button collapses the expanded field.
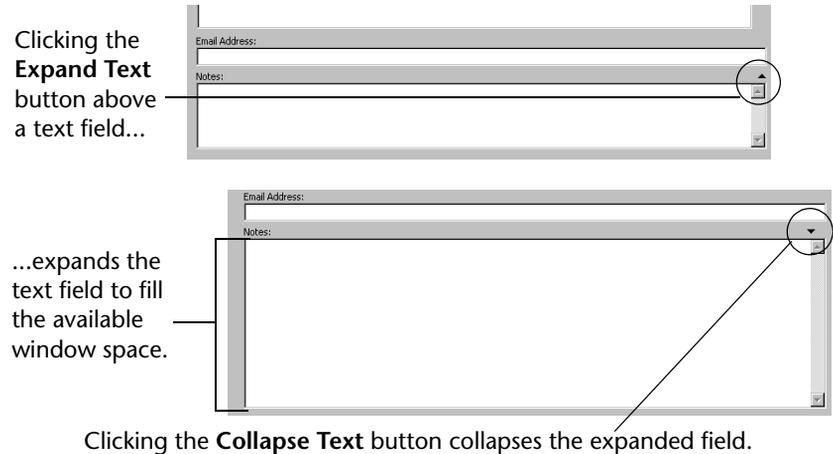
Entering TrackRecord Data
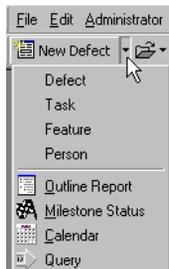
1 From the **File** menu, open a new form using one of the following methods:

◇ Click the drop-down arrow next to the **New Defect** button on the Toolbar. If you or your Administrator has changed your Favorite Types list, it may not be displayed. In this case, use the Toolbar's **New Item** drop-down list to select the appropriate form.

◇ Open the Item Browser (see "Working With the Item Browser" on page 25 for more information), right-click on a applicable item, and select the **New** *optionname* from the shortcut menu ("Opening New Project Using the Item Browser" on page 47).

Opening New Project Using the Item Browser
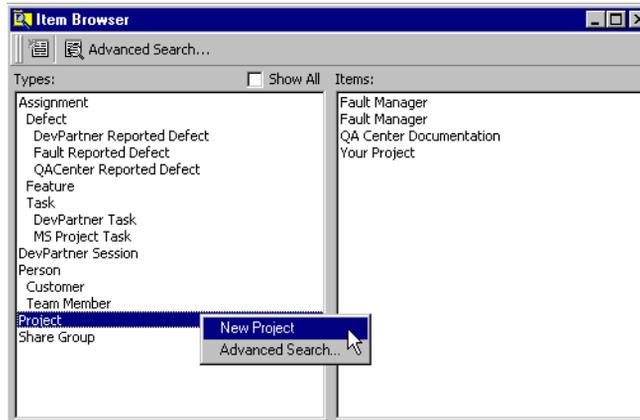
◇ Select the appropriate form from the **File>New** menu.

◇ Choose **File>New>Other**. When the Choose a Type dialog box (Figure 3-10) appears, select the appropriate form and click the **New** button.

Figure 3-10. Choose Type Dialog Box
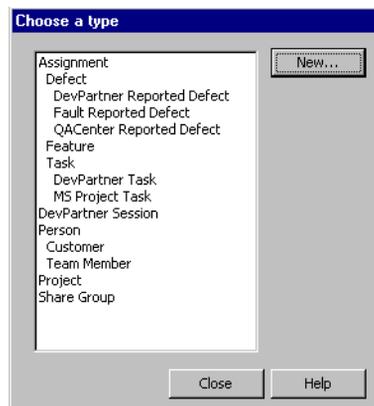
2 When the form appears, enter information in the appropriate fields.

Required: If you are using the WebServer, be sure to review "Notes about the WebServer" on page 91 to avoid errors when opening your Web page.

Note the following when entering defect data:

◇ A single line text field can contain up to 255 characters.
◇ A multi-line text field can store up to 65,535 characters of information.
◇ A numeric field can store a number between between 0 and 4,294,967,295.

◇ The display format of a Date field is based on the regional settings on the same client machine.

◇ Attempt to limit the amount of text to below 800 characters in the Description field. If the characters exceed this amount the partial display may appear as a garbage overlay of characters.

If your site has implemented templates, TrackRecord may fill in some of the fields for you. Refer to Chapter 7, "Working With Templates" for information on how to establish and use TrackRecord templates.

3 If you are finished entering data, click **Save and Close** on the toolbar. The drop-down menu next to the **Save and Close** button offers two additional save options:

◇ If you want to add an unrelated item, choose **Save and New** from the toolbar.

◇ If you want to duplicate the current information as part of a new item, select **Save and Duplicate**.

Changing Item Status

From the time an item is opened to the time it is officially closed, it typically undergoes a series of status changes; these changes are collectively known as a *workflow*. For example, a new Defect typically starts with a status of Unassigned. A project manager assigns the Defect to a developer, updating its status to Assigned. If the developer confirms that the problem exists and fixes the appropriate software, he or she would move the Defect into a Pending Validation status, flagging it for testing and verification.

A workflow defines the states an item goes through and the privileges each user has to move an item from one state to another. Your Track-Record administrator defines the workflow for items. For example, an administrator might specify that a someone in Quality Assurance can move a Defect with a status of Unresolved to a status of Needs More Information or to Resolved.

Not all items follow a workflow. The Person type, for example, might undergo a series of changes over time, but these changes do not constitute a change in the status of the item. Your TrackRecord administrator establishes which types of items will follow a workflow by placing a Status field on the type form. The Person type does not follow a workflow and does not contain a status field.

To change the status of an item, follow these steps:

1   Open the appropriate item and enter any changes in the fields on the form.

2   Use the **Action** button on the toolbar to select an action. You can only select actions that your group is authorized to perform.

3   When you are finished, click **Save and Close**.

Merging Items

If you discover that your TrackRecord database includes duplicate items, you can merge them to remove the redundant information. When you merge one item, the *source*, into another, the *target*, TrackRecord replaces all references to the source item with references to the target item throughout the TrackRecord database, ensuring that database links are preserved. When the merger is complete and the appropriate information from the source item is moved to the target item, TrackRecord deletes the source item.

If the two items you merge contain lists of information, such as telephone numbers, the contents of the source item's lists are added to the corresponding list for the target.

Perform the following procedure to merge items:

1   Open the target item and the source item. You can open items from the **File** menu, from the Item Browser, or from an Outline Report.

2   Click inside the dialog box of the target item to make it active.

3   From the **Edit** menu, choose **Merge with Another Item**. The Target dialog box (Figure 3-11) appears displaying the type and name of the item to which information will be transferred.

Figure 3-11. Target Dialog Box

4   Click inside the dialog box of the source item to make it active.

5   Click the **Merge into Target** button in the Target dialog box.

If the source item has information in lists that can be transferred to the target item, the Merge Items dialog box (Figure 3-12) appears. Click **Yes** to transfer the item's list contents.

Merge Items Dialog Box

> **Merge Items** ☒
>
> Do you also want to merge the lists in <000011: TrackRecord bug> with the corresponding lists in the target?
>
> [Yes] [No] [Cancel]

6 When the Merge Complete dialog box is displayed, click **OK**.

TrackRecord merges the two items, closes the dialog box for the source item, and deletes the source item from the database.

7 Close the target item and the dialog box.

Chapter 4

Retrieving Data
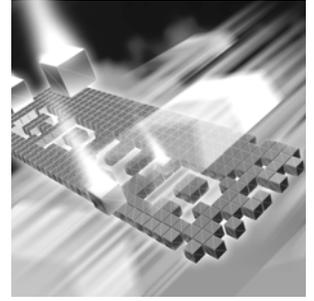
◆ Understanding Queries

◆ Composing Queries- Guidelines to Follow

◆ Creating a Query

◆ Opening, Modifying, and Deleting Queries

Understanding Queries

Tip: If you are new to TrackRecord and want to create simple reports quickly, you can use the Header Wizard to display data without creating a query. See "Using the Header Wizard" on page 72.

To use information that has been entered into the TrackRecord database, you must first identify the information in which you are interested and create a query to retrieve that data. A query defines *what* is displayed. It lets you formulate requests for specific data from the database.

Queries let you specify criteria for retrieving information in the Track-Record database and are building blocks for Outline Reports. An Outline Report consists of one or more queries that are formatted to display information that is returned by queries. You select the type of item you want to find and add parameters to make your query as specific (or general) as necessary.

The query shown in Figure 4-1 returns all Defect items in which the Current Build field is equal to 42.

Figure 4-1. Simple Query

List of types

List of search-able fields within the selected type

Drag a field from the list to use it in the query

Search criteria to set specific search parameters
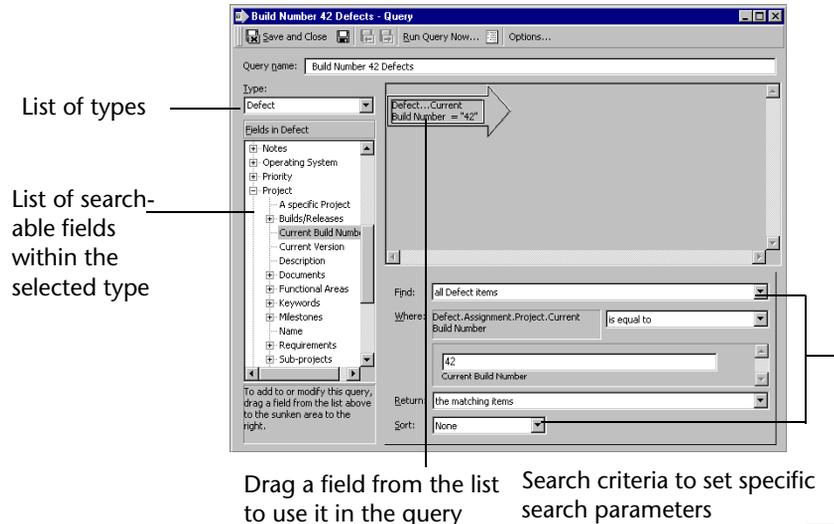
When you create a query, you select:

◆ Type of item you want to find (Defect in the example)

◆ Fields you want the query to search on (Project and Build Number in the example)

◆ Parameters to make your query as specific as necessary

You can create your own queries or use queries that have been constructed for you by your TrackRecord Administrator.

Tip: For date fields, you can use relative dates (Today, 1 week from today) to make reuse of queries easier.

Each selection criterion is represented graphically as an arrow. Including more than one arrow in a query allows you to filter database information using several fields as selection criteria. The output from one arrow becomes the input set for the next arrow, until the end of the query chain is reached.

Composing Queries- Guidelines to Follow

While TrackRecord provides great flexibility in the creation of queries, you should follow a few simple rules to ensure that your queries perform satisfactorily.

◆ Begin your query with the type of item you want to find. For example, if you want to find all the Defects for a particular Project, start by

selecting the Defects data type, then add a query element for the Project field. If you start your query by asking for all Project items, the query would check all Projects, rather than Defects that relate to a given Project.

◆ To create an AND specification (Figure 4-2), place related queries side-by-side; to create an OR specification (Figure 4-3), place queries top-to-bottom.

Note: Using the OR statement within a query will nullify the desired results if the types are the same, such as status or priority.

Figure 4-2. An AND Specification for Search Criterion

Query will search for defects relating to Fault Manager AND were entered by the current user. Items that meet both criteria will be selected.

Figure 4-3. An OR Specification for Search Criterion

Query will search for defects relating to Fault Manager OR defects entered by the current user. Items that meet either condition (as well as other elements in the query) will be selected.
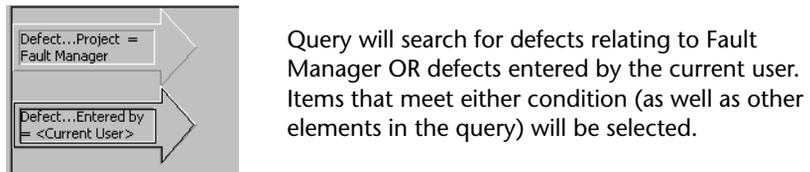
◆ Create many simple queries. You can later combine these queries into more complex data extraction operations by creating Outline Reports and attaching simple queries. (Refer to "Using Outline Reports" on page 63 for more information.)

◆ Avoid complex queries and queries that return very large data sets.

◆ In a sequence of query elements (arrows), start with the query elements you expect to return the fewest items.

◆ The fastest queries are often the ones that run on the entire database.

◆ To create a query based on a specific date, do not use the GUI date selector. Simply type in the date in the date field.

Query Execution Order

TrackRecord executes queries from left to right, then top to bottom following the arrows in the queries.

Example One

In the example shown in Figure 4-4, the query would be executed in the following manner:

1 The database will search for defects related to Your Project.

2 The database will search for Critical defects relating to Your Project.

3 The database will search for High priority defects relating to Your Project.

4 The results of step 1–3 are combined and can be displayed with the **Run Query Now** button.

Figure 4-4. Example One
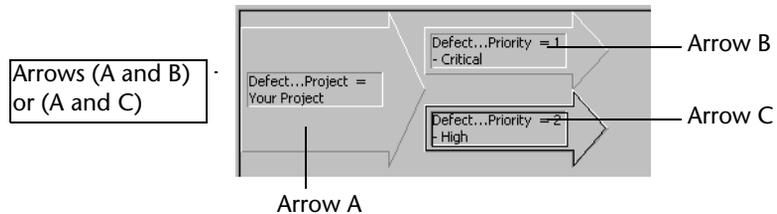
Example Two

In the example shown in Figure 4-5, the query will retrieve data in the following order:

1 The database will search for items assigned to *<CurrentUser>* **AND** are assigned a priority of Critical.

2 The database will search for items assigned to Matt Johnson **AND** are assigned a High priority.

3 The results of step 1–2 are combined and can be displayed with the **Run Query Now** button.

Figure 4-5. Example Two
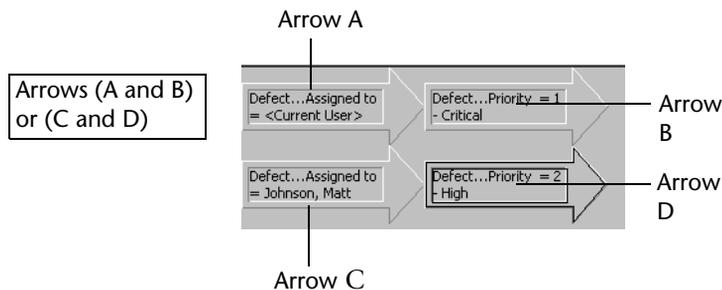
Example Three

In the example shown in Figure 4-6, the query will execute in the following order:

1 The database will search for items with a Critical **OR** High priority.

2 The database will search for items assigned to <Current User> **AND** a Critical **OR** High priority.

3 The database will search for items assigned to Matt Johnson **AND** a Critical **OR** High priority.

4 The results of step 1–3 are combined and can be displayed with the **Run Query Now** button.

Figure 4-6. Example Three
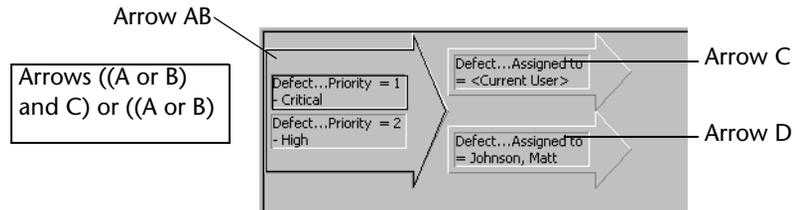
Creating a Query

To create a query, perform the following procedure:

1 On the toolbar, choose **Query** from the **New Item** drop-down list. Alternatively, you can open a new Query from the **File** menu. Choose **New>Query** (Figure 4-7).

Figure 4-7. Query Form

Run Query Now button

Create Outline Report button

Options button

Query name

Type list

Query area

Field list

Search criteria fields

Sort options

Find list
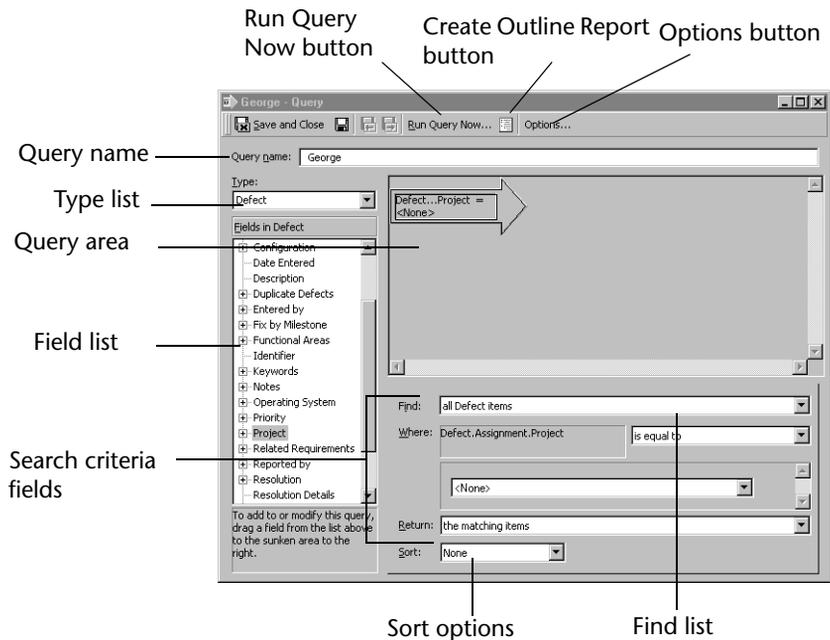
2 Enter a name for this query in the **Query Name** field. Query names can contain up to 39 characters.

3 From the **Type** drop-down list, select the type of item you would like to find. For example, if you want to find all Defects in the TrackRecord database relating to a specific development project, you would choose **Defect**.

4 In the **Field** drop-down list, select a primary search criterion and drag it to the **Query** area (Figure 4-7). For example, to find the Defects relating to a specific project, drag Project to the Query area. An arrow identifying the search field (the query element) will appear in the Query area.

5 Use the **Find** drop-down list to specify whether child types should be retrieved.

Normally, if you query a parent type such as Defect, the results include child types, such as Unassigned Defect. If you want to exclude child types from the query results, select **Excluding child types**. Refer to "Understanding Data Type Inheritance" on page 17 for additional information on parent-child relationships.

6 Specify search criteria.

◇ Use the **Where** drop-down list to specify the search criteria you want the query to use. For example, to find Defects associated with the Colossus project you would select **Is Equal To** and then enter `Colossus` in the field below. As you specify selection criteria, TrackRecord updates the text in the query element (the arrow).

◇ In the **Return** drop-down list, specify what you want TrackRecord to do when it finds an item that matches the search criteria. Typically, you want the query to return all items that meet the search criteria you have entered. Alternatively, you can retrieve all items that link to anything meeting your search criteria.

◇ Optionally, use the **Sort** drop-down list to specify how the query should sort the items it retrieves.
   – If you choose **Ascending**, TrackRecord sorts the selected items by the selection field you specified in alphabetical order (1, 2, 3,…x, y, z).
   – If you choose **Descending**, TrackRecord sorts the selected items by the selection field you specified in reverse alphabetical order (z, y, x,…3, 2, 1).
   – If you choose **None**, TrackRecord does not sort the selected items.

Note: Sorting in outlines are done by field and not based upon the sorting defined in the Query. If creating a compound query, and using different sort conditions on each, the query will be sorted using the last sort condition that was applied.

Repeat step 3–6 to add additional query elements.

7 If you want to share this query with other users or be notified when new items meet the selection criteria, click the **Options** button to display the Query Options dialog box (Figure 4-8).

Figure 4-8. Query Options Dialog Box
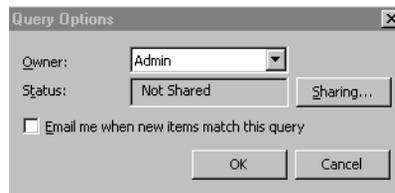
◇ To share the query with other users, click the **Sharing** button. When the Sharing dialog box appears, click the **Share To** button and select the share groups with whom you want to share the

query. If you choose **Not Shared**, no one other than you can use the query.

◇ To receive notification through electronic mail when a new item meets the selection criteria for this query, select the **Email Me** check box. Note that your TrackRecord administrator must configure AutoAlert and record your electronic mail address as part of your user profile for this feature to take effect.

Note: If you choose to share a query and also click the **Email Me** check box, the email will only be sent to you, not to members of Share Groups.

◇ Click **OK** to close the Sharing dialog box.

8 Optionally, click the **Run Query Now** button on the toolbar.

Running the query from within the Query dialog box allows you to test your query. A search results dialog box will display all items from the database that match your query. If the results do not match your expectations, modify the query.

9 Optionally, click the **Create Outline Report** button in the toolbar.

Since queries are most often used to create Outline Reports, this button provides a shortcut to that feature.

Tip: Outline Reports are described in "Using Outline Reports" on page 63.

The new query is automatically saved and entered as a header in a new Outline Report. (This option is not available on Queries created from within Outline Reports.)

10 Save the new query by clicking **Save and Close** or by choosing **File>Save**.

Opening, Modifying, and Deleting Queries

TrackRecord makes it simple to open, modify, and delete queries.

Opening and Modifying Queries

To open and/or modify an existing query, perform the following steps:

1 From the **File** menu, choose **Open>Query**.

**2** After making modifications, click the **Save and Close** button.

Deleting Queries

To delete a query, perform the following steps:

1   From the **File** menu, choose **Manage**.

2   From the displayed list, select the type of query to be deleted. The Manage dialog box appears.

3   Select the query to be deleted and click the **Delete** button.

Chapter 5
Viewing Data
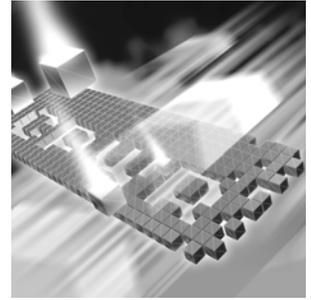
◆ Understanding Views

◆ Opening, Modifying, and Deleting Views

◆ Using Outline Reports

◆ Working with Graphs

◆ Using the Milestone Status View

◆ Utilizing the Calendar View

Understanding Views

After you identify the information in which you are interested by creating a query, you must determine what format in which you want the information displayed. A view defines *how* data is displayed. TrackRecord's four types of views present information in an organized, easy-to-use way and contain the most current information in the database:

◆ **Outline Reports**— Dynamic reports that allow you to view summaries of the TrackRecord data returned by a query or set of queries, select what fields appear in columns in the report, and change the order in which the columns and headers are displayed. For more information, refer to "Using Outline Reports" on page 63.

◆ **Graphs**— Displays a graphical summary of the information in an outline report. Depending upon the type of information, you can generate pie charts, bar graphs, trend graphs, and more. For more information, refer to "Working with Graphs" on page 78.

◆ **Milestone Status**— Provides a concise summary of project status that captures a broad range of project status indicators, including how much automated error detection has been performed. See "Using the Milestone Status View" on page 82 for additional information.

◆ **Calendars—** TrackRecord automatically categorizes and displays a simple list of your appointments and tasks or a tick-marked schedule of each day. You can maintain and display multiple calendars simultaneously. Refer to "Utilizing the Calendar View" on page 85 for more information.

Opening, Modifying, and Deleting Views

TrackRecord makes it simple to open, modify, and delete views.

Opening and Modifying Views

There are several ways to open an existing views: the **Open** button on the Toolbar, **File>Manage**, or **File>Open**, which is the method used in the following steps.

To open and/or modify an existing view, perform the following steps:

1 From the **File** menu, choose **Open**.

2 From the displayed list, select the type of view to be opened.

3 After making modifications, click the **Save and Close** button.

Deleting Views

To delete a view, follow these steps:

1 From the **File** menu, choose **Manage**.

2 From the displayed list, select the type of view to be managed. The Manage Outline Reports dialog box (Figure 5-1) appears.

Figure 5-1. Manage Outline Reports Dialog Box
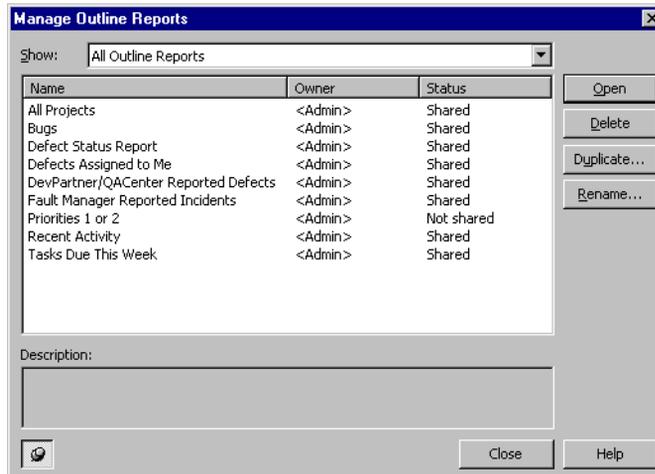
**3** Select the view to be deleted and click the **Delete** button.

Using Outline Reports

Outline Reports (Figure 5-2) let you selectively retrieve information from the TrackRecord database through dynamic reports that select, sort, and format summaries. When you create an Outline Report, you insert headers into the report and associate a query with each header. Queries are building blocks for Outline Reports. When you run the report, the queries are run and the matching information is displayed in columns in the report.

While you are viewing an Outline Report, TrackRecord periodically runs the queries associated with the report to ensure the contents of the report reflect the most current information in the database.

Figure 5-2. Sample Outline Report

Parent headers with queries attached

Columns (fields from the items found by the query attached to this header)

Sibling of Your Project Priorities 1; Child of Your Project Priorities 1 or 2
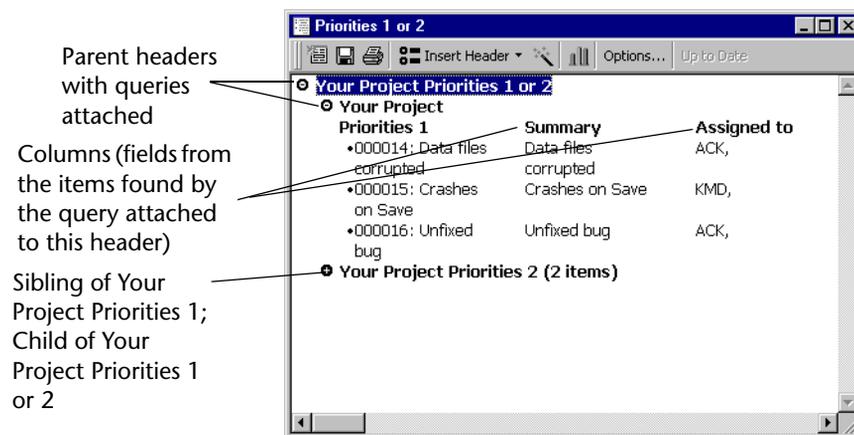
Outline Reports are *not* outlines in the tradition sense; you cannot use an Outline Report to enter data in a hierarchical format. Rather, Outline Reports are a mechanism for generating a dynamic report by querying the database. The queries associated with the Outline Report act like smart filters, letting through only the applicable data, and presenting that data in an *outline-like* format.

The headers on an Outline Report are hierarchical. A child header can display only data that meets the Query conditions of all of its parent headers. Refer to "Using Headers in Outline Reports" on page 71 for more information.

To collapse or expand a header, click the bullet to the left of the header's title. When a header is expanded to show its child headers and data items, its bullet appears as a white circle with a minus (-) sign inside it. When a header is collapsed, concealing its child headers and contents, its bullet appears as a black circle with a plus (+) sign inside and the number of items it contains appears to the right of the header text. You can use this feature to create numeric *summary reports* that identify data categories and item counts within each category.

When you view a list of existing Outline Reports, the list shows both your privately owned reports plus all other Outline Reports you are permitted to share.

Creating a New Outline Report

There are five steps to creating an outline report:

- ◆ Defining Queries
- ◆ Adding Report Headers
- ◆ Configuring New Items Options
- ◆ Setting Report Columns
- ◆ Specifying Print Options

Defining Queries

If the queries you want to use in your Outline Report do not already exist, you should create them before you establish the Outline Report. Alternatively, you can create them as you add report headers. Refer to Chapter 4, "Retrieving Data" for information on setting up queries.

Adding Report Headers

1 From the **File** menu, choose **New>Outline Report**. An untitled Outline Report (Figure 5-3) appears.

Figure 5-3. Blank Outline Report Form
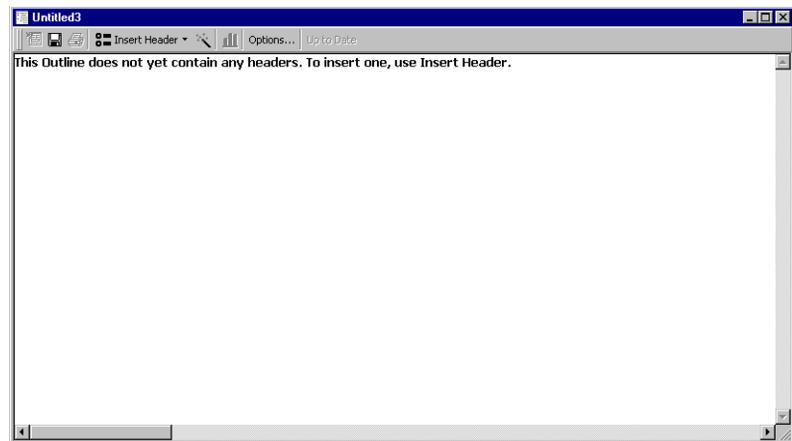
2 Click the **Insert Header** button and select the **As a Sibling Header** option. The Header Properties dialog box (Figure 5-4) appears.

Figure 5-4. Header Properties Dialog Box
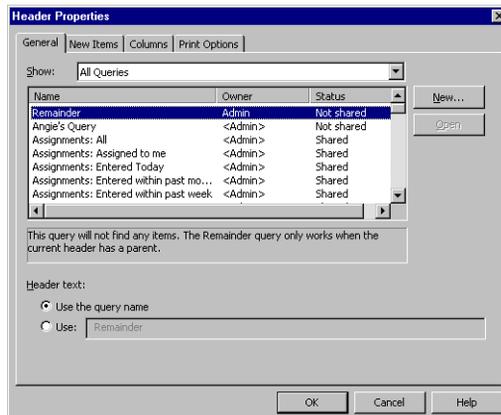
3 On the **General** tab, select the query you want for your top-level header or click the **New** button to create a new query.

To review the contents of an existing query, click the **Open** button.

If you create a new query and use the **Run Query Now** button, note that the query results will not reflect the filters of the parent headers.

4 Click a **Header Text** option to use the query name or to enter more descriptive text for the header.

5 Click **OK** or click another tab to continue setting up the header.

Configuring New Items Options

The options on the New Items tab are used to define custom behavior when a user right-clicks on a displayed header. It adds a New Item option to a header's right-click menu and allows you to specify a template to be used for new items. If you are new to creating Outline Reports, you do not have to enter anything on this tab.

1 Right-click in the Outline Report and select **Set Template**.

2 On the **New Items** tab, select the type of item to be added.

3 Select a template to be used when items are added. To learn about templates, refer to "Working With Templates" on page 103. Click **OK** or click another tab to continue setting up the header.

Setting Report Columns

Use the Column tab to specify what columns are to be displayed for this header.

1 Right-click in the Outline Report and select **Set Columns** to display the **Columns** tab (Figure 5-5) on the Header Properties dialog box.

Figure 5-5. Columns Tab in Header Properties Dialog Box
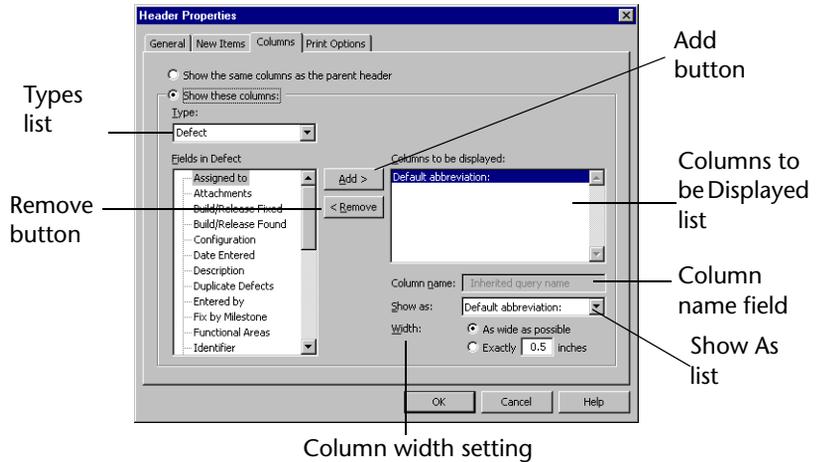
2 Select one of the following options for column display:

◇ **Show the Same Columns as the Parent Header**—Displays the same columns as are displayed under the parent header.

◇ **Show These Columns**— Allows you to customize the column display for the selected header.

3 Select the type of data in the header from the **Type** drop-down list.

4 Select a field you want to display in the Outline Report and click the **Add>** button to move the field name into the **Columns To Be Displayed** list.

The Default Abbreviation is always displayed. It is established by your Administrator and cannot be eliminated from the report. To display multiple lines in the description field, select **Descriptions** and then **Full Notepad** from the **Show As** drop-down list. Repeat this step for all columns to be displayed.

5 Specify the order in which you want columns displayed by dragging field names up and down within the **Columns To Be Displayed** list.

For example, if you want Project to be displayed in the first column, drag it to the top of the list.

◇ Use the **Column Name** field to change the label the Outline Report displays at the top of the column.

◇ Use the **Show As** drop-down list to specify how you want the column displayed.

◇ The available options vary depending on the field type. For a Name field, for example, you could choose to display the full name, initials, name and address, and so on.

◇ Specify how wide you want the selected column to be within the Outline Report.
  – If you want TrackRecord to determine how much space to use, select the **As wide as possible** option.
  – If you want the column to be a specific width within the report, select the **Exactly** option and enter the number of inches for the column width in the **Inches** text box.

6 When you have finished adding and formatting columns for the header, click **OK** or click another tab.

Specifying Print Options

You can specify print options for an Outline Report to override your default print option settings, and you can specify print options for specific headers within the report.

◆ To set print options for the whole report, click the **Options** button on the Outline Report toolbar and select the **Print Options** tab (Figure 5-6).

◆ To set print options for individual headers, right-click on the header, choose **Properties**, and select the **Print Options** tab.

The following steps are common to both report and individual header print options.

Figure 5-6. Print Options for Individual Header
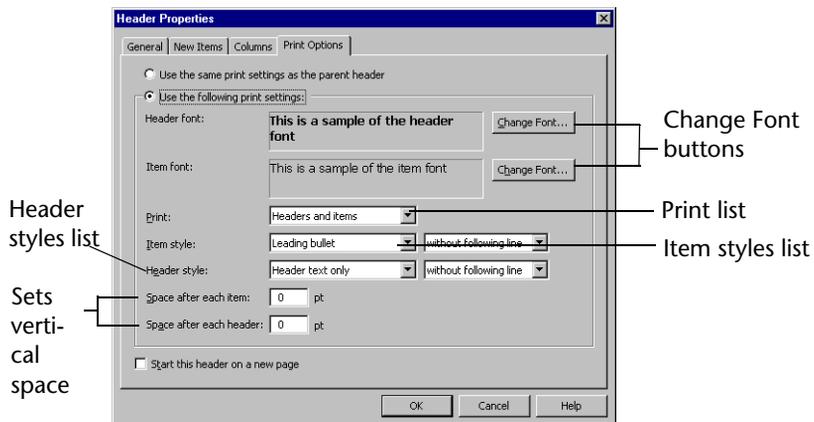
1 Select the typeface and size you want to use to print report headers and data items by clicking the **Change Font** button. When the Font

dialog box appears, select the typeface, style, and size you want to use. When you are finished, click **OK**.

Required: Headers and items must use the same type size, even if they use different typefaces.

---

2 From the **Print** drop-down list, select **Headers and Items or Headers Only** to print the items belonging to report headers.

3 If you are printing data items, use the **Item Style** drop-down list to select the lead-in character for item entries.

◇ Select the **Leading Bullet** option if you want each item to be preceded with a bullet (•).

◇ Select the **Leading Number** option if you want each item to be preceded with a sequence number. Sequence numbers restart within each header.

◇ Select the **Leading check box** option if you want each item to be preceded with an empty check box. Check boxes simplify tracking which items within a list have been discussed or completed.

Select whether to print with or without a line following each item.

4 Use the **Header Style** drop-down list to specify how you want headers on the report printed.

◇ Select **Header Text Only** or **Header Text and Item Count**.

◇ Select whether to print with or without a line following each header.

5 In the **Space After Each Item** and **Space After Each Header** fields, type a number to specify how much vertical space you want between lines.

6 If you are setting print options for an individual header, choose whether to start this header on a new page and, if this is a child header, whether to use the parent headers print options.

7 When you are finished, click **OK**. The changes will not be reflected on your screen display; they are used only when reports are printed.

Customizing Outline Reports

The Outline Reports tab on the TrackRecord Options dialog box controls the default typeface and size for new Outline Reports and what headers in a report do when you double-click them. You can override these default settings for specific reports or for specific headers within a report.

If you are new to TrackRecord, read "Using Outline Reports" on page 63 before customizing the Reports.

1 From the **Tools** menu, choose TrackRecord **Options**.

2 When the TrackRecord Options dialog box appears, click the **Outline Reports** tab. The Outline Reports dialog box (Figure 5-7) appears.

Figure 5-7. TrackRecord Options Dialog Box – Outline Reports Tab
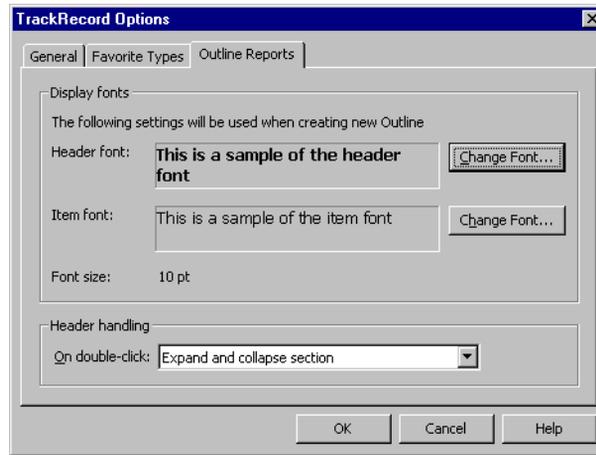
3 To change the font used to display report headers or items in an Outline Report:

◇ Click the **Change Font** button.

◇ When the Font dialog box appears, select the typeface, type style, and size you want TrackRecord items to use.

4 In the **Header Handling** drop-down list, specify what you want TrackRecord to do when you double-click an Outline Report header.

◇ Select **Expand and collapse section** if you want TrackRecord to display and hide the entries under a header when you double-click it.

◇ Select **Open Header Properties** if you want TrackRecord to display the property form for a header when you double-click it.

◇ Select **Open Query** if you want TrackRecord to display the query associated with a header when you double-click it.

5 Click **OK**.

Tip: You can use different typefaces and styles for headers and items, but the header font and the item font must use the same type size. Resetting the size for one automatically changes the size for the other.

Using Headers in Outline Reports

Headers are the building blocks of Outline Reports. They are used to isolate and filter project data by associating database queries with Outline Reports. Headers have properties that you can modify such as data view options, use of templates, column content and format, and print and displaying fonts.

Creating a Report Header

For information on adding a report header to an Outline Report, refer to "Adding Report Headers" on page 65.

Adding Multiple Headers

To add more headers to your reports, select a header in the report and click the **Insert Header** button.

◆ To add headers at the same level as the one you selected, choose **Insert Header>As a Sibling Header**.

◆ To add child headers, choose **Insert Header>As a Child Header**. Child headers act to further segment the data selected by the parent header. The selection criterion of the parent header limits the data available for selection by the child header.

Dragging Headers in an Outline Report

You can easily rearrange your Outline Report by dragging headers from one location to another within the report. When the cursor is over an area where the header can be dropped, the dragged image will *snap in*, showing you where the dropped header will appear. You can drag one header above or below another as a sibling, which puts them at the same level within the report. You can also drag one header below another to position it as a child or drag one header above another to make the dropped header a parent header.

If it is not possible to drop a header at a given location, the header will not snap in at that location, or will snap to the closest alternative.

Employing the Remainder Header

TrackRecord includes a special header called Remainder, which acts as a *None of the Above* summary item. When you include a Remainder header as a child header, it gathers and summarizes all the items belonging to the parent header that have not been listed in the child headers above it. The Remainder header is typically used to identify items belonging to a

parent header that fail to match all criteria pertaining to sections under that parent header.

By moving the Remainder header within a parent header, you can summarize the none of the above items quickly and easily. Figure 5-8 illustrates how you can move the Remainder header from one location to another within an Outline Report to obtain different summaries.

Figure 5-8. Using Remainder Header
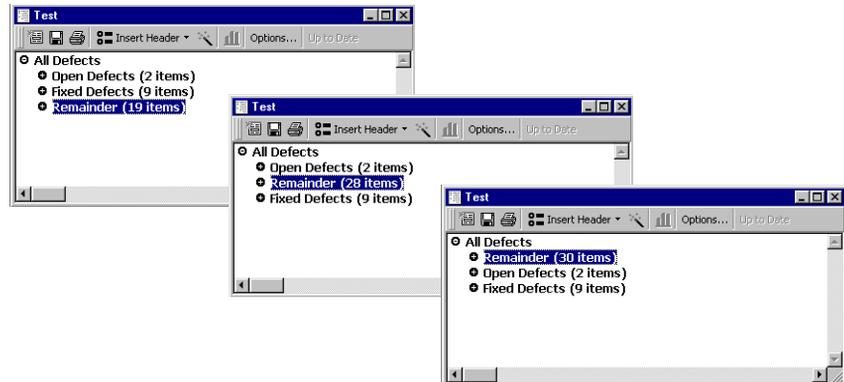
The first screen summarizes all defects, sorted by status, with the number of defects of each status shown in parentheses beside the sibling header. The Remainder header indicates that the product has 19 defects whose status is not Open or Fixed.

When the Remainder header is moved above the Fixed Defects header in the second screen, the item count for Remainder changes from 19 to 28. The Remainder header is now counting the Open Defects it was counting before (19), plus the Fixed Defects (9). Similarly, when the Remainder header is moved above the Open Defects header, the item count for Remainder changes to 30, representing the number of items of Open Defects (2) in addition to the number of items of Fixed Defects (9), and the number of items it represented in the first screen (19).

Using the Header Wizard

The Header Wizard is a TrackRecord utility that simplifies the creation of Outline Reports. The Header Wizard is most useful in two situations:

◆   When you are a new TrackRecord user unfamiliar with creating queries and inserting headers

◆   When you want to create Outline Reports that would require multiple, repetitious queries

For example, to create a report listing tasks assigned to certain Team Members, you would have to create a query element for each person

(AssignedTo=Bob, AssignedTo=Mary, AssignedTo=Joe, etc.). To group the tasks under separate headers would be even more tedious, since you would have to create separate queries. With the Header Wizard, you could identify all Team Members at one time by selecting them from a list and specifying how you want the tasks grouped.

To use the Header Wizard, follow these steps:

1   From the **File** menu, choose **New>Outline Report**.

2   Choose the **Insert Header>Using Header Wizard**. The Introduction dialog box (Figure 5-9) appears.

Figure 5-9. Header Wizard Introduction Dialog Box
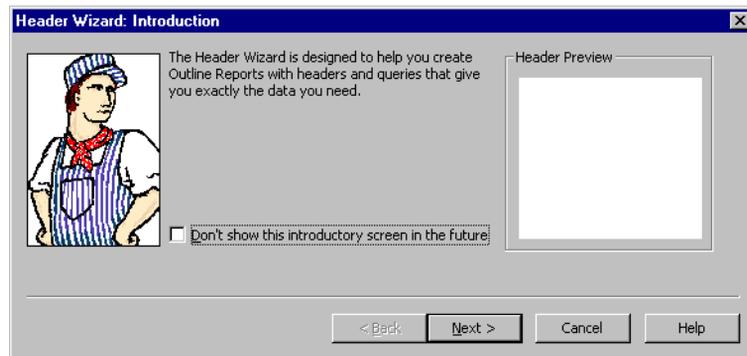
Read the instructions on the Introduction dialog box. If you want to skip this dialog box when you run the Header Wizard in the future, select the **Don't Show This Introductory Screen** check box. When you are finished, click the **Next** button.

3   In the Select Item Types dialog box (Figure 5-10), select the check box corresponding to each type of item you want to retrieve from the TrackRecord database.

Figure 5-10. Select Item Types Dialog Box
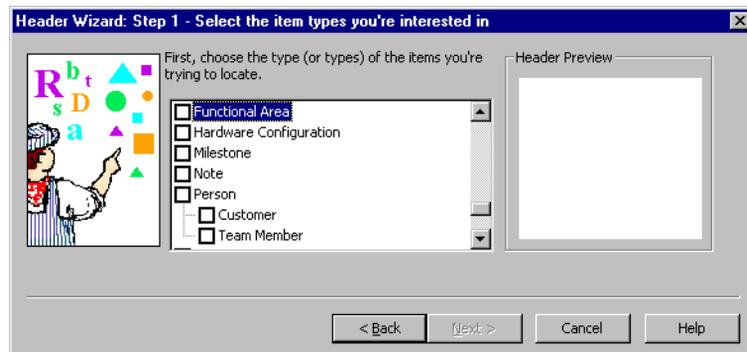
The Header Preview pane displays the name of each type you select. When you are finished, click **Next**.

4 In the Choose Field to Query On dialog box (Figure 5-11), specify the option you want to use as your query criterion.

Figure 5-11. Choose Field to Query On Dialog Box
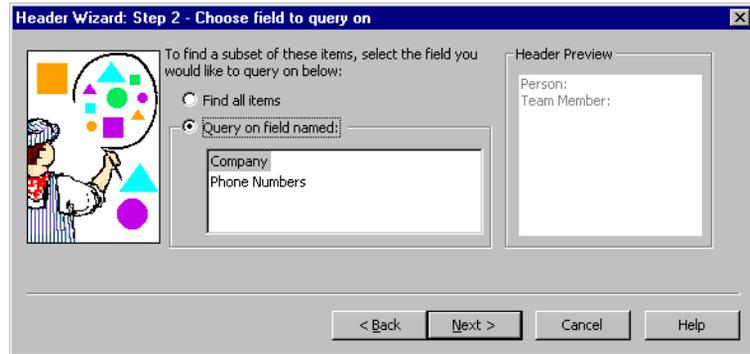
Click on one of the following options:

◇ **Find All Items—** Searches for all items. Click **Next** and skip to step 5.

◇ **Query On Field Named—** Finds items that have a specified value in a field. Select the field you want to use. For example, if you want to look for Defects associated with a specific project, you would choose Project as the query field. If you choose more than one type in step 3, the option may not be available. Click **Next** and continue to step 5.

5 If you selected a query field in step 4, use the Choose Specific Values To Find dialog box (Figure 5-12) to specify the values you want the query to find.

Figure 5-12. Choose Specific Values to Find Dialog Box
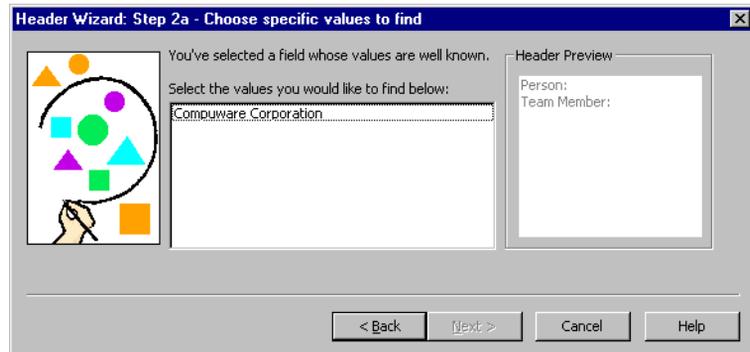
If you want the query to search for more than one value, click each value you want. For example, if you want to look for Defects associated with three specific projects, you would click each project name. To deselect an entry, click it again. When you are finished, click **Next**.

6   In the Grouping dialog box (Figure 5-13), specify how you want the query results to be grouped by selecting the associated option.

Figure 5-13. Grouping Dialog Box
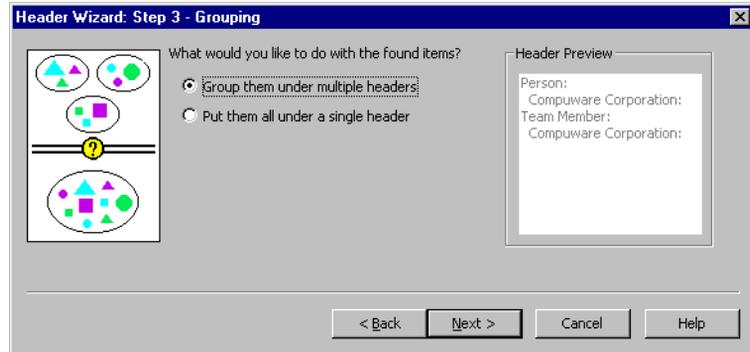
◇   To group selected items under separate headers, select the **Group Them Under Multiple Headers** option. Click **Next** and continue to step 7.

◇   To group selected items under one header, select the **Put Them All Under a Single Header** option. Click **Next** and skip to step 8.

7   If you specified in step 6 that you wanted selected items grouped under multiple headers, use the Grouping Options dialog box (Figure 5-14) to specify how TrackRecord should group items.

Figure 5-14. Grouping Options Dialog Box
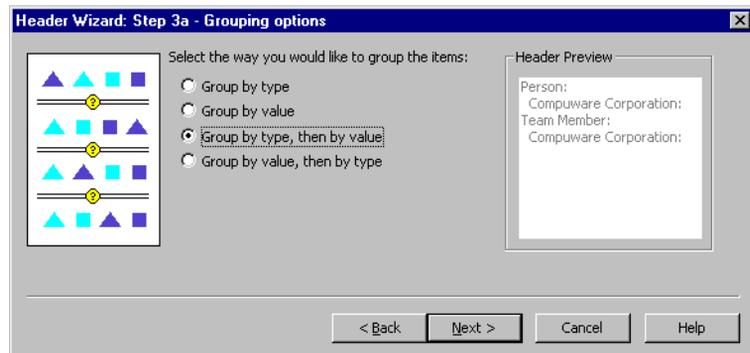
The following options are available:

◇   **Group by Type**— Places all items of the same type together, but do not sort them.

◇ **Group by Value**—Places all items with the same value together, but do not sort them.

◇ **Group by Type, Then By Value**— Places all items of the same type together and sort them by value.

◇ **Group by Value, Then By Type**— Places all items with the same value together and sort them by type.

When you are finished, click **Next**.

8 In the Placement Options dialog box (Figure 5-15), specify where the new headers should appear on the Outline Report.

Figure 5-15. Placement Options Dialog Box
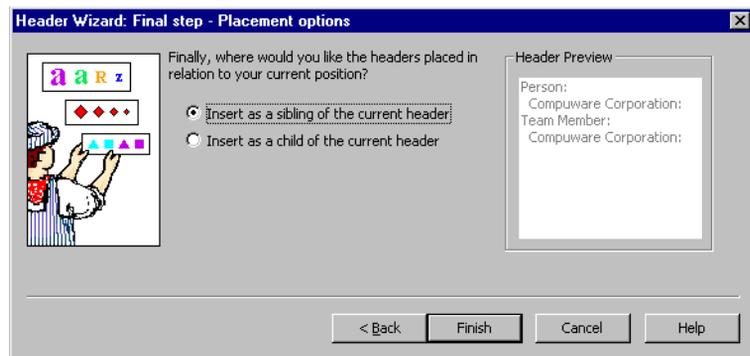
◇ If new headers should appear at the same level as the current header, or if these are the only headers in the report, select the **Insert as a Sibling** option.

◇ If new headers should appear as subheaders within the current header, select the **Insert as a Child** option.

9 When you are finished, click **Finish**. TrackRecord formats the Outline Report with the new headers, retrieves the items that meet the header search criteria, and displays the selected items under the appropriate headers.

You can use the Header Wizard to insert as many headers as desired in your report.

Opening Items in an Outline Report

Each item entry in an Outline Report represents an item in the Track-Record database. To open an item, double-click its entry in an Outline Report. If you want to update the information displayed for the item, make the appropriate changes and close the form; click **Yes** to save your changes.

Creating New Items from an Outline Report

You can create new items from within an Outline Report. Refer to "Configuring New Items Options" on page 66 for information about establishing the type of items that will be created and the template to be used. To create a new item from within an Outline Report, perform the following steps:

1 Select the header under which the item will be created.

2 Right-click and select the **New itemtype** option. The item type is the default type of item included in this header. An item form appears, allowing you to create a new item.

Utilizing the Shortcut (Right-Click) Menu

When you are working in an Outline Report, you can use the shortcut menu to perform a variety of functions. To open the shortcut menu, right-click an outline header or item.

As Figure 5-16 illustrates, the contents of the shortcut menu change according to the type of header or item you right-click.

Figure 5-16. Shortcut Menus for Headers and Items

Shortcut menu for a header in an Outline Report view

Shortcut menu for an item in an Outline Report
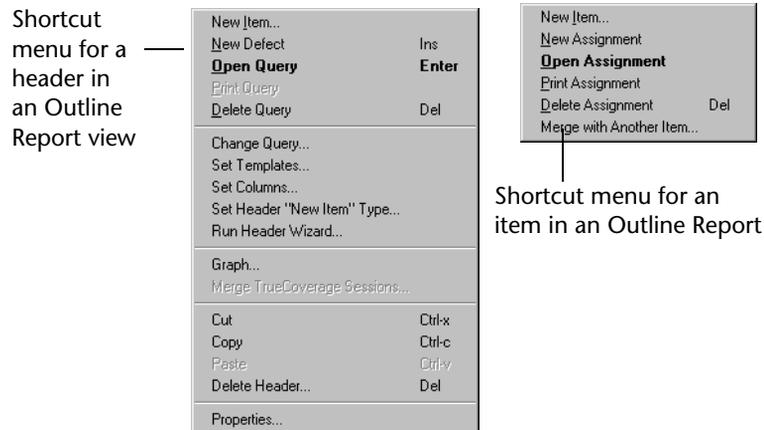
Printing from Outline Reports

There are three methods available to print multiple defects in an outline view:

For information on specifying print options for an Outline Report to override your default print option settings, and you can specify print options for specific headers within the report.

◆ Hold the keyboard's **Shift** key while right-clicking a defect. An option will appear on the menu allowing you to print the defect and the rest of the set. Left-click this option while holding the Control key (Ctrl).

◆ Hold the keyboard's **Control** key (Ctrl) while right-clicking a defect. This allows you to print that defect as well as the next 15 when this option is left-clicked in conjunction with the Ctrl key. Please note that this command will create a separate print job for each defect and will create 15 print jobs with one defect each.

◆ Hold the keyboard's **Control** key (Ctrl) + **C** to copy the result of the header. Open an application you will be displaying the report in (e.g. Microsoft Word) and use the **Ctrl + V** keystrokes. Multiple header results can be displayed on a single document using this method.

To create printed copy that looks like the screen format of Outline Reports:

1 Hold down the keyboard's **Shift** key, right click on the first item under a header in your Outline Report.

2 Select **Print** from the menu. This command will print out all of the items in the list until the next parent header is reached. Repeat the process if desired.

Working with Graphs

The Graph view displays a visual summary of the information in an Outline Report. Graphs can be used to effectively:

◆ Convey information quickly

◆ Identify trends which may not be apparent

◆ Display relationships that may exist between groups or series of numbers

Note: Graph availability is governed by the number of parameters in the query that resides in the header.

Tip: Reports with symmetric, hierarchical headers produce the most meaningful graphs.

After a graph is generated, TrackRecord updates it automatically when its underlying data changes. However, the graph does not change if you modify the Outline Report view from which the graph was generated.

You can print and save Graph views just as you do any other view. You can copy graphs generated by TrackRecord into graphics applications, such as Microsoft Paint, or into text editors, spreadsheet programs, and electronic mail applications that can accept bitmap images, such as Microsoft Word, Microsoft Excel, or Microsoft Outlook. For more infor-

mation, refer to "Integrating TrackRecord with Other Applications" on page 113.

Types of Graphs

Depending on the information in the Outline Report, you can generate the following graphs: pie, bar, stacked bar, and trend (line and area).

Pie Graphs

Tip: The graph style toolbar buttons become active when the style is appropriate for the data being graphed. Pie graphs require two or more parameters.

A pie graph (Figure 5-17) is a pictorial summary that displays the number of items matching a particular set of queries in an Outline Report. The results of each query represent a single pie slice (percentage) on the graph. They are useful in seeing the percentage relationship between components. Show the change in component proportion at different times using two pie graphs.

Figure 5-17. Pie Graph— Defects by Team Member and Priority
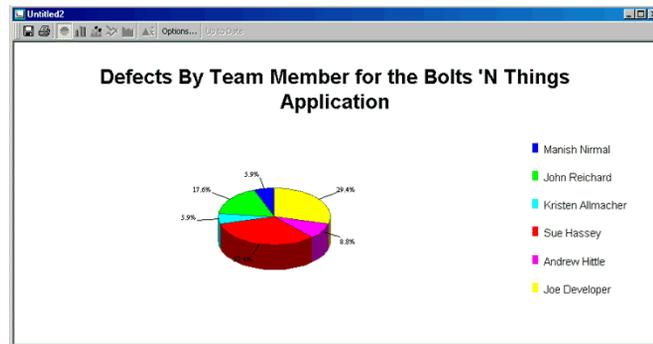
Bar Graphs

Tip: The graph style toolbar buttons become active when the style is appropriate for the data being graphed. Bar graphs require two or more parameters.

A bar graph (Figure 5-18) is a pictorial summary that displays the number of items matching a particular set of queries in an Outline Report. The

results of each query represent a single bar on the graph. A bar graph is useful when comparing the magnitude of, or differences between items.

Figure 5-18. Bar Graph— Defects by Status and Priority
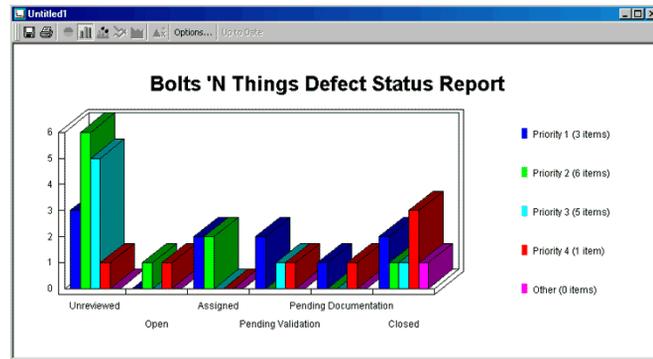
Stacked Bar Graphs

A stacked bar graph (Figure 5-19) displays the results of queries, which are used to calculate all the bars on the graph. Each point is the number of items matching a particular value for a field in that query. A stacked bar graph shows bars on top of one another to convey relative proportions of parts to the whole, and to each other. Data is presented in segments and bars.

Figure 5-19. Stacked Bar Graph— Defects by Team Member and Priority for the Bolts 'N Things Application
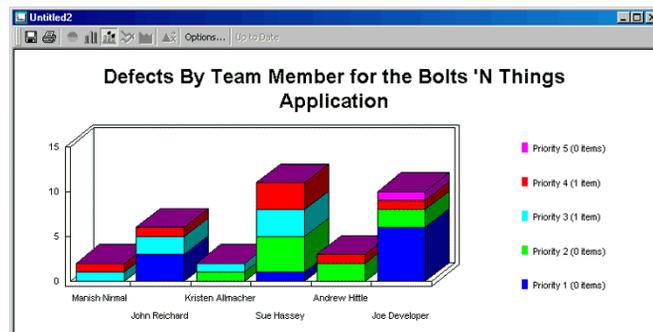
Trend Graphs

A trend graph is used to show rates of change over time, especially if data quantities differ greatly. It is useful for comparing two series of data if large quantities are involved, or when quantities differ greatly between two series. There are two types of trend graphs in TrackRecord (Figure 5-20):

◆ **Line graphs** — Used to show trends in data over equally spaced intervals of time. It is useful for a long series of data, or comparison of two or more series of data.

◆ **Area graphs** — Used to show trends in data over time. It is useful for emphasizing the magnitude of changes of time. An area graph is the equivalent of a stacked bar graph, for continuous data.

Trend graphs use the results of a single query to calculate all the points/ bars/slices on the graph, and each point is the number of items matching a particular value for a field in that query.

Figure 5-20. Example of a Line and Area Graph
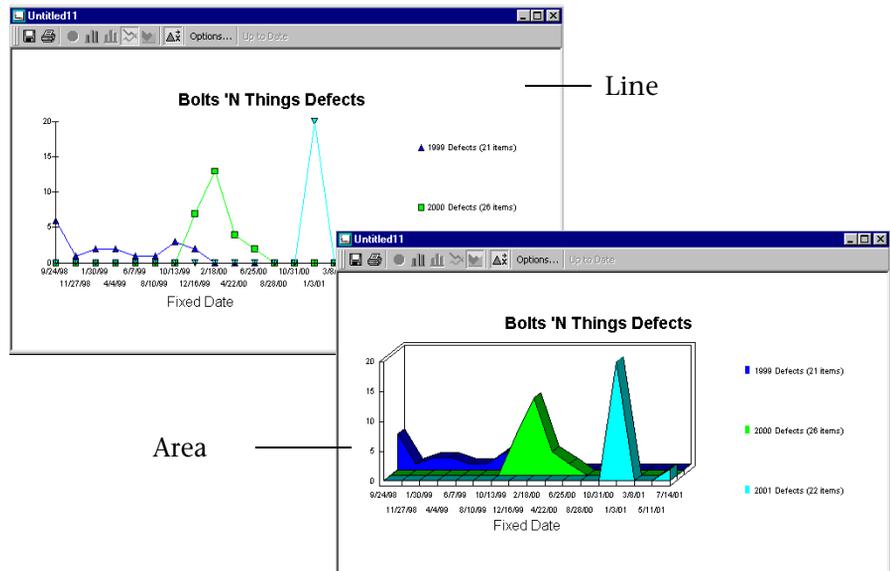
Creating Graphs From Outline Reports

To create a graph from an Outline Report, select the appropriate header in the report and click the **Graph** button on the toolbar (Figure 5-21). Alternatively, right-click the appropriate header and choose **Graph** from the shortcut menu.

If the information in the header is not appropriate for graphing, the Graph button and option will not be active.

Figure 5-21. Creating Graph from Outline Report

Select a header in an Outline Report...

...then click the Graph button...

... or choose Graph from the shortcut menu.
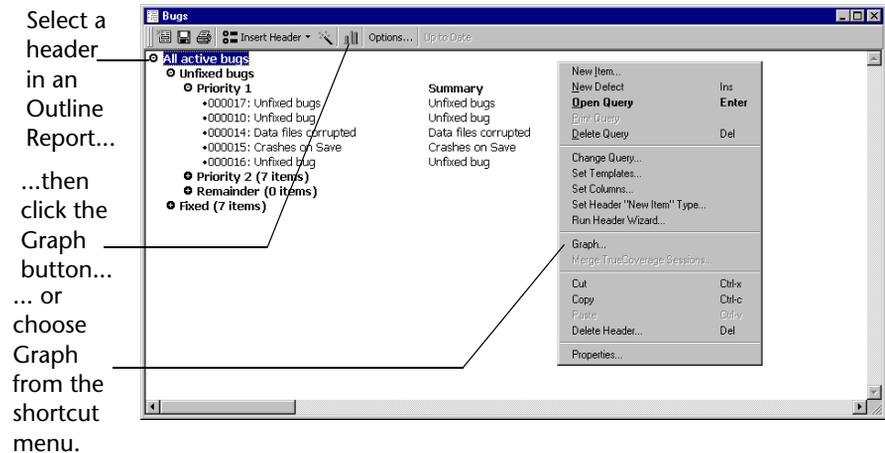
Formatting Graphs

TrackRecord automatically selects a graph style based on the structure of the Outline Report and the contents of the queries in the outline. You can override the default graph style by choosing a different graph icon from the Graph toolbar. The graph style toolbar buttons become active when the style is appropriate for the data being graphed.

◆ To select a different graph style, click a graph style button on the **Graph** toolbar or choose a graph style entry from the **View** menu.

◆ For line graphs, you can add a line identifying the overall trend by choosing **View>Best Line Fit**. Similarly, you can insert vertical bars connecting graph points to the baseline by choosing **View>Draw Bars to Points**.

◆ To choose whether to display a legend for your graph, choose **View >Legend**.

Using the Milestone Status View

When project plans are developed, typically the project is broken into manageable segments or development cycles, target dates are identified, and criterion for each milestone is defined. Once development is under-way, milestones become the focus of the team efforts; Team Members work to perform the tasks associated with upcoming milestones.

The Milestone Status view (Figure 5-22) identifies where a development project stands with respect to a predefined milestone, such as an Alpha or Beta release date. Individual developers can use the Milestone Status view to identify the specific assignments they have to complete to meet an upcoming deadline. By adding database queries identifying which tasks and bugs have been assigned, individual developers can use a personalized Milestone Status view as a To Do list that highlights tasks remaining to be performed.

Similarly, project managers can use the Milestone Status view to get a summary of the overall project status. They can leverage code statistics to identify how much of the project source code has been tested. By adding queries to the standard report, a project manager can determine critical information, such as the status of the project's requirements and software defects.

A Milestone Status view consists of two types of information:

Figure 5-22. Sample Milestone Status View
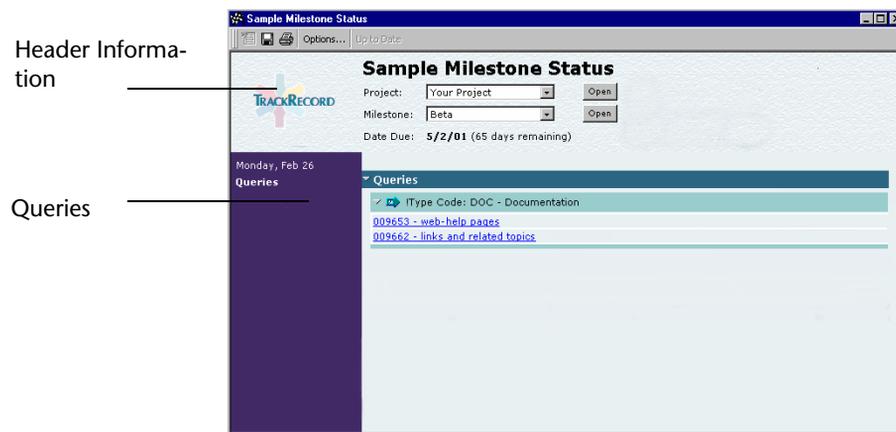
Table 5-1. Milestone Status Components

Section	Description
Header Information	Identifies the project, milestone and date due.
Queries	Results of queries included in the Milestone Status.

Creating a New Milestone Status

To create a new milestone status view, perform the following procedure:

1   From the **File** menu, choose **New>Milestone Status** to create a blank Milestone Status view.

   ◇   Use the **Project** drop-down list to select the project you want to profile. Optionally, click the **Open** button to display the project details.

   ◇   Use the **Milestone** drop-down list to select the project milestone you want to profile. Optionally, click the **Open** button to display the milestone details.

2   Click the **Options** button on the Milestone Status toolbar to open the Milestone Status Options dialog box (Figure 5-23).

Figure 5-23. Milestone Status Options Dialog Box
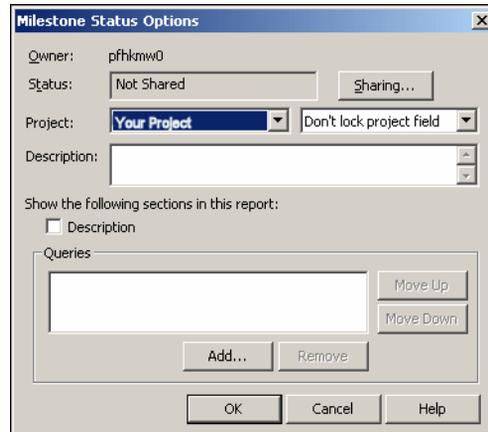
3   To share your Milestone Status view with other users, click the **Sharing** button.

   Click the **Share To** button on the dialog box that appears and click the check box beside each share group with whom you want to share the report. Click **OK** when you are finished.

4   Use the **Project** list to select the project you want to summarize in the Milestone Status view.

5   To prohibit other users from changing the project being displayed, select the **Lock Project field** option from the drop-down list.

6   Enter a brief description of the report in the **Description** field.

7   To display the report description on the report, select the **Description** check box.

8 To include queries in the Milestone Status view, select the **Queries** check box.

To add a query to a Milestone Status view, click the **Add** button. When the Open Query dialog box appears, choose the query you want to include in the Milestone Status view and click **Open**.

To change the sequence in which queries are displayed in the Milestone Status view, select a query and click the **Move Up** or **Move Down** buttons.

To delete a query from the Milestone Status view, select it and click the **Remove** button.

9 When you are finished, click **OK**.

Utilizing the Calendar View

To view project information in the context of some span of time, use TrackRecord's Calendar view. The Calendar view (Figure 5-24 and Figure 5-25) functions as an appointment book and To Do list, where Track-Record automatically categorizes and displays the appropriate data by date and time.

By default, TrackRecord displays all uncompleted items for a given day or week. Timed Tasks are displayed according to their scheduled start date/time, and Tasks (including Defects and Feature Requests) are displayed according to their due date. Timed Tasks take place at specific times and for specific periods. Regular Tasks may have deadlines, but are otherwise open-ended.

The data displayed in a calendar is determined by the query run by the calendar view. You can customize the information displayed by your calendar by changing the query. Refer to Chapter 4, "Retrieving Data" for more information on queries.

Depending on your preferences, the daily or weekly Calendar view displays a simple list of your appointments and tasks or a tick-marked schedule of each day. By changing the Calendar view's query, you can

display different data or dates. You can also maintain and display multiple calendars simultaneously.

Figure 5-24. Sample Calendar by Day Views

Drag open a new time bar to create a new item for a selected day; also works in Week view
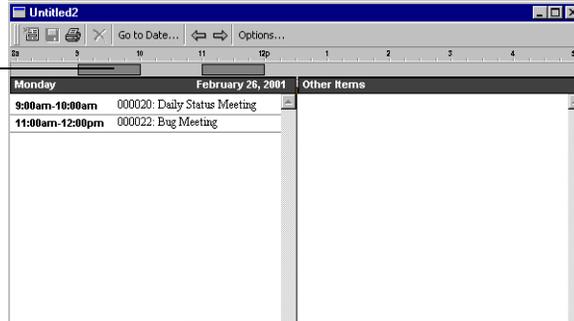
Displays list of appointments and items or daily calendar
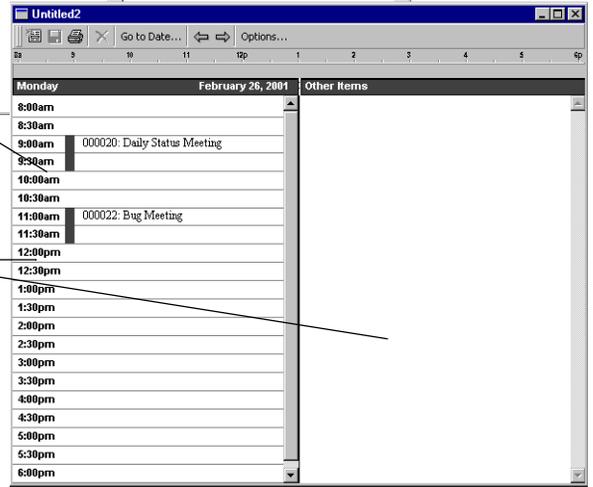
Displays appointments (Timed Tasks) and To Do items (Tasks)

Figure 5-25. Sample Calendar by Week Views

Change appointment times dynamically by dragging handles or entire time bar

Display list of appointments and items or weekly calen-

Double-click titlebar to display Day view

Double-click an item to see its Item view; right-click to inspect
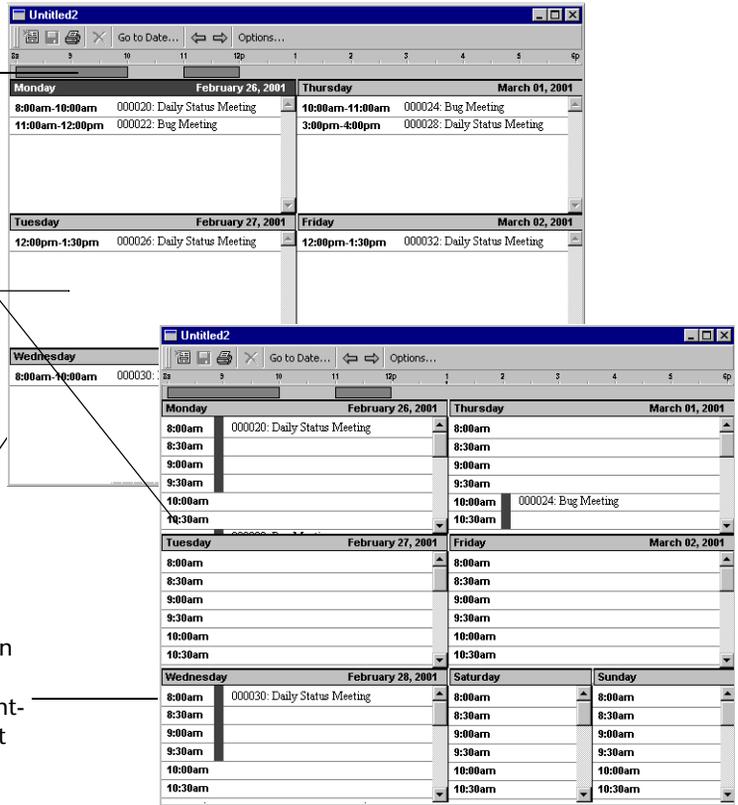
Creating Your Default Calendar

The items displayed in a calendar are determined by the query run by the Calendar view. Before setting up your default calendar, create a query for the items that you want displayed. Refer to "Understanding Queries" on page 51 for information about creating queries.

To configure your default calendar, perform the following procedure:

1 From the **File** menu, choose **New>Calendar**.

2 Click the **Options** button. The Calendar Preferences dialog box (Figure 5-26) appears.

3 Specify your calendar preferences:

Figure 5-26. Calendar Preferences Dialog Box

Specifies calendar display

Turns time bar at top of calendar on or off

Sets time slots intervals and tick marks on time bar.

Sets default type for other time-dated queries

Specifies if empty calendar slots are shown

Sets time range displayed. Allows tasks to be entered outside established range

Sets default type for appointments

Sets query to retrieve information. Choose any that scans for time or date fields (default query displays all incomplete tasks and timed tasks due each day)

Description of calendar

4 Click **OK** to display the Calendar view.

TrackRecord stores your Calendar view settings and uses them any time you display a new calendar.

Adding Tasks to the Calendar

Note: If the query specified in your Calendar Preference dialog box does not search for date and time fields, you will not be able to enter an appointment in this way. The default calendar query uses appropriate fields.

Perform the following procedure to add a task to a calendar:

1 Open your TrackRecord calendar.

2 From the **File** menu, choose **New>Calendar**. TrackRecord uses your default calendar settings to display your current calendar.

3 Click the point on the time bar representing the starting time of the task or appointment, and drag across to the ending time. Release your mouse button.

For example, if you are entering an appointment scheduled to start at 9 AM and end at 10 AM, you would drag from the 9 to the 10 on the time bar. The Timed Task form (Figure 5-27) appears.

Figure 5-27. Timed Task Form

4   Enter information about the appointment, such as a one-line summary (which will appear in your calendar), in the form fields. TrackRecord fills in the starting and ending date and time fields for your appointment automatically.

5   When you are finished, click the **Save and Close** button. The new appointment appears on your calendar.

Chapter 6
Using TrackRecord's WebServer
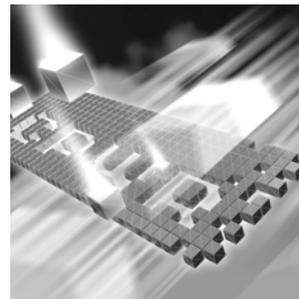
◆ Understanding the WebServer

◆ Exploring the WebServer Interface

◆ Creating a New Item

◆ Working with File Attachments

◆ Searching With WebServer

◆ Opening an Outline Report

Understanding the WebServer

TrackRecord's WebServer allows you to access the TrackRecord database through a Web browser, such as Microsoft Internet Explorer.

Tip: Refer to the TrackRecord Administrator's Guide for administrative information.

When you log in to TrackRecord through the WebServer, TrackRecord accesses your user information in the database just as though you had logged in through the TrackRecord Windows client. If you have set preferences such as a Home Page or favorite reports through your Windows client, those items will be maintained in the WebServer client as well. The WebServer also recognizes your membership in Groups and Share Groups and allows you to run the same reports you run through the Windows client.

While using the WebServer, you can create new items, view and modify existing items, and view existing Outline Reports. You cannot create new queries, Outline Reports, or other reports.

Notes about the WebServer

The WebServer uses the same item form as the TrackRecord Windows client, but has a few important differences.

Entering Information

You enter information just as you would in the Windows client with these exceptions:

◆ For any date fields in the Web client, always enter date information using the same date format as that used by the computer running the WebServer. This information is displayed next to the Date field label. For example, if the WebServer machine is configured to use dates in the format dd/mm/yyyy, you should enter a date as 28/09/2001, not 09/28/2001. To ensure that the correct format is used when selecting dates, click the **Calendar** button to specify dates from a graphical calendar instead of entering a date with the keyboard. This will open the calendar and you can double-click a date to select the day you want to enter. Note that alphabetic characters are not supported in dates.

◆ To update an existing TrackRecord item from the WebServer interface, you must open an Outline Report that includes that item and then click the item's link.

◆ Do not use an ampersand (&), a quote sign ("), a greater than sign (>), or a less than sign (<) in any of your fields that are going to be displayed on the Web. If you do, you will not be able to open up the Web page.

◆ Do not use field names greater than 40 characters in length.

◆ Ensure that there are no spaces at the end of a field name.

◆ Information entered into TrackRecord will not be available in the WebServer for about one minute.

Outline Reports

When accessing an Outline Report through the WebServer, note the following differences from Outline Reports in the Windows client.

◆ You can open and close all headers at once with the **Expand All** and **Collapse All** buttons in the Status Bar (Figure 6-2). Note that Expand All may take a some time to complete, depending on the contents of the headers.

◆ If a report contains more than ten items in a header, when the header is expanded the first ten items are displayed. Figure 6-1 illustrates how the arrows are used to display the returned items.

Figure 6-1. Navigation Arrows for Viewing Returned Items
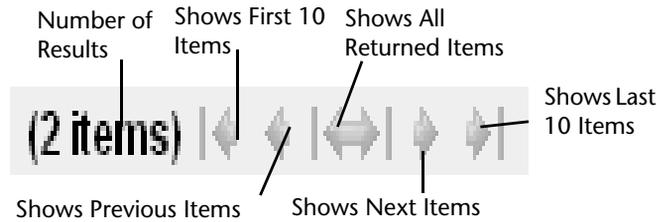
◆ When you open a header, the report scrolls to position the open header at the top of the Work Area.

◆ If you click on a drop-down list that causes TrackRecord to run rules, TrackRecord must access the database to run those rules. The item will be partially saved when the database is accessed. Once the item has been partially saved, clicking the **Cancel** button will display a message that a version of the item has been saved and you cannot cancel your changes. You must manually restore the values that you want saved.

Entering and Exiting the WebServer

Required: A non-admin user is prevented from a login to the WebServer if they have not previously performed a login to the full TrackRecord client.

Logging In to WebServer

To log in to TrackRecord WebServer:

1 Run a Web browser such as Microsoft Internet Explorer.

2 Enter http://<*your servername*>/trackrecord/welcome.html in the **Destination** field of your Web browser and click **Enter**.

Note: Ask your TrackRecord administrator what value to enter for <*your servername*>.

For example, if your server was named sfa10072, you would enter http://sfa10072/trackrecord/welcome.html.

The TrackRecord WebServer Login page (Figure 6-2) appears.

Figure 6-2. TrackRecord WebServer Login Page

3   Enter a user name, password, and the name of a TrackRecord data-base. Alternatively, enter the name of the server, followed by a colon, and the name of a TrackRecord database. For example, trdb1:qacenter.

4   Click **OK**. The TrackRecord WebServer main window (Figure 6-3) appears.

Logging Out of WebServer

To log out of TrackRecord, click the **Logout** link in the Control Area of the WebServer window.

You should use this browser window exclusively for TrackRecord tasks. Use another browser window to access other URLs.

Changing the Database Name Appearing on Login Screen

To change the database that appears on the login screen:

1   Click **Start** > **Run**.

2   Type Regedit in the **Open** field. Click **OK**.

3   Navigate to the following path: H_KEY_LOCALMACHINE>SOFTWARE>Com-puware>TrackRecord.

4   Right-click on **databaseDir** and choose **Modify**.

5   In the Edit String dialog box, change the value data from **Default** to the name of your database.

Exploring the WebServer Interface

The WebServer window (Figure 6-3) is your Web interface to the Track-Record database. Use this window to create and modify items and view reports. The WebServer window consists of three areas that are explained in the following sections:

◆ "Control Area" on page 95
◆ "Status Bar" on page 96
◆ "Work Area" on page 96

Figure 6-3. TrackRecord WebServer Main Window. The links are shortcuts to your most common tasks. The links on your screen may differ from the illustration since they depend on your user settings.
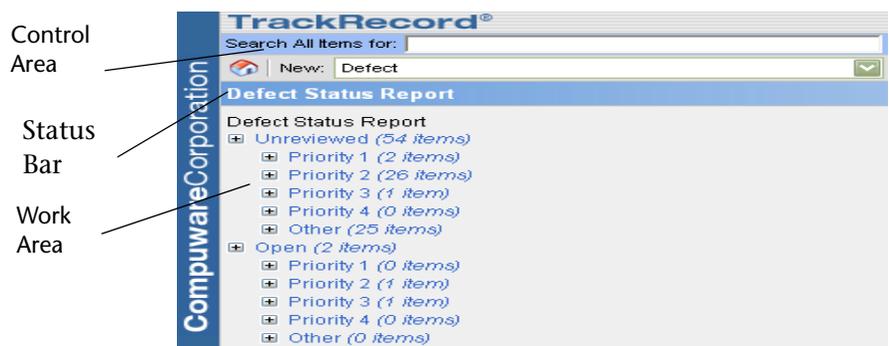
Control Area

The Control Area of the WebServer Main Window includes the following options:

◆ From the **New** dropdown menu at the top, create a new item. The default for this is New Defect.

◆ From the **Open** dropdown menu, open a list of existing items.

◆ Shortcut to your Home Page report if you or your administrator has specified a Home Page in TrackRecord. If a Home Page has not been specified, this link is not displayed.

◆ Use the **Search** dialog to search for information through the Web-Server.

◆ The **Manage** link is available for administrators. This link is not displayed if not logged on as an Administrator.

◆ The **User Options** link displays the TrackRecord WebServer version number, the name of the database and username. Change a password, and email address here.

◆ The **Help** icon displays information about using the WebServer.

◆ The **Logout** icon logs out of the WebServer.

Status Bar

The Status bar may contain a status message, such as an error or a message indicating communication with the server, or a series of dots that are displayed to indicate that the WebServer is performing an action. It may also contain information about an item or report currently on view, including the title of the page and buttons that operate on the current item or report.

The contents of this area vary. For example, when you are working on a Defect, the status bar contains a Cancel button and a Save button.

Work Area

The Work Area displays the selected item or report. When you first access the WebServer, your TrackRecord Home Page is displayed in the work area by default. If you have not set a Home Page, the work area will be empty.

Database and User Name

The database name and user name appear on the browser's title bar. For example, the database "default" and the username "Admin" would appear as (`default:Admin`). If different from the WebServer name, the database server name will also be displayed. For example:

```
Compuware TrackRecord on WebServername (servername|
databasename:username)
```

WebServer Window Notes

Note the following when using the WebServer window:

◆ TrackRecord launches a separate browser window in which to run the Web application. This window should be used exclusively for running TrackRecord. If you use this window to access another URL or if you close the window, your TrackRecord session will be terminated.

◆ The context menu (right-click menu) **Open Item in New Window** option is not supported. Although a window will be opened, it will not be functional. To display two items simultaneously, open another browser window, enter the URL for the `welcome.html` page, and log into TrackRecord from this window.

Viewing Change History

At the bottom of most item forms is a Recent Change History section. To see all the changes associated with an item, click the View All link. A change history window appears (Figure 6-4) if there are five or more changes associated with this item. This provides an audit trail of the changes made to an item over time. When an item is created or modified, an entry is added to the change history list for that item. If items are change several times during a single session, each change is noted separately.

Figure 6-4. WebServer Change History Window

Printing A Page

Click the Printable Page button to display the item in a printer friendly format (Figure 6-5).

Figure 6-5. Printable Page Window

Creating a New Item

You can use the WebServer interface to create new TrackRecord items.

Caution: Compuware recommends that you review the "Notes about the WebServer" on page 91 before beginning this procedure.

To create a new TrackRecord item, execute the following procedure:

1   Open the TrackRecord WebServer main window as described in "Entering and Exiting the WebServer" on page 93.

2   From the **New** drop-down menu, select the type of item you want to create. The Work Area displays a form allowing you to enter the new

item. The Status Bar displays buttons appropriate for this item, such as **Cancel** and **Save**.

Figure 6-6. New Defect Form in WebServer Window

3   Complete the fields in the form. Required fields are identified with red field labels. Note the following items:
    ◇   A single line text field can contain up to 255 characters.
    ◇   A multi-line text field can store up to 65,535 characters of information.
    ◇   A numeric field can store a number between between 0 and 4,294,967,295.

4   Click the **Save** or **Cancel** button on the Status Bar, when the form is complete.

Working with File Attachments

Note: This function will not work unless you are running Microsoft Internet Explorer and your Web server is Microsoft Internet Information Server (IIS) 4.0 or higher or iPlanet Web server 4.x with an ASP plug-in.

In TrackRecord's WebServer client, attach files, open attached files, and delete attachments.

The TrackRecord limit on file attachment size per item is 12 MB. After attaching, these files are compressed, stored in attach.dat, and can only be viewed through the TrackRecord client or WebServer. Their compressed physical size when stored in the database can be notably smaller than the original file size.

Furthermore, attachments are only read into memory when viewing or extracting them, so the fact that the attachment table can become rather large on disk has no affect on performance or memory usage.

Working With List Boxes On a WebServer Form

Insert, create, open, or delete items in a list box using the buttons described below.

Figure 6-7. Adding to a List Box on Form
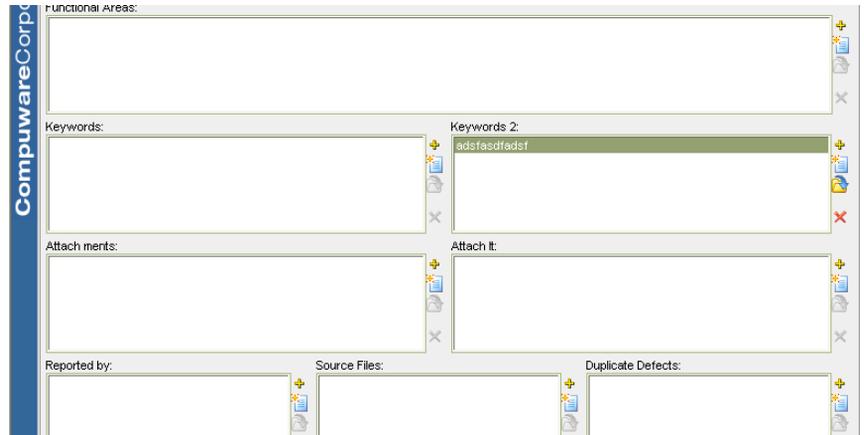
To insert a previously existing item, click the insert button.

To create a new item, click the new item button.

To select an existing item from the displayed list, highlight the item and click the existing item button.

To delete an item from the displayed list, highlight the item and click the delete button.

If you make any changes to an item, be sure to click the **Save** button. If you have not made any changes to the attachment, click **Cancel** to return to the browser.

Searching With WebServer

To find database information, perform a search rather than create a view. The WebServer offers a simple search to find items that contain a specified text string. For example, search for all defect items that contain a specific name in any string field. To search the WebServer, follow these steps:

1 Open the TrackRecord WebServer main window as described in "Entering and Exiting the WebServer" on page 93.

2 Select the **Search** link from the WebServer menu. The TrackRecord Search window appears.

3 Enter a text string in the **Search Criteria** field.

Any items that contain the specified text string in any field are displayed. Enter partial words to find wording variations. For example, enter *veri* to find all items that include the words *veri*fication, *veri*fy, *veri*fied, or un*veri*fied.

4 Click the **Search** button. The Search Results window lists all items that meet the search criteria.

Figure 6-8. Search Results Window
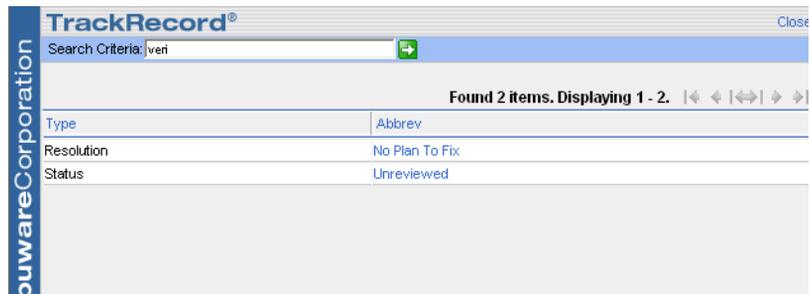
5 To display the contents of one of the items, click the appropriate entry.

6 Close the window.

Opening an Outline Report

Any Outline Report that is available to you through the Windows client is also available through the WebServer.

Caution: Compuware recommends that you review the "Notes about the WebServer" on page 91 before beginning this procedure.

Complete the following procedure to open an Outline Report:

1   Open the TrackRecord WebServer main window as described in "Entering and Exiting the WebServer" on page 93.

2   Select an Outline Report from the **Open** list. If you have identified a Home Page report, you can open your Home Page by clicking on the link in the Control Area.

3   Click a report header to show the items within that header. If you have enabled the Show Count on Un-Expanded Outlines feature in WebServer Administration, each header is followed by an item count.

You can click the **Expand All** button to display all items in the report, or click **Collapse All** to hide items. You cannot collapse individual headers.

To view the entire text of a field, click **Show Details.**

4   To update an item in the TrackRecord database, click its reference in the Outline Report.

5   To close the report, open another item or report.

Chapter 7

Working With Templates
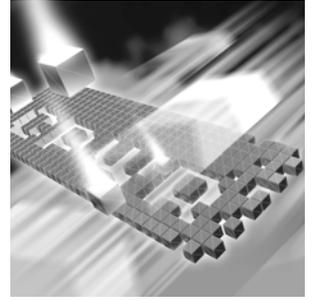
◆ Understanding Templates

◆ Creating Templates

◆ Setting the Default State

◆ Associating Templates with a Header

Understanding Templates

Templates simplify data entry in TrackRecord by automatically entering information in specified fields when you create a new item. This preset format is used as a starting point for a particular application so that format does not have to be recreated each time it is used. For example, you can create a template for new Defect items that enters your name, your computer configuration, and other information in the appropriate fields in the Defect form. You can create templates for any TrackRecord data type, such as Team Members, Tasks, or Defects.

Caution: When creating a template, be careful to leave blank any auto-incrementing or auto-initialized fields. Otherwise, the contents of the template will override the automatic value inserted by TrackRecord.

Figure 7-1 illustrates how TrackRecord enters information in a Defect form when it is first opened.

Figure 7-1. Templates Prefill Information in Forms

Personal template supplies Reported By name

Project name supplied by global template (Vertigo)...

...is overridden by Project supplied by personal template (Millennium)
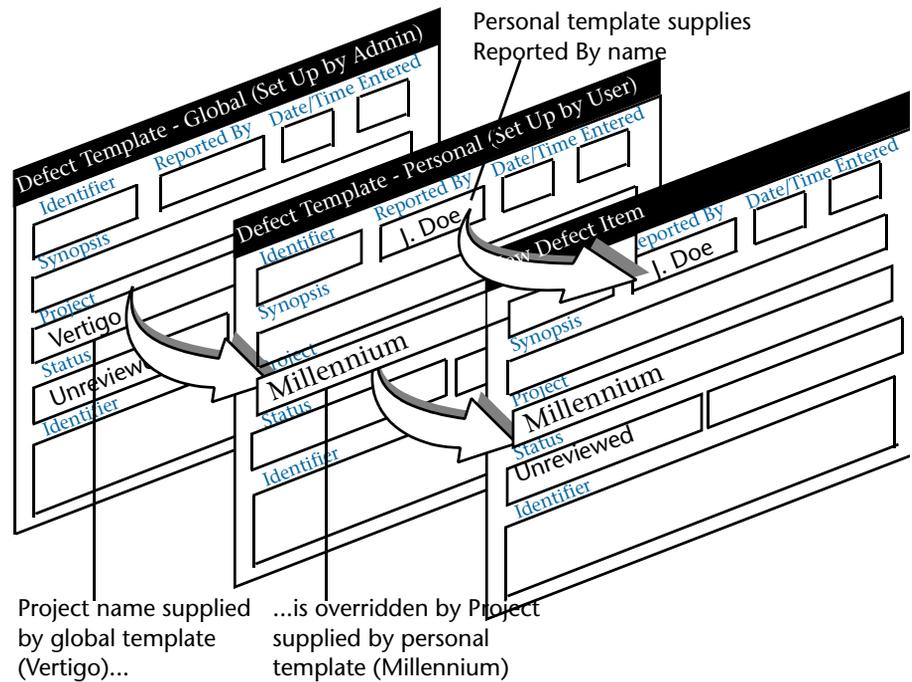
◆ The user's personal Defect template specifies that "J. Doe" should be automatically entered in the Reported By field on the Defect form.

◆ The global template specifies that the default status for new Defects is "Unreviewed". Note that the user's personal template does not specify a value for that field. TrackRecord automatically enters "Unreviewed" in the Status field on the Defect form.

◆ The global template specifies that the default project name for new Defects is "Vertigo". However, the user's template, which overrides the global template, specifies that new Defects should default to "Millennium" for the project name, so TrackRecord enters "Millennium" in the Project field on the Defect form.

Templates can be global, shared to selected work groups, or private. Private templates are applied after global and shared templates and can therefore be used to override global and shared templates.

TrackRecord applies templates in two circumstances: when you create new items directly and when you create new items from within an Outline Report.

When Creating Items Directly

When you create an item, TrackRecord automatically inserts values from templates for that type of item. Templates use the principles of data type inheritance determining how to populate fields (Refer to "Understanding Data Type Inheritance" on page 17 for more information). The values that will be inserted are determined by a nested set of sources, which are applied in the following order:

1   Global template for a parent of the new item

2   Template for a parent of the new item shared with the user's work-group(s)

3   User's personal template for a parent of the new item

4   Global template for that type of item

5   Template for that type of item shared with the user's workgroup(s)

6   User's personal template for that type of item

When a value for a field is found at one level, TrackRecord ignores values specified at lower levels. For example, if a user's personal template specifies "Colossus" as a project name and the global Defect template specifies "Millennium," TrackRecord uses "Colossus" because it is a higher priority.

Templates and Items Created from an Outline Report

Templates provide a context-sensitive formula for items created in an Outline Report section. When you use templates to create items from within an Outline Report, you can specify as many templates as you require to prefill the item's fields.

For example, Figure 7-2 illustrates an Outline Report that lists Defects by status (Unfixed bugs, Fixed bugs), with separate child headers for each Defect priority (1, 2, 3) under each status header. If you add a Defect template to the Unfixed bugs status header, the phrase Unfixed bugs will automatically be inserted into the Status field when a new Defect is created from within that header. You could then add a Defect template to

each child header under Unfixed bugs to insert the appropriate value in the Defect Priority field.

Adding Templates to Headers Simplifies Data Entry

A template attached to the Unfixed bugs header would insert a status of Unfixed bugs into new Defects

A template attached to each Priority header would insert a different priority into new Defects
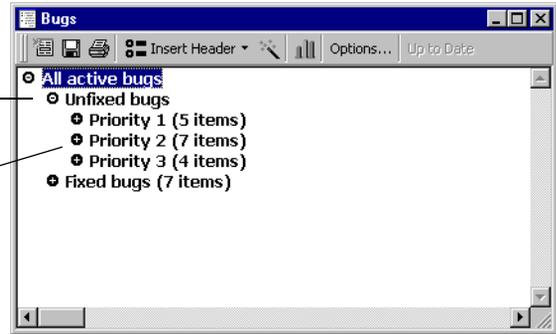

When someone using this Outline Report wants to add a new Defect, he or she would right-click the appropriate child header and choose New Defect from the shortcut menu. TrackRecord would automatically fill the Status field with the information supplied by the parent header's template and the Priority field with the information from the child header's template.

Templates associated with child headers override templates associated with parent headers. For example, if the template linked to the parent header inserts "Millennium" in the Project field of a new Defect and the child header inserts "Vertigo," TrackRecord would insert "Vertigo" whenever a new Defect is created from within the child header.

Figure 7-3 illustrates how TrackRecord fills fields in a new item with information supplied by templates attached to headers within an Outline Report.

Figure 7-3. Precedence of Templates From Within an Outline Report
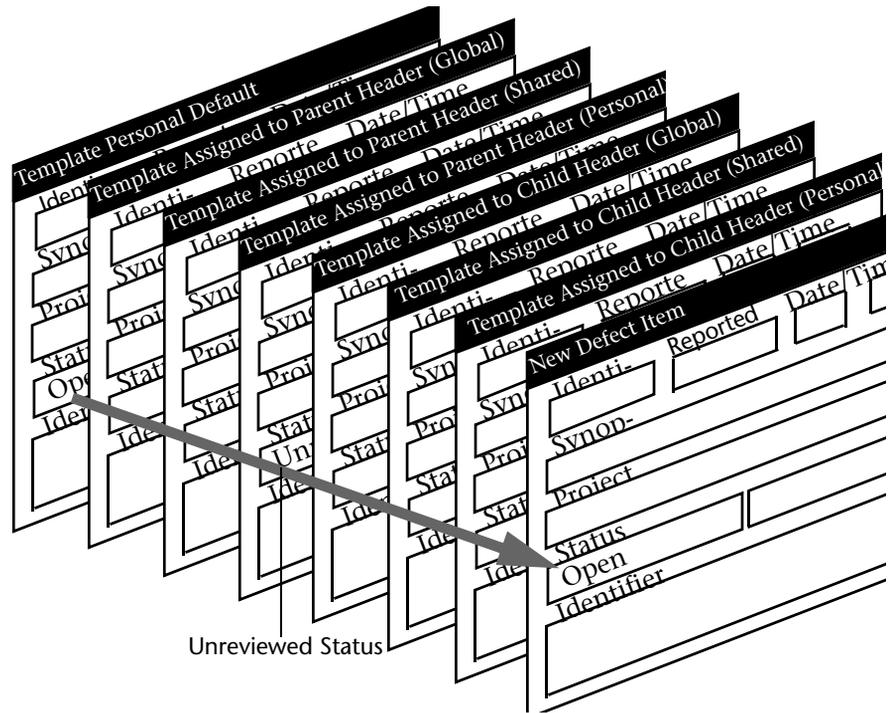
Creating Templates

To create a new template, follow these steps:

**1** From the **File** menu, choose **Manage>Templates**. The Manage Templates dialog box (Figure 7-4) appears.

Figure 7-4. Manage Templates Dialog Box
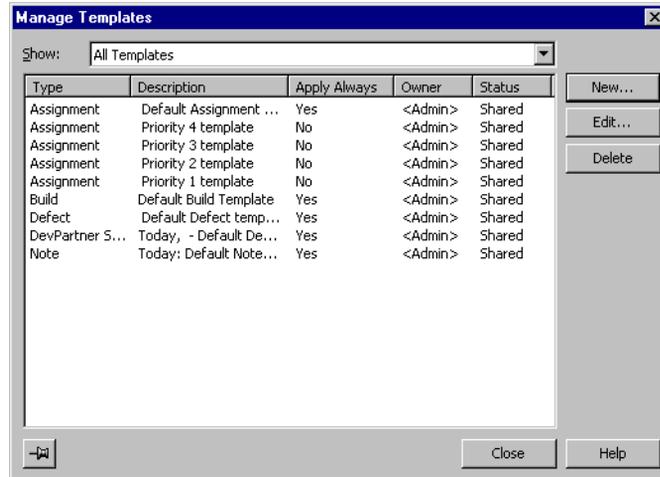
2 Click the **New** button to display the Choose a Type dialog box.

3 Select the type of item for which you want to create a template and click the **New** button.

An Item form (Figure 7-5) for the selected type appears. The Identifier and Summary fields display a blue key icon beside the label to signify that these fields are not part of the template.

Figure 7-5. Template Form for Build Item

Blue key indicates field identifies or describes the template instead of establishing default information for a field in a new item
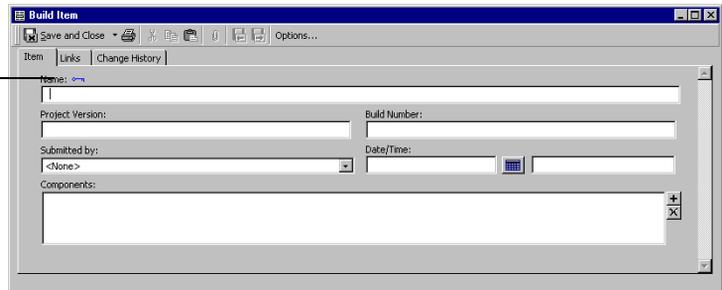
4 Enter a description for this template in the **Summary** field. The Summary field is used to identify the template in the Manage Templates dialog box (that is, the Summary becomes the template name).

**5** Enter information in the fields you want the template to prefill.

6 Click the **Options** button to open the Template Options dialog box (Figure 7-6).

Figure 7-6. Template Options Dialog Box

7 Optionally, specify whether you want to share this template with other users.

◇ Click the **Sharing** button to open the Sharing dialog box (Figure 7-7). Click the **Share To** button and then select the check box next to each group with which you want to share the template.

Figure 7-7. Sharing Dialog Box
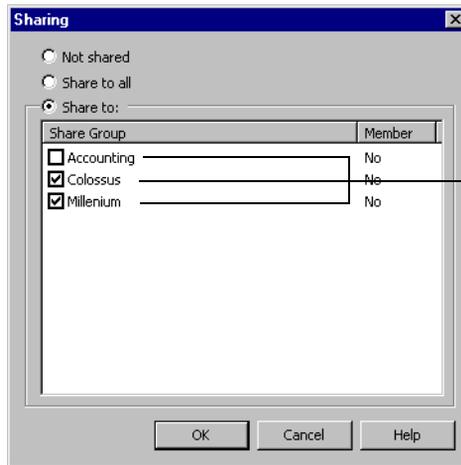
Template is shared with Team Members in the Colossus and Millennium workgroups, but not Team Members in the Accounting workgroup.

◇ If you have opened the Sharing dialog box, click **OK** to return to the Template Options dialog box.

◇ If you want to use this template whenever you open a new item of this type, select the **Apply This Template to New Items** check box.

◇ When you are finished, click **OK** to return to the template form.

8 Click **Save and Close**.

Setting the Default State

To set the default state through the use of a template, perform the following steps:

1 From the **File** menu, choose **Manage>Templates**. The Manage Templates dialog box appears. If necessary, use the **Show** drop-down menu to view a subset of templates.

2 If an appropriate template already exists, select it and click the **Edit** button to make any modifications. If an appropriate template does not exists, click the **New** button and select the type.

3 In the **Summary** field, enter a descriptive name for this template. This name will identify this template in the Manage Templates dialog box.

4 In the **Status** field, select a default value for Status, such as Unreviewed or Open.

5 Click the **Options** button to open the Template Options dialog box.

6 Ensure that the **Apply This Template to All New Items** option is selected.

7 Click the **Sharing** button and select the **Share to All** option. Click **OK**.

8 When all template items have been set, click **Save and Close**. When a user creates a new item of this type, the initial status will be set.

Associating Templates with a Header

To associate a template with an Outline Report header, follow these steps:

1 Open the Outline Report to which you want to link a template.

2 Right-click the header to which you want to add a template and choose **Set Templates**. The New Items tab on the Header Properties dialog box (Figure 7-8) appears.

Figure 7-8. Header Properties Dialog Box – New Items Tab
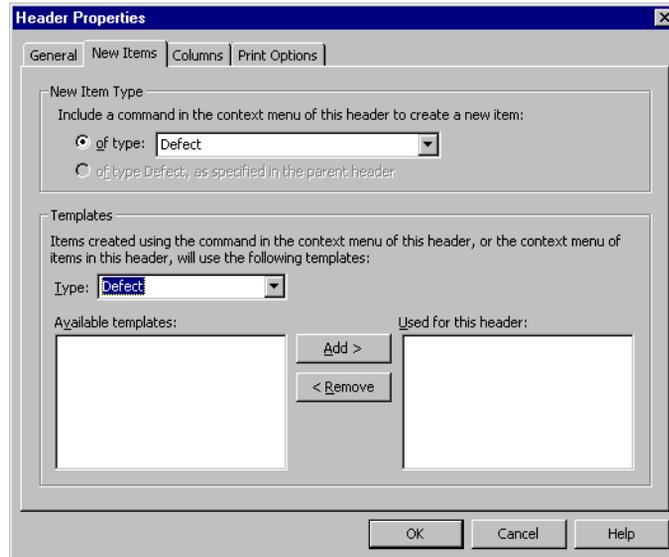
3 In the **New Item Type** section, specify the item types that you want to be able to add by right-clicking the header.

◇ Select the **Of type** option and choose the data type from the list on the right.

◇ To open the same types from this header as you can from the parent header, select the **Of type <type>**, as specified in the parent header button.

4 Identify the templates you want to use when creating new items from within the selected header.

Use the **Type** drop-down list to select the type of item for which you want to create templates. When TrackRecord displays the list of templates applicable to the type you select in the Available templates list, select the one you want to use and click the **Add>** button.

You can use more than one template when you create items from within an Outline Report header. For example, construct one template to insert your name and a second template to insert a project name. This lets you reuse the first template when you set up templates for other headers in the Outline Report.

When you create more than one template for an Outline Report header, information from the templates at the top of the list is used before information from lower templates. For example, if the first template in the list specified a project name of "Colossus" and a lower template specified a project name of "Millennium," TrackRecord would use "Colossus" when creating a new item.

5   When you are finished, click **OK**.

Chapter 8

Integrating TrackRecord with Other Applications
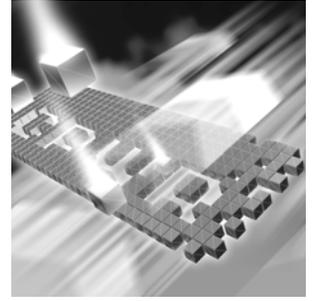
◆ Integrating QACenter Products

◆ Using TrackRecord with Text Editors

◆ Integrating TrackRecord with Graphics Applications

◆ Synchronizing TrackRecord with Microsoft Outlook

◆ Connecting TrackRecord to Microsoft Project

◆ Using TrackRecord With Visual C++

◆ Utilizing TrackRecord with Version Control Systems

◆ Integrating TrackRecord With Compuware Products

◆ Using TrackRecord in a CARS Engagement

## Integrating QACenter Products

*QA*Center tools help companies achieve consistent, dependable application performance.

*QA*Center delivers automated testing products and solutions designed to validate applications running in the full spectrum of environments, to isolate and correct problems, and to ensure that systems can handle anticipated load before applications go live. These include:

◆ Requirements Management

◆ Test Planning

◆ Test Execution Management

◆ Functional Test Automation

◆ Load Testing

- Mainframe Test Automation
- Defect Management
- Test Data Management

As shown in the following figure, *QA*Center products work together to successfully meet all enterprise needs.
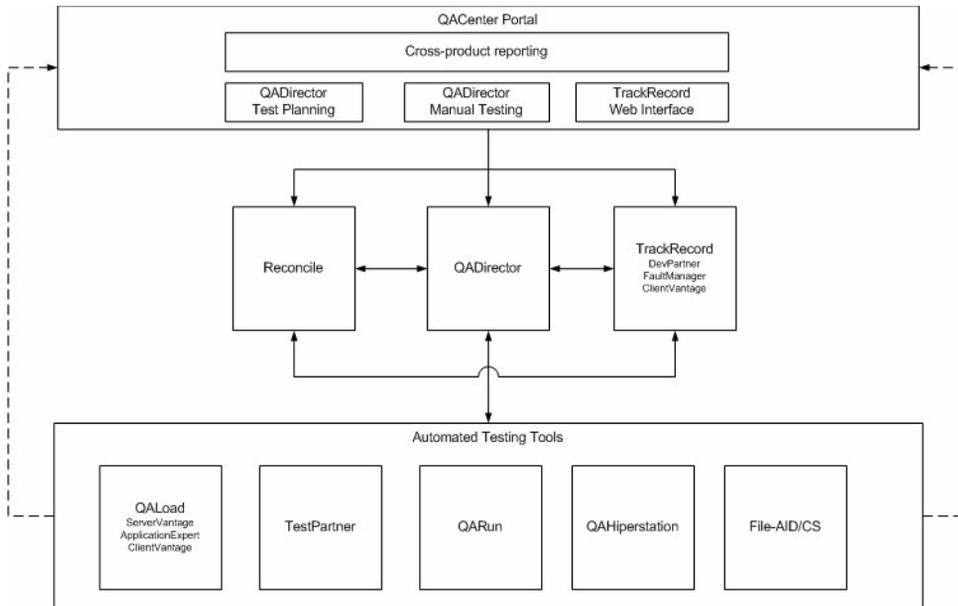
File-Aid CS

File-AID/CS is a comprehensive data management tool designed to help developers, testers and quality assurance teams work efficiently with data as they develop, test and support their applications. With File-AID/ CS, it is possible to extract, load, copy, convert, transform, compare, and edit data without having to be an expert in each database environment. File-AID/CS supports the major distributed databases (Oracle, DB2 UDB, Microsoft SQL Server and Sybase), in addition to a wide range of data types including mainframe data.

File-Aid/CS integrates with the following *QA*Center applications:

***QA*Director:** Launch File-AID/CS from within *QA*Director, and avoid searching through the Windows Explorer Start menu. Also from *QA*Director, access the File-AID/CS Convert and Compare facilities. Use the File-AID/CS Convert facility to create specifications that contain all the data

necessary to convert an existing data file to a new target data file. The File-AID/CS Compare facility creates specifications that compare the expected and actual contents of output files. From *QA*Director, create File-AID/CS tool domains for processing File-AID/CS test scripts within a test suite.

*QA*Run: *QA*Run works with File-AID/CS to execute compare specifications. Within *QA*Run, create Checks containing File-AID/CS compare specifications.

QADirector

Testing is a major undertaking that requires the coordination of many tasks, many testers, large suites of test scripts, and multiple versions of different applications. *QA*Director provides a framework for managing the entire testing process—from design, to execution, to analysis.

*QA*Director works with testing, requirement, and defect tracking tools, organizing tests and results in one location. Specifically, *QA*Director integrates with the following *QA*Center applications:

*QA*Center Portal: *QA*Director reports can be published in *QA*Center Portal. View these reports from any workstation with a supported version of Microsoft Internet Explorer installed. *QA*Director does not have to be installed on the computer. Also, manual tests can be viewed or run from the *QA*Center Portal.

File-AID/CS: Launch File-AID/CS from within *QA*Director and avoid searching through the Windows Explorer Start menu. Also from a *QA*Director menu, access the File-AID/CS Convert and Compare facilities. Use the File-AID/CS Convert facility to create specifications that contain data necessary to convert an existing data file to a new target data file. Use the File-AID/CS Compare facility to create specifications that compare the expected and actual contents of output files. From *QA*Director, create File-AID/CS tool domains for processing File-Aid/CS test scripts within a test suite. In addition, analyze test data by comparing test logs that are accessible through *QA*Director.

*QA*Hiperstation: From within *QA*Director, browse *QA*Hiperstation scripts on the mainframe, add scripts to test procedures, launch *QA*Hiperstation to play back the scripts, and view details about failed *QA*Hiperstation scripts.

*QA*Hiperstation+: With *QA*Hiperstation+ installed on a computer, edit and create *QA*Hiperstation scripts from *QA*Director.

*QA*Load: Launch *QA*Load Conductor, Analyze, and Player modules from a convenient *QA*Director menu. Add, find, execute, and abort scripts that

can stress a distributed system by simulating thousands of users simultaneously performing different operations. Also, view results of *QA*Load tests from within *QA*Director.

QARun: Launch *QA*Run from within *QA*Director to add, create, edit, find, execute, and abort scripts that test native Windows applications, distributed applications with a Windows client, or host based (mainframe) applications accessed via a Windows terminal emulation program. Additionally, view results and logs to analyze *QA*Run test data.

Reconcile: Use *QA*Director with Reconcile to generate test plans in accordance with changing requirements. Integration between *QA*Director and Reconcile accelerates test planning and ensures end-user needs are met. Plan tests between Reconcile and *QA*Director through QAC Portal

TestPartner: Launch TestPartner from within *QA*Director to add, create, edit, find, execute, and abort scripts that test Java, Visual Basic, and Visual C++ applications, as well as browser-based Web applications. View results and logs from within *QA*Director.

TrackRecord: Launch TrackRecord, submit defects, and view defects from a center within *QA*Director and avoid searching through the Windows Explorer Start menu. Load failed test results into TrackRecord defect reports. Store the defect ID with the test procedure for easy follow-up.

QACenter Mainframe Solutions

*QA*Center mainframe solutions are a suite of products that automates mainframe server testing. *QA*Center helps measure, manage, and minimize the risk in mainframe servers by simplifying frequent mainframe server application testing. Solutions include:

◆ QAHiperstation to streamline the testing of traditional VTAM applications.

◆ *QA*Center for IBM Enterprise Servers to test IBM WebSphere applications using HTTP, HTTP/S and APPC communications.

◆ *QA*Center for IBM WebSphere MQ to test MQSeries applications.

QALoad

Today's distributed systems must perform reliably under loads ranging from hundreds to thousands of simultaneous users. Organizations must perform repeatable load testing and determine the ultimate performance and potential limits of a system. Using loads that mimic realistic business usage, *QA*Load validates that the system meets acceptable service levels.

*QA*Load integrates with the following QACenter applications:

*QA*Director**:** Launch *QA*Load Conductor, Analyze, and Player modules from a convenient *QA*Director menu. Add, find, execute, and abort scripts as well as view results of *QA*Load tests from within *QA*Director.

QARun

The time consuming and labor intensive task of testing e-commerce, ERP or distributed applications is difficult to perform accurately and thoroughly using only hit-or-miss, manual methods. *QA*Run provides automation capabilities necessary to quickly and productively create and execute test scripts, verify tests, and analyze test results.

Programmers create scripts that imitate the actions of a human tester. This keeps testing in sync with accelerated release cycles, improves the return on testing investment, and delivers the quality applications end users and management expect.

*QA*Run integrates with the following applications:

File-Aid/CS: Create, verify and restore data using the integration between *QA*Run and File-AID/CS. Use File-AID/CS to create datapools for data entry during testing. Invoke File-AID/CS's Compare feature directly from *QA*Run's built-in file check function. View the comparison results from the *QA*Run log files, the central point for verifying test results. Restore test databases using File-AID/CS, ensuring repeated tests are run without data modification.

*QA*Director**:** Launch *QA*Run from within *QA*Director. Add, create, edit, find, execute, and abort scripts to test native Windows applications, and distributed applications. Access these applications with a Windows client, or host based (mainframe) applications accessed via a Windows terminal emulation program. Additionally, view results and logs to analyze *QA*Run test data.

Reconcile

Reconcile helps accurately assesses a project's status by keeping planning, development, and testing activities in sync. With Reconcile, test all requirements, and include development or testing changes, within the confines of a tight schedule.

Reconcile shares information with other tools that support the project lifecycle. This eliminates having to document similar information in multiple sources. Specifically, Reconcile integrates with the following QACenter applications:

*QA*Director: From within Reconcile, launch *QA*Director and import test results. Use *QA*Director with Reconcile to generate test plans in accordance with changing requirements.

TrackRecord: From within Reconcile, launch TrackRecord to synchronize requirements.

TestPartner

TestPartner is an automated functional testing tool specially designed for testing complex applications based on Microsoft, Java, and web based technologies. TestPartner's unique features allow testers and developers to create repeatable tests through visual scripting and automatic wizards. Users also have access to the full capabilities of Microsoft's Visual Basic for Applications (VBA), allowing tests to be as high level or detailed as necessary. From within TestPartner, submit defects to TrackRecord.

TrackRecord

TrackRecord is a defect tracking application that records and reports information about developed and supported products. TrackRecord records project information including project team members and testers, schedulers and milestones, bug reports, and feature requests in an Object database. TrackRecord's query and reporting features retrieve and format the information necessary to keep a project on track.

TrackRecord integrates with the following *QA*Center applications:

Reconcile: From within Reconcile, launch TrackRecord to synchronize requirements.

*QA*Center Portal

The initial and primary focus of *QA*Center Portal is to provide a comprehensive reporting facility that is consistent among the *QA*Center point products. This will enable users, with various roles and responsibilities, to create and view detail, summary, and cross-product reports. The *QA*Center Portal reporting engine ties together requirements planning, test planning, test execution, and defect tracking to provide users with a centralized view of application quality.

In addition to the report features, *QA*Center Portal provides the framework for web-based views and functionality to the *QA*Center point products. *QA*Center Portal supports defect tracking, as well as manual test execution and test planning.

*QA*Center Portal integrates with the following *QA*Center applications:

*QA*Director: Publish *QA*Director report data in *QA*Center Portal. View these reports from any workstation with a supported version of Microsoft Internet Explorer installed. *QA*Center Portal also provides the functionality to execute manual tests.

Because *QA*Director and *QA*Center Portal share the same database, users may be created and maintained in either product.

TrackRecord: Launch the TrackRecord web interface from *QA*Center Portal to enter, edit, and view defects.

Reconcile: Import requirements from Reconcile into *QA*Center Portal to review details and generate reports.

Using TrackRecord with Text Editors

TrackRecord makes it easy to copy data from Outline Reports into other applications, including text editors, spreadsheet programs, and electronic mail applications. When you paste data from an Outline Report into an application that supports Rich Text Format (RTF), such as Microsoft Word or Microsoft Outlook, the report's columns, fonts, and format are preserved in the new document.

Tip: Information copied from TrackRecord to other applications is embedded statically. It will not change when the data in TrackRecord changes.

Embedding an Outline Report in a Text Document

To embed an Outline Report in a text document, follow these steps:

1   Select the headers or items you want to copy and from the **Edit** menu, choose **Copy** to add the Outline Report data to the Windows Clipboard.

2   Activate the document window for your target application.

3   From the **Edit** menu, choose **Paste**.

    If you copied an Outline Report header, the header you selected, its child headers, and any sibling headers below the one you copied appear in the target document window. If you selected an Outline Report item, that item is pasted to the target document.

4   Optionally, update the style information for pasted data to make it conform to your document standards.

    TrackRecord information pasted into other applications uses two styles: *TR Header* and *TR Item*. After you have pasted information from TrackRecord into a text editor, you can quickly adjust the typefaces, type sizes, and other properties of the embedded information by changing settings for these styles.

Integrating TrackRecord with Graphics Applications

You can copy graphs generated by TrackRecord into graphics applications, such as Microsoft Paint. After you paste a TrackRecord graph, you can modify the graph using the application's tools.

Additionally, you can paste graphs generated by TrackRecord into text editors, spreadsheet programs, and electronic mail applications that can accept bitmap images. For example, you can paste a bar graph from TrackRecord into Microsoft Word, Microsoft Excel, or Microsoft Outlook.

Pasting a TrackRecord Graph into Another Application

To paste a TrackRecord graph into another application, perform the following procedure:

Tip: Graphs copied from TrackRecord to other applications will not change when the data in TrackRecord changes.

1   Generate the graph from the appropriate Outline Report. Refer to "Working with Graphs" on page 78 for information on formatting TrackRecord graphs.

2   From the **Edit** menu, choose **Copy** to add the TrackRecord graph to the Windows Clipboard.

3   Activate the window for your target application.

4   From the **Edit** menu, choose **Paste**.

5   Optionally, if the target application lets you edit bitmap images, change the colors or layout of the TrackRecord graph.

Synchronizing TrackRecord with Microsoft Outlook

Those who use Microsoft Outlook can import TrackRecord task items into Outlook. It then displays TrackRecord task items as Outlook tasks. You can check off a completed task in Outlook. After synchronization, the task will also be shown as completed in TrackRecord. You can synchronize the applications periodically to keep your items up-to-date in both applications. Optionally, tasks marked as completed in either application can be removed from Outlook during the next synchronization.

The following table details how TrackRecord tasks appear in Outlook tasks:

Table 8-1. How TrackRecord Tasks Appear in Outlook

Outlook Field	Contents
Subject	Default value of item (Identifier and Summary by default)

Table 8-1. How TrackRecord Tasks Appear in Outlook

Outlook Field	Contents
Due Date	Date Due field
Priority	Mapped from Priority field
Body	Text of the format: "`Project: <Project> <Description>`" where Project and Description are taken from the corresponding TrackRecord fields
Category	Set to the text TrackRecord

Caution: **Three additional user-defined fields are added to the Outlook task item:** *TRIdentifier, Project,* **and** *Database.* **These fields maintain the link with TrackRecord and should not be edited.**

Note: Outlook 2000 users will find a TrackRecord menu on the Outlook menu bar after a TrackRecord installation. Outlook 97/98 users must run a separate program called `TROutlookSync.Exe` to set synchronization options and to synchronize tasks.

Synchronizing TrackRecord and Outlook 97/98

1   In Windows Explorer, locate the TrackRecord directory and double-click the `TROutlookSync.Exe` icon in the TrackRecord program group.

2   If the TrackRecord login screen appears, enter your user name and password. Click **OK**.

3   Click **Options** on the TrackRecord Task Synchronization dialog box.

Note: You can also use the "/sync" command line parameter to automatically begin a synchronization upon launching the application. If this is coupled with a "/silent" parameter, no user interface will be shown and the synchronization will simply occur. For example: `C:\Program Files\Compuware\`**TrackRecord**`\TROutlookSync.exe/sync`.

Tip: If you want synchronization to occur automatically, you can use a feature like the Microsoft Scheduler to periodically launch the TrackRecord Task Synchronization program. Use the "/synch /silent" arguments to prevent dialog boxes from appearing.

4   On the Synchronization Options dialog box (Figure 8-1), set or change options as necessary:

Note: If the selected query returns non-task items such as Defects or Projects, they will not be imported into Outlook; only tasks (or items that inherit from tasks) can be imported.

Figure 8-1. Synchronization Options with Microsoft Outlook
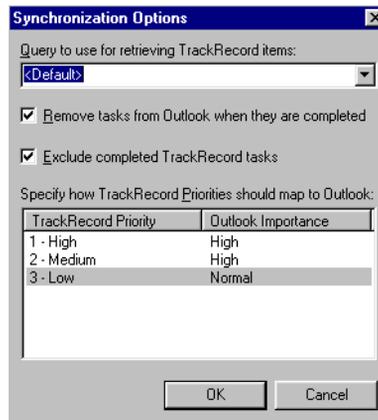
◇ Select a TrackRecord query for retrieving task items by selecting a query from the drop-down list. By default, TrackRecord will search for a query named **My Outlook Tasks** in the current database and use that to determine which items should be synchronized. If that query is not found, it will scan all task items and synchronize any tasks that are assigned to the current user and not marked as complete. Changing the query only affects what new items will be imported/synchronized with Outlook. Any items that have already been imported into Outlook will remain, and will continue to be synchronized with TrackRecord.

◇ Choose whether to remove completed tasks from Outlook by selecting or clearing the check box. By default, once an item is marked as complete, it is removed. When this option is cleared, completed items will not be removed and will continue to be synchronized.

Note: You cannot mark tasks as incomplete from within Outlook. If you mark a completed task as incomplete in Outlook, it will be remarked as complete next time you synchronize.

◇ Choose whether to exclude TrackRecord tasks already marked as complete by selecting or clearing the check box. By default, completed TrackRecord tasks in the query are not added to Outlook. When this option is cleared, even the completed tasks will be added.

Note: If the **Remove Completed Items** option is selected while the **Exclude Completed** tasks is cleared, all the completed tasks will be

added to the Outlook Tasks folder and then moved to the Deleted Items folder.

◇ Select how to map TrackRecord priorities to Outlook by double-clicking an entry in the **Outlook Importance** column and selecting **High, Normal,** or **Low.** This control allows you to map each TrackRecord priority to an Outlook priority. If a priority has not been mapped in TrackRecord, or has no priority, it will be set to **Normal** in Outlook.

5 Click **OK** when you are finished.

6 Click the **Synchronize** button.

7 Click **Exit** when finished.

Synchronizing TrackRecord and Outlook 2000

If you have Outlook 2000, the TrackRecord client installation process will install an add-in that allows you to access TrackRecord Task Synchronization. From the **Outlook Tools**>TrackRecord menu, there will be three menu options: **Synchronize, Edit Options,** and **Change Login**. To synchronize using Outlook 2000, perform the following procedure:

1 In Outlook, choose **Tools**>TrackRecord>**Options**. The Synchronization Options dialog box (Figure 8-1) appears.

2 On the Synchronization Options dialog box (Figure 8-1), set or change options as necessary:

Note: If the selected query returns non-task items such as defects or projects, they will not be imported into Outlook; only tasks (or items that inherit from tasks) can be imported.

Figure 8-2. Synchronization Options with Microsoft Outlook
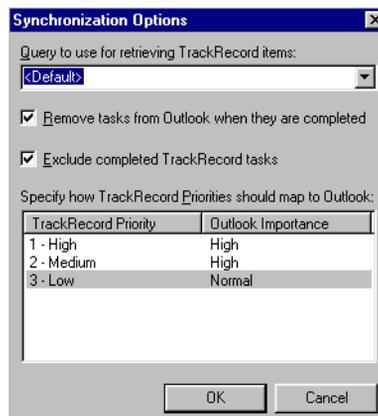
◇ Select a TrackRecord query for retrieving task items by clicking the drop-down list and choosing a query from the supplied list. By default, TrackRecord will search for a query named **My Outlook Tasks** in the current database and use that to determine which items should be synchronized. If that query is not found, it will scan all task items and synchronize any tasks that are assigned to the current user and not marked as complete. Changing the query only affects what new items will be imported/synchronized with Outlook. Any items that have already been imported into Outlook will remain, and will continue to be synchronized with TrackRecord.

◇ Choose whether to remove completed tasks from Outlook by selecting or clearing the check box. By default, once an item is marked as complete, it is removed. When this option is cleared, completed items will not be removed and will continue to be synchronized.

Note: You cannot mark tasks as incomplete from within Outlook. If you mark a completed task as incomplete in Outlook, it will be remarked as complete next time you synchronize.

◇ Choose whether to exclude TrackRecord tasks already marked as complete by selecting or clearing the check box. By default, completed TrackRecord tasks in the query are not added to Outlook. When this option is cleared, even the completed tasks will be added.

Note: If the **Remove Completed Items** option is selected with the **Exclude Completed** tasks cleared, all the completed tasks will be added to the Outlook Tasks folder and then moved to the Deleted Items folder.

◇ Select how to map TrackRecord Priorities to Outlook by double-clicking an entry in the **Outlook Importance** column and selecting **High**, **Normal**, or **Low**. This control allows you to map each TrackRecord priority to an Outlook priority. If a priority has not been mapped in TrackRecord, or has no priority, it will be set to **Normal** in Outlook.

3 Synchronize tasks by choosing **Tools**>TrackRecord>**Synchronize Tasks**. The TrackRecord Task Synchronization Status dialog box appears.

4 Close the dialog box when the synchronization is complete.

Connecting TrackRecord to Microsoft Project

Integrate TrackRecord with Microsoft Project to let managers and development Team Member exchange up-to-date project status information quickly and easily and link development schedules to items in the TrackRecord database. Periodically synchronizing Project information and TrackRecord information lets you update information about project dates and milestones, status and priorities of tasks, and the availability of project Team Member.

Managers can track actual schedules against baseline schedules easily; each time a Team Member marks a task as complete in TrackRecord, its status and dates are adjusted in the project plan in Project. Similarly, a project Team Member can use TrackRecord to obtain a list of current tasks (which may include tasks defined in TrackRecord or Project). When a Team Member completes an assignment, TrackRecord automatically updates the project database and passes the new assignment information to Project.

Integration Overview

Figure 8-3 provides an overview of the process of integrating TrackRecord and Microsoft Project information. Each item is described fully in the following sections. These tasks are generally performed by a project manager and should be done in the following order.

Figure 8-3. Microsoft Project/TrackRecord Integration Overview

Install the Microsoft Project and TrackRecord integration macros. See "Installing the Microsoft Project Macros" on page 126.

Perform initial project setup to connect a Microsoft Project-based schedule with a TrackRecord project. See "Performing Initial Project Setup" on page 127.

Map Project and TrackRecord priorities. See "Mapping TrackRecord Priorities to Project Priorities" on page 128.

Synchronize applications. TrackRecord creates a new Project Task item for each task and synchronizes status. See "Synchronizing a Project in TrackRecord with Microsoft Project" on page 129.

Synchronize the applications periodically, whenever you want to update project information. Refer to "What Happens During Synchronization?" on page 130 for an explanation of how fields are synchronized.

Installing the Microsoft Project Macros

To integrate TrackRecord and Microsoft Project information, begin by installing the TrackRecord macros in Microsoft Project. A new Track-Record menu will be added to the Microsoft Project tool bar.

1   Open the Integration.mpt file created for your specific version of Microsoft Project:

◇   **Microsoft Project 98-2000**: In Windows Explorer, double-click the TrackRecord `Integration.mpt` file to open Microsoft Project. By default, the file is installed in the `x:\Program Files\Compu-ware`\TrackRecord folder where x is the drive where Windows resides on your computer.

◇   **Microsoft Project 2002**: In Windows Explorer, double-click the `trackrecord integration2002.mpt` file to open Microsoft Project. By default, the file is installed in the `x:\Program Files\Compuware`\TrackRecord folder where x is the drive where Windows resides on your computer.

2   If the Microsoft Project Macro warning dialog box (Figure 8-4) appears, click the **Enable Macros** button.

Note: This dialog box will not display if you have cleared the **Always ask before opening projects with macros** check box.

Figure 8-4. Microsoft Project Dialog Box
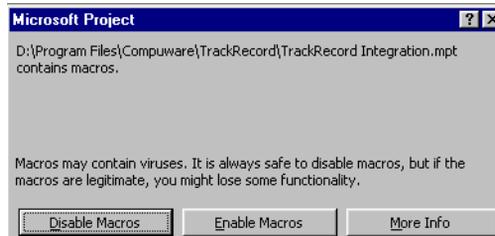
3   Click **OK**.

If the Office Assistant is open, TrackRecord displays status and error messages through the Office Assistant.

TrackRecord Menu

The integration macros create an additional TrackRecord menu in Microsoft Project that contains three options:

◆ **Synchronize Project Now** – Causes TrackRecord and Microsoft Project to exchange project information. Refer to "What Happens During Synchronization?" on page 130 for information on what types of information are transferred during synchronization.

◆ **Open Current Item in** TrackRecord – Selecting an item, such as a task, milestone, or resource, in Microsoft Project and choosing this option causes TrackRecord to run and open the selected item.

◆ **Options** – Opens a new dialog box that lets you change the user ID, database, project, or priority map.

Performing Initial Project Setup

Before TrackRecord and Microsoft Project can exchange project information, you must log in to TrackRecord from within Project and identify the database and TrackRecord project associated with the current schedule.

1 Open the Microsoft Project project file you want to use.

2 From the TrackRecord menu, choose **Options**. The TrackRecord Options dialog box (Figure 8-5) appears.

Figure 8-5. TrackRecord Options Dialog Box
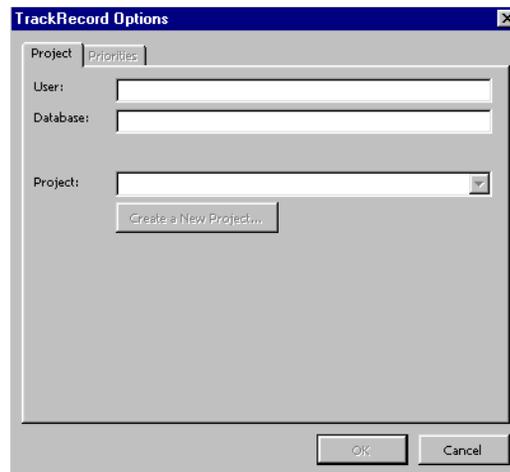
3 Enter your TrackRecord login name in the **User** field and the database you want TrackRecord to use in the **Database** field.

4 To specify a project, do one of the following:

◇ To use an existing project, click the drop-down list in the **Project** field.

◇ To create a new TrackRecord project, click the **Create a New Project** button.

5 On the TrackRecord Login dialog box (Figure 8-6), enter your login password in the **Password** field and click **OK**. Note that TrackRecord passwords are case-sensitive.

Figure 8-6. TrackRecord Login Dialog Box

6 Perform one of the following:

◇ If you are using an existing project, select it from the **Project** list on the Options dialog box (Figure 8-5).

◇ If you are creating a new project, select the check box beside the Team Members you wish to assign to the new TrackRecord project (Figure 8-7). Click **OK** when you are finished.

Figure 8-7. TrackRecord Team Member Selection Dialog Box
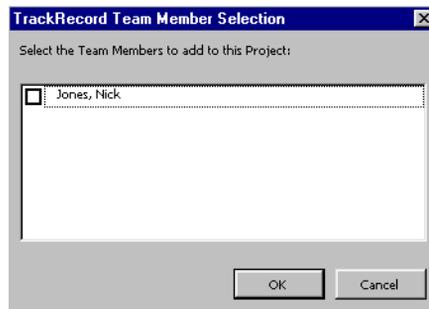
7 Click **OK**.

Mapping TrackRecord Priorities to Project Priorities

The priority assigned to a task indicates the task's importance within a project. When schedules grow tight, tasks with low priorities are typically deferred or eliminated. TrackRecord and Project have different default priority settings. Before you can use resource leveling in Project, you must map the priority levels in TrackRecord to the corresponding priority levels in Project. To map priorities, perform the following procedure:

1 Run Microsoft Project.

2 Open a project you have previously configured for TrackRecord and Microsoft Project integration.

3 From Project's TrackRecord menu, choose **Options**.

4 When the TrackRecord Options dialog box appears, click the **Priorities** tab.

Figure 8-8. TrackRecord Options Dialog Box – Priorities Tab. If your TrackRecord administrator has modified the default priorities in TrackRecord, your Priorities tab may differ from the one shown.
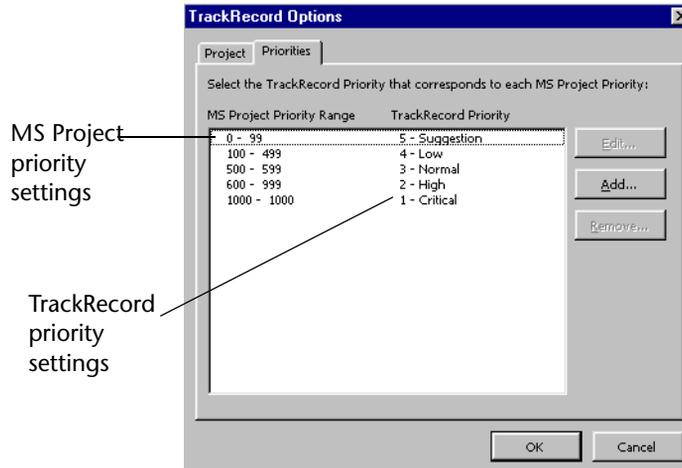
5 Click the **Edit** button to change any mapping assignments (Figure 8-8). The Priority Mapping dialog box appears (Figure 8-9)

Figure 8-9. Priority Mapping Dialog Box
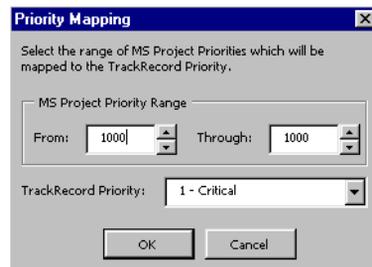
In this example, the TrackRecord priority "1 – Critical" is mapped to the Project priority "1000 - 1000". Select an item from the drop-down list to change the mappings. Click **OK** when your changes are complete.

6 Click **OK** to close the dialog box.

Synchronizing a Project in TrackRecord with Microsoft Project

Note: Tasks are not synchronized if a Team Member has not been assigned to the task. If you have not assigned a TrackRecord Team Member for each task in Microsoft Project, do so now. Refer to "Performing Initial Project Setup" on page 127 for complete instructions.

What Happens During Synchronization?

When you choose **Synchronize Project Now**, TrackRecord and Microsoft Project exchange information about Team Members, Projects, Tasks, and Milestones in the project.

TrackRecord adds a Microsoft Project section to the bottom of the Task item form. Selecting the **Auto Update Summary** field in the Microsoft Project section of a Task item form will cause the **Summary** field to be read-only in TrackRecord, allowing it to be changed through Project only. Clearing this option allows you to change the Summary in TrackRecord, but your changes will not be reflected in Microsoft Project.

The project name and description can be defined in Project and sent to TrackRecord on first synchronization. During syncronization, Track-record updates the project name in Trackrecord with the name in the MS Project Title field found in **File>Properties**.

The following tables (Table 8-2 - Table 8-5) identify what fields in Track-Record are overwritten by information from Microsoft Project and what fields in Microsoft Project are overwritten by information from Track-Record.

Table 8-2. TrackRecord Team Member Item to Microsoft Project Field Mapping

TrackRecord Team Member	Synchronization Direction	MS Project Resource Field	Comment
Name	-->	Name	Project members are defined in TrackRecord and sent to MS Project.
Initials (Abbreviation)	-->	Initials	
Email Address	-->	Email	

Table 8-3. TrackRecord Project Item to Microsoft Project Field Mapping

TrackRecord Project Field	Synchronization Direction	MS Project Project Field	Comment
Name	<-- (new items only)	Title	Project name and description can be defined in Project and sent to Track-Record on first synchronization.
Description	<-- (new items only)	Comments	
Team Members	--> (new or changed)	Resources	Team Members are defined in Track-Record.

Table 8-4. Task Mapping

TrackRecord MS Project Task Field	Synchronization Direction	MS Project Task Field	Comment
Summary	<--	Name	Tasks are created in MS Project. Completion status is captured in TrackRecord
Description	<--	Notes	
Assigned To	<--	Resource	
Priority	<--	Priority (mapped)	
Date Due	<--	Finish (baseline)	In order for this field to be imported, there must be a baseline assigned
Date Completed	-->	Finish (actual)	Tasks are created in MS Project. Completion status is captured in TrackRecord
Completed	-->	% Complete	
Identifier (autogenerated)	-->	WBS field	

Table 8-5. TrackRecord Milestone Item to Microsoft Project Task Field Mapping

TrackRecord Milestone Field	Synchronization Direction	MS Project Task Field	Comment
Name	<--	Name	Milestones and planned dates are defined in MS Project. Actual dates are captured in TrackRecord
Description	<--	Notes	
Project	<--	Associated Project	
Projected End Date	<--	Finish (base-line)	In order for this field to be imported, there must be a base-line assigned
Start Date	-->	Project Start date	Milestones and planned dates are defined in MS Project. Actual dates are captured in TrackRecord
Actual End Date	-->	Finish (actual)	

Performing Project Synchronization

1 Open the Microsoft Project file for the project you want to synchro-nize.

2 From Project's TrackRecord menu, choose **Synchronize Project Now**.

3 If you have not already done so, you will be prompted to login into the TrackRecord database. The TrackRecord Synchronization dialog box indicates the progress as TrackRecord and Project exchange infor-mation.

4 When the TrackRecord Synchronization Complete dialog box appears, click **OK**.

Using TrackRecord With Visual C++

Nearly all world-class software, from the leading Web Browsers to mission-critical corporate applications, is built using the Microsoft Visual C++ development system. Visual C++ is the most productive tool for the highest-performance development for Windows and the Web. You can

integrate TrackRecord with Visual C++ to allow you to submit a defect or task into the TrackRecord database from within Visual C++.

Required: TrackRecord must be installed after Visual C++ in order for the integration to work. If you installed TrackRecord first, you must uninstall and reinstall the product before performing these procedures.

Enabling Visual C++ Integration

1 From Visual C++'s **Tools** menu, choose **Customize**. The Customize dialog box appears.

2 Click the **Add-ins and Macro Files** tab.

3 From the list of available add-ins and macro files, select **TRDevStu-Addin.TRDSAddin**.

4 Click the **Close** button to exit the dialog box.

Disabling Visual C++ Integration

1 From Visual C++'s **Tools** menu, choose **Customize**. The Customize dialog box appears.

2 Click the **Add-ins and Macro Files** tab.

3 From the list of available add-ins and macro files, clear the **TRDevStuAddin.TRDSAddin** option.

4 Click the **Close** button to exit the dialog box.

Submitting a Defect

To enter a defect into the TrackRecord database from within Visual C++, simply perform the following procedure:

1 Click the **Submit Defect** icon on the Visual C++ tool bar. If the icon is not visible, follow the steps for "Enabling Visual C++ Integration" on page 133.

2 On the TrackRecord Login dialog box,

◇ Enter your TrackRecord login name and password. Note that they may be different from your Windows login name and password. Passwords are case-sensitive.

◇ Identify the database you want TrackRecord to use in the **Database** field by selecting a name from the drop-down list or by entering a new name.

If you have used TrackRecord before, the names of the databases you have used previously appear in the **Databases** list. You do not need to enter the path to the database, just the database name.

◇ Click **OK**.

3 The TrackRecord Defect Item appears. Enter information into the applicable fields. For more information on using TrackRecord forms, refer to Chapter 3, "Entering and Editing Data".

4 Click **Save and Close** when you are finished.

Submitting a Task

To enter a task into the TrackRecord database from within Visual C++, simply perform the following procedure:

1 Click the **Submit Task** icon on the Visual C++ tool bar. If the icon is not visible, follow the steps for "Enabling Visual C++ Integration" on page 133.

2 On the TrackRecord Login dialog box,

◇ Enter your TrackRecord login name and password. Note that they may be different from your Windows login name and password. Passwords are case-sensitive.

◇ Identify the database you want TrackRecord to use in the **Database** field by selecting a name from the drop-down list or by entering a new name.

If you have used TrackRecord before, the names of the databases you have used previously appear in the **Databases** list. You do not need to enter the path to the database, just the database name.

◇ Click **OK**.

3 The TrackRecord Task Item appears. Enter information into the applicable fields. For more information on using TrackRecord forms, refer to Chapter 3, "Entering and Editing Data".

4 Click **Save and Close** when you are finished.

Utilizing TrackRecord with Version Control Systems

Version control system (VCS) applications help you manage projects by controlling and tracking source and other project files. You can integrate TrackRecord with VCS applications, such as Microsoft Visual SourceSafe,

Merant PVCS, and MKS Source Integrity. Integrating TrackRecord with a version control system allows you to check files in and out from within TrackRecord, open read-only versions of source files, and synchronize releases with VCS labels.

Required: TrackRecord must be installed after VCS in order for the integration to work. If you installed TrackRecord first, you must uninstall and reinstall the product before performing these procedures.

When you integrate TrackRecord with a VCS application, each tool tracks parallel sets of changes to your software projects. TrackRecord tracks change requests and their resolution, such as defects that have been fixed or features that have been added. A VCS application tracks changes to files. By integrating the tools, you can identify which source file changes were associated with specific change requests.

For example, a developer fixing a defect checks out source files, makes changes to them, and checks them in again. If a problem with the defect fix is subsequently identified, you can use the VCS files to identify and roll back the files that were modified, making it easier to resolve the problem.

For each file, release, and project in a VCS application, TrackRecord maintains a corresponding item in the database. This item references the source file. In most situations, the program creates items automatically when you check files in or out. However, you must update information for milestones, projects, and for file items that already exist in TrackRecord.

Associating a TrackRecord Project with a VCS Project

To associate a TrackRecord project with a VCS project, perform the following procedure:

1   Open a new or existing project in TrackRecord.

◇   To open a new project, choose **File>New>Other**. From the Choose a Type dialog box, select **Project** and click the **New** button.

◇   To open an existing project, choose **File>Open>Other**. From the Item Browser, select **Project** and double-click the appropriate project name in the **Items** list.

2   When the Project form appears, click the button beside the **VCS Project Name** field (Figure 8-10).

Figure 8-10. VCS Button Location

Click the VCS button to access your version control system.
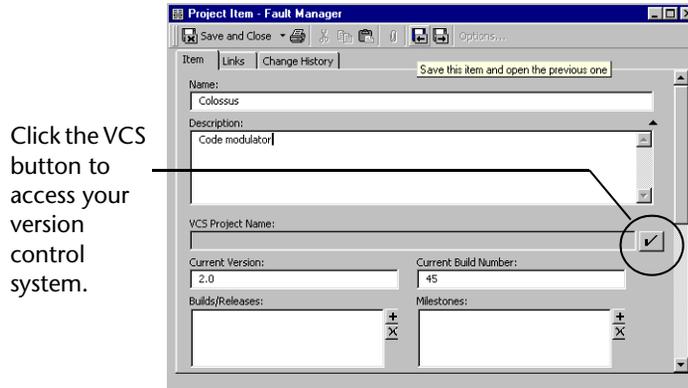
Note: For additional information on associating a TrackRecord Project to a VCS Project, consult your VCS documentation.

If you do not already have Source File and Data File items that you want to connect with your VCS files, TrackRecord will automatically create these items the first time you check the file in or out from within Track-Record. When the items are created, you will see a status message, and have the opportunity to enter a description of the new file.

Checking Files In and Out

You typically check source files in and out of a VCS system in the course of working on a specific TrackRecord Defect or Feature. When you check files in and out of a VCS system from within TrackRecord, TrackRecord automatically records the file name and current VCS version number in the item's change history. To check a file in or out from TrackRecord, execute the following steps:

1   Open the appropriate Defect or Feature item.

2   Verify that the project identified in the **Project** field is associated with a project in your VCS application.

3   From TrackRecord's **Edit** menu, choose **Source Control>Check Out** or **Check In**.

Note: If the submenus of the **Edit>Source Control** menu are disabled, ensure that the type contains a field that is associated to the type *Source File* and you have a VCS login and password. For more information on types, refer to the *TrackRecord Administrator's Guide*.

You will be presented with a list of files from your VCS project, which can be checked in or out as appropriate.

When the file(s) are checked in, TrackRecord copies the descriptive comments from the Resolution Details field to the VCS Comment field. This comment may then be further modified as desired.

Synchronizing TrackRecord and VCS Projects

Labels are user-defined identifiers used by VCS applications to represent a specific version of a project or file. When you label a project, all the files in that project inherit the label. For example, if you assign a label of "Beta 1" to a project, you can retrieve the appropriate version of files within that project by using the project label.

Connecting your TrackRecord releases with your VCS releases works the same way as connections to projects and file names, with one exception: you can create a new VCS label from within TrackRecord, at the same time you create a TrackRecord release.

Associating a TrackRecord Release with a VCS Label

*Tip: If TrackRecord cannot find the VCS project, verify that the Release item is contained in a Project item that contains a valid VCS Project field. To add the release to the Project, open the Project item, scroll to the **Builds/ Releases** field, and click **Add Item**. After the Release item links to the Project item, you should be able to display the list of your VCS labels.*

Perform the following procedure to associate a TrackRecord release with a VCS label:

1 Open the Item Browser.

2 Select the **Show All** check box.

3 Select **Release** from the **Types** list.

4 From the **Items** list, select the release you wish to associate with a VCS label.

5 Click the button beside the **VCS Release>Label** field. TrackRecord displays a list of your VCS labels.

6 To use an existing label, select the appropriate entry in the list. To create a new label from within TrackRecord, click the **New** button.

   To create a new VCS label from within TrackRecord, select the check box next to the **VCS Release** field, and click the **New** button. Track-Record will use the name of the release as the default value for the label; you can change this value when prompted for the release name. When TrackRecord creates the release, it applies the label to the entire project associated with the Release item.

7 Click **OK**.

Troubleshooting

For a detailed listing of troubleshooting and configuration information for one of the supported version control systems, refer to "Troubleshooting" in the TrackRecord online help or the Release Notes.

For the most current TrackRecord support information, please visit the Compuware Web site at: http://www.compuware.com. From this location, you will have access to our online Knowledgebase and the most current patches and updates for the product.

Integrating TrackRecord With Compuware Products

TrackRecord integrates with four of Compuware's product families: QACenter, DevPartner Studio, Vantage, and Abend-AID.

Using TrackRecord With DevPartner Studio

TrackRecord is part of the DevPartner Studio Enterprise Edition (DPSEE) suite of software debugging tools for building components and applications using Microsoft Java. TrackRecord serves as a central repository and communication hub for all development-related activities and data. It captures information generated by the DPSEE developer tools including:

Note: Refer to the DevPartner Studio Enterprise Edition documentation for general information on using these products.

◆ detailed information about the detection, diagnosis, and resolution of software problems

◆ platform hardware and software configuration data

◆ consolidated or filtered test coverage data, which reveals untested software by platform, user, or configuration

◆ defects and issues including the software build

◆ task and defect lists for each developer

◆ testing, profiling, and automated error-detection status of each project

TrackRecord's ActiveLink feature submits information generated by DevPartner Studio tools directly to a TrackRecord project database. The project database is accessible to developers from within the DevPartner Studio tool such as Error Detection or Performance Analysis. TrackRecord compares new defect submissions against existing issues to reduce duplicate defect entries. This integration provides users with the information they need from within the tools they use.

Note: Integration of TrackRecord and the DevPartner Studio tools is version dependent. You many need to upgrade your TrackRecord or DevPartner Studio software if you purchased the tools at separate times.

TrackRecord can literally track anything. These features are just a limited glimpse of what TrackRecord can do in conjunction with the following DPS tools:

◆ **Error Detection**— Delivers automatic error detection for C/C++/ VC++. Once a runtime error has been found by Error Detection, it can be automatically entered into TrackRecord.

◆ **SmartCheck**— Delivers automatic error detection for Visual Basic. Once a runtime error has been found by SmartCheck, it can be automatically entered into TrackRecord.

◆ **JCheck**— Provides automatic error detection for Java. Once a runtime error has been found by JCheck, it can be automatically entered into TrackRecord.

◆ **CodeReview**— A static source code analysis tool for Visual Basic. Once an error has been found by CodeReview, it can be automatically entered into TrackRecord.

◆ **Performance Analysis**— A performance analysis tool for VB/C/C++/ VC++/Java/ASP. Once a performance error has been found by Performance Analysis, it can be automatically entered into TrackRecord.

◆ **Memory Profiler**— A memory analysis tool for Java. Once a memory issue has been identified by Memory Profiler, it can be automatically entered into TrackRecord.

◆ **FailSafe**— An automatic error handling tool for Visual Basic. If an application has been instrumented with FailSafe, it can email the error back to TrackRecord from a remote location to ensure that an error does not go unreported in production.

DevPartner Studio Interaction with TrackRecord

DevPartner Studio Enterprise Edition derives much of its power from its underlying *ActiveLink* connection to TrackRecord. ActiveLink automates the submission of debugging/tuning tool information to a database. This accumulated information provides:

◆ Platform configuration data, including hardware resources and version information about installed software components

◆ Coverage data gathered from all developers using Coverage Analysis

◆ Task lists for each developer

◆ Detailed error messages from the error detection tools

Logging In to TrackRecord from DevPartner Studio Tools

When starting a DevPartner Studio tool, you are prompted to log in to a TrackRecord database. Logging in at this time does not start TrackRecord, but allows access to tasks and defects within the database.

If you are already logged in to TrackRecord, you can change your login identity from within any of the DevPartner tools.

To log in to a TrackRecord database, perform the following procedure:

1 From the DevPartner tool's TrackRecord menu, select **Change Login** (Figure 8-11).

Figure 8-11. Changing TrackRecord Login from Within JCheck

2 In the TrackRecord Login dialog box:

◇ Enter your login name in the **Name** field.

◇ Enter your login password in the **Password** field. Passwords are case-sensitive.

◇ Identify the database you want to use in the **Database** field. The names of the databases you have used recently appear in the **Databases** list. You can select the database you want to use from this list or enter a different database name.

3 Click **OK**.

Platform Configuration

When an application runs under one of the DevPartner tools, Track-Record records hardware and software configuration information about the computer on which the tested application executes. The hardware configuration information is stored in an item called Hardware Configuration and is associated to the defect or session via the Defect's Configuration field. Software configuration information is stored as a list of Executable File objects in a Defect or TrackRecord Session item's Loaded Components field.

The Configuration type contains fields for information such as the type of processor, amount of memory, screen resolution, and the operating system.

A Loaded Components field in an item tracks the details of DLL, OCX, and the EXE files used by the application being debugged. These details include the link date and time and version resource strings. Many software vendors, including Compuware and Microsoft, use version resource strings to provide unique version numbers of components.

Platform configuration information, including software component version numbers, can aid the process of finding errors caused by component incompatibility.

Suppose a tester reports a defect, but a developer cannot duplicate the defect. One cause for discrepancies of this nature is mismatched versions of essential software components, such as dynamic link libraries and ActiveX custom controls. TrackRecord's Advanced Search capability gives Team Member one tool for uncovering such discrepancies.

Troubleshooting TrackRecord and DevPartner Integration

For troubleshooting documentation, refer to "Troubleshooting" in the TrackRecord online help or the Release Notes.

For the most current TrackRecord support information, please visit the Compuware Web site at: http://www.compuware.com. From this location, you will have access to our online Knowledgebase and the most current patches and updates for the product.

Using TrackRecord With ClientVantage

TrackRecord integrates with Compuware's Vantage tools. ClientVantage, a program designed to measure application performance and availability to maintain high service levels.

TrackRecord can integrate with ClientVantage's Fault Detection to include captured fault data as part of a defect report automatically.

Note: Refer to the ClientVantage documentation for general information on using this product.

Using TrackRecord With Abend-AID

TrackRecord can be used with Abend-AID products to automate fault management and reduce critical application downtime. TrackRecord automates key areas of the problem-resolution process: notification,

prioritization, workgroup communications, resource management, and reporting.

For example, Abend-AID Fault Manager can automatically load fault information into a TrackRecord database, reducing the amount of required data entry. TrackRecord then enables you to: assign fault notices, track and report on the status of faults, add information to faults, and create graphical reports. The online access to reports and graphs contains information such as:

◆ current defects
◆ high priority defects by application, developer, and date
◆ defects fixed-by version, programmer, priority, date or any set of categories desired
◆ defect statistics and trends

With Abend-AID Fault Manager, you can:

◆ respond to application failures immediately
◆ report on service level agreements
◆ manage and justify resources
◆ improve application quality
◆ perform trend analysis

Note: Refer to the Abend-AID documentation for general information on using this product.

Using TrackRecord in a CARS Engagement

When Using TrackRecord in a CARS Engagement some of the features of TrackRecord are not available.

These include:

◆ The WorkFlow Editor

◆ The Import/Export Wizard

◆ The following Administrative Menu options:

    ◇ Edit Types

    ◇ Edit Rules

    ◇ Edit WorkFlow

    ◇ Import

    ◇ Export

Additionally, the Show All option in the Item Browser is not accessible.

The CARS Database

A default database is installed with TrackRecord and is accessible immediately for tracking defects and issues. The following lists the fields and drop-down lists used in the defect items. They are listed here in alphabetical order:

Table 8-6. Database fields

Field	Description	Field Instructions
Action	Controls the **Status**	The **Status** details what state the defect is in. This is set to **Unreviewed** as a default. Choose an **Action** from those available for the state. See the CARS Workflow section for the list of available **Actions** and states.
Assigned to	Person currently responsible for the defect	Choose from the drop-down list. A project must be entered in the **Project** field to enable this field.
Attachments	Attach a design document, image, etc. associated with the defect	Click the **Add** button to browse directories for the appropriate attachment. The attachment is added to the field.
Build Found	The name or number of the build in which the defect is found	Enter the build found.
Build Resolved	The name or number of the build in which the defect is fixed	Enter the build resolved.
Build Tested	The name or number of the build in which the defect is fixed	Enter the build tested.

Table 8-6. Database fields

Field	Description	Field Instructions
Date entered	Date that the defect is entered	Date is auto-popu-lated and disabled.
Description	Detailed description of the defect including any pertinent informa-tion necessary for its eventual resolution	Describe any neces-sary information such as the nature of the defect, how it can be recreated, and sug-gested resolutions, etc.
Duplicate Defects	Reference to defect already entered	Right-click within the field to browse for the defect identifier.
Entered by	Name of person enter-ing the defect	Choose from the drop-down list.
Identifier	The defect number	A defect can be searched by this num-ber within Track-Record. A distinct number automatically assigned to the defect beginning with 000001.
Notes	Any further informa-tion necessary for the resolution of the defect	Enter any notes for the issue or defect.
Keywords	A word or phrase entered in the defect so that all defects with this keyword can be grouped together by sorting. For example, Beta Required.	Click the **Add** button to add an item, or right-click within the field to create an item.
Operating Sys-tem	The Operating System of the machine on which the application under test is running. For example Windows 2000 or Windows XP.	Click the drop-down list to select an item or right-click inside the field to create an item.

Table 8-6. Database fields

Field	Description	Field Instructions
Phase Found	The software develop-ment phase in which the defect is found	Click the drop-down list to select a phase or right-click inside the field to create one. See the CARS Phases sec-tion for descriptions of the available phases.
Phase Intro-duced	The software develop-ment phase in which the defect was intro-duced	Click the drop-down list to select a phase or right-click inside the field to create one. See the CARS Phases sec-tion for descriptions of the available phases.
Priority	High, medium, or low, expressing the defect's order of precedence	Choose a priority.
Project	The name or number, etc. of the project with which the defect is associated	Click the drop-down list to select a project or right-click inside the field to create one.
Project Resource	The resource responsi-ble for the issue's reso-lution	Click the drop-down list to select an item. Click the **Add** button or right-click within the field to create a resource.
Release Found	The number of the release in which the defect is found	Click the drop-down list to select a release or right-click inside the field to create a new one.
Release Resolved	The number of the release associated with the resolution of the defect	Click the drop-down list to select a release or right-click inside the field to create a new one.
Release Tested	The number of the release which QA tests	Click the drop-down list to select a release or right-click inside the field to create a new one.

Table 8-6. Database fields

Field	Description	Field Instructions
Resolution	The actions performed to resolve the defect	Click the drop-down list to select a resolution. Click the **Add** button or right-click inside the field to create a new one.
Resolution Date	The date the defect is resolved	Enter the date or click on the calendar and choose the appropriate date.
Resolution Details	Explanation of the work performed to resolve the defect	Enter details of the work performed.
Service Pack	The system service pack installed on the testing machine. For example Windows XP SP1, etc.	Enter a service pack.
Summary	A summary of a defectwith pertinent information necessary to its resolution	Enter the summary.
Status	The current status of the defect	This automatically reflects the status as a result of the **Action**.
Testing Resource	The resource performing QA testing	Click the drop-down list to select a resource Click the **Add** button or right-click inside the field to create a new one.
Type Code	The type of issue. For example, Bug, Enhancement, etc.	Click the drop-down list to select a type code. Click the **Add** button or right-click inside the field to create anew one.

CARS Phases

There are six stages of software development defined for tracking defects:

1   Requirements - The first stage of software development which defines what the potential users want the system to do.

2   Design - The approach that development or engineering uses to specify how to create the system.

3   Prototype - The original model of the system from which future versions are patterned.

4   Development - The process of analysis, design, coding, and unit testing software.

5   QA - The process of exercising a system to identify differences between expected and actual behavior.

6   Production - A system used to process an organization's daily work.

CARS Workflow

A defect can pass through a series of states between the time it is entered and the time it is closed. For example, when a defect is entered, it is in an Unreviewed state. It might then be assigned to someone, resolved, and validated. This series of actions, and the states resulting from these actions, is calle d a workflow. There are nine Groups of users who have varying permissions:

1   Everyone

2   Quality Analysis Management

3   Quality Analysis Lead

4   Quality Analysis

5   Development Management

6   Development

7

8   ***

9   Guest

The following lists the states, available actions, and who can perform them:

Table 8-7. Workflow states and actions

State	Action	Group
Unreviewed	Review - Moves to Reviewed	QA Management
Reviewed	Assign - Moves to Assigned	Development Management
Assigned	Need More Info - Moves to Pending Information	Development
	Working On - Moves to In Progress	Development
Pending Information	Submit Info - Moves to Assigned	Everyone
In Progress	Need More Info - Moves to Pending Information	Development
	Resolve - Moves to Ready To Test	Development
Ready To Test	Pass - Moves to Closed	QA
	Fail - Moves to Reviewed	QA
Closed	Re-Open - Moves to Re-Opened	QA Management, QA Lead, QA, Development Management, Development
Re-Opened	Review - Moves to Reviewed	QA Management

Glossary
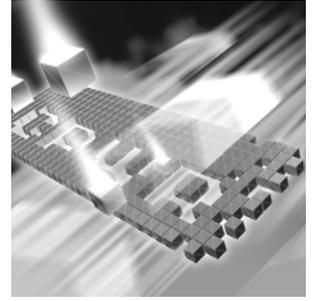
Abend-AID Fault Manager: An automated fault management tool to help IT managers reduce downtime and optimize resources. Provides real-time and historical reports and graphs for monitoring the fault resolution process.

abbreviation: Text used to identify an item in the TrackRecord database.

absolute date: Entry in a date field that identifies a specific date; for example, May 19, 1999 or 2/14/87. Compare relative date.

access control: Function of an application that restricts user access to data according to permissions derived from the user's identity or membership in groups.

ActiveLink tags: A mechanism to allow administrators to link the types and fields they create with the underlying structure.

ActiveX control: An interface object on a form that enables or enhances a user's interaction with an application. ActiveX controls have an .ocx file name extension.

administrator: The person responsible for installing, configuring, and maintaining TrackRecord user accounts. The TrackRecord administrator may or may not be responsible for maintaining the network and database for a site.

API: An application program interface (API) is the specific method used by a computer operating system or by another application program by which a programmer writing an application program can make requests of the operating system or another application.

ASCII file: American Standard Code for Information Interchange (pronounced ASK-ee). Code in which numbers from 0 to 255 represent

individual characters, such as letters, numbers, and punctuation marks. Standard for text representation.

audit trail: Record identifying each change made to an item or report and the identity of the person making the change. See change history.

AutoAlert: An optional component that provides email notification to users of the defects that pertain to them.

AutoAlert Administration Utility: A tool that allows you to add and remove databases that are being polled by the AutoAlert service, show users that have AutoAlert enabled, and set a variety of AutoAlert options.

available states: The Workflow Editor's list of states that have been defined, but are not yet used in the workflow.

bug report: See defect.

calendar: TrackRecord automatically displays a list of appointments and tasks.

CGI request: Common gateway interface (CGI) is a standard way for a Web server to pass a Web user's request to an application program and to receive data back to forward to the user. For example, when a user fills out a form on a Web page and sends it in, it usually needs to be processed by an application program. The Web server typically passes the form information to a small application program that processes the data and may send back a confirmation message. This method or convention for passing data back and forth between the server and the application is called the common gateway interface (CGI). It is part of the Web's Hyper-text Transfer Protocol (HTTP).

change history: Record identifying each change made to an item or report and the identity of the person making the change. See audit trail.

child: An item that is subordinate to another item.

child header: A header that is subordinate to another header within an Outline Report. In the following example, Open Bugs is a child header of Bugs, and Priority 1 is a child header of Open Bugs. Compare parent header, sibling header.

```
Bugs
Open Bugs
Priority 1
Priority 2
Closed Bugs
```

ClientVantage: Formally known as Interval Pro, ClientVantage is designed to validate end-user response time from the end-user perspective and proactively measure application performance and availability to maintain high service levels.

cloning projects: Duplicating and reusing information from existing projects.

Command Line Interface: A CLI (command line interface) is a user interface to a computer's operating system or an application in which the user responds to a visual prompt by typing in a command on a specified line, receives a response back from the system, and then enters another command, and so forth.

coverage: Percentage of a project that has been tested, expressed as a percentage of lines tested or a percentage of the functions tested.

data type inheritance: TrackRecord uses a data hierarchy to develop related data types. When one data type (the child) is based on another data type (the parent), the child type inherits all the fields and controls of the parent type. See child and parent for more information.

database: A collection of data that is organized so that its contents can easily be accessed, managed, and updated. TrackRecord uses a relational database, a tabular database in which data is defined so that it can be reorganized and accessed in a number of different ways.

database lock-out: A error that will result if attempting to change the database (usually by creating or modifying types) while in use. A dialog will appear listing current users to allow the administrator to advise them to log off.

DBHost: Database Host. It caches values for a specific database.

defect: Report describing a problem found with software or hardware undergoing testing. A defect report is updated over time as a problem is reported, reproduced, fixed, and tested.

Defect: Item in the TrackRecord database describing a specific problem identified during project testing.

derived type: A data type that inherits all of the fields of its parent's type. For example, a Software User object inherits all the fields from the Person data type.

DevPartner Studio: TrackRecord is part of the Compuware DevPartner Studio suite of Windows-based, software debugging tools. Easily integrated into every team's development process, including Web-enabled, e-commerce, and distributed applications to help developers automatically detect, diagnose, and facilitate resolution of software errors; maximize code performance; and ensure optimum code coverage and testing.

export: To generate a formatted file containing data from the TrackRecord database for use by another application.

Fault Manager: See Abend-AID Fault Manager.

favorite reports: Frequently used reports or views.

fields: Holds specific facts about an item, such as a person's address or the name of a project.

filter: Process that selects information from the database according to user-specified criteria.

function coverage: A measure of how much of the code for a project has been tested, expressed as a percentage of functions tested across all Coverage Analysis sessions relative to the total number of functions in a project.

global favorite types: Favorite types that are shared with every Track-Record user.

global Outline Report: Outline Reports that are shared with every Track-Record user.

Global Preferences Administration: Creating queries, reports, and global templates, and identifying Home Pages and favorites for all users.

global query: Queries that are shared with every TrackRecord user.

global template: Templates that are shared with every TrackRecord user.

graph: A visual summary of information.

Group Administration: Creating groups and establishing group access rights.

header: Entry in an outline report that corresponds to a database query.

Header Wizard: TrackRecord utility that simplifies the process of defining and formatting outline reports. The Header Wizard was called the Header Engineer in previous TrackRecord releases.

hide: A field-level privilege setting that allows making a field invisible on a group-by-group basis.

Home Page: A report that opens automatically when TrackRecord is launched and can be accessed through the Home Page button.

import: To bring data generated by another application into the Track-Record database.

inheritance: Property of data types that allow them to derive their structures from parent types.

item: Object or entity of a specific type in the TrackRecord database. Equivalent to a record in a relational database.

Item Browser: Provides access to information in the TrackRecord database and allows the creation of new items.

label: User-defined name you can attach to a specific software release or build in version control systems.

line coverage: A measure of how much of the code for a project has been tested, expressed as a percentage of code lines tested across all Coverage Analysis sessions relative to the total number of code lines in a project.

link: Relationship between items in the TrackRecord database. A link is created whenever one item references another. For example, attaching a note to a Person object creates a link between the two items.

mail query: A TrackRecord query in which an option is enabled to email users when new items match the query.

menu bar: Displays on the TrackRecord user interface below the window title and contains the following menus: File, Edit, Administrator, Favorites, Tools, Window, and Help.

merging: The process of compiling coverage information across multiple test sessions.

milestone: An event or point in a schedule that marks the transition of a project from one phase to another.

Milestone Status: Report that identifies the current status of a project with respect to a specified milestone, data submitted from QACenter tools, and custom queries that summarize project information.

OLE-compliant: A set of APIs to create and display a document, OLE (Object Linking and Embedding) is Microsoft's framework for a compound document technology. Part of Microsoft's ActiveX technologies, OLE is part of a larger, more general concept, the Component Object Model.

Outline Report: Structured view of information in the TrackRecord database that is updated dynamically.

parent: An item that has one or more subordinate items.

parent header: A header that owns one or more subordinate headers within an outline report. In the following example, Bugs is the parent header of Open Bugs, and Open Bugs is the parent header of Priority 1 and Priority 2. Compare sibling header, child header.

```
Bugs
Open Bugs
Priority 1
Priority 2
Closed Bugs
```

password: Text string used to verify the identity of a user before granting the user read or write access to TrackRecord information.

priority: Arbitrary integer value assigned to a defect to indicate its significance relative to other defects. Depending on the standards of your site, you can use a higher or lower number to indicate that one defect is more important than another.

Project Administration: Determines the organizational framework for completing a deliverable including tasks required to build an application, people who work on those tasks, and dates on which the tasks must finish.

QADirector: QADirector is a powerful, extensible test management solution for full life cycle testing of distributed large-scale applications.

query: A means to specify criteria for data retrieval.

Reconcile: An enterprise-wide requirement management system. It allows a project team to create, change, track, and report on project requirements.

recurring events: Event scheduled to occur at regular intervals, such as Every Thursday.

relative date: Entry in a date field that identifies a date relative to the current system date; for example, Yesterday or Tomorrow. Compare absolute date.

Remainder Header: A None of the Above summary item used in an Outline Report. It is typically used to identify items belonging to a parent header that fail to match all criteria.

Rich Text Format (RTF): A file format that lets you exchange a text file between different word processors and different operating systems.

right-click: Pressing and releasing the right mouse button while positioning the cursor over an object or control on the screen. Typically opens a shortcut menu, which displays options applicable to the control or item over which the cursor is positioned.

share groups: Groups whose members share queries, Outline Reports, Milestone Status views, and templates.

shared: Property of a report that allows TrackRecord users other than the report's owner to view it. Only the owner of a report can modify a shared report, though other users can copy it (by saving it under a new name) and then modify their copy.

shortcut menu: Menu that appears when you right-click a control or item in a window.

sibling header: A header that is at the same level as another header within an outline report. In the following example, Open Bugs is a sibling header of Closed Bugs, and Priority 1 is a sibling header of Priority 2. Compare parent header, child header.

```
Bugs
Open Bugs
Priority 1
Priority 2
Closed Bugs
```

status bar: Located at the bottom left of the screen, this bar provides suggestions for the actions you can perform with a tool or a selected object.

subproject: A project that is one component of a larger or more complex project.

task: Any activity in a project that has a beginning date and an end date.

Task: An item in the TrackRecord database that identifies a task in a project.

Team Member: An individual assigned to work on a project.

template: A document or file having a preset format, used as a starting point for a particular application so that the format does not have to be recreated each time it is used.

TestPartner: An automated functional testing tool that has been specially designed for testing complex applications based on Microsoft, Java and Web based technologies.

toolbar: Contains shortcuts to the most commonly used tasks such as creating a new item or view, opening an existing item, displaying the Item Browser, opening the Home Page, or searching.

transient sessions: Efficient data structures that cache data from users for a period of ten minutes before it is removed.

type: An organizational system that provides the framework on which the TrackRecord database is built. Information is organized into categories such as Person, Company, Defect, or Project.

Type Editor: Inserts fields into a form, modifies fields on a form, and modifies settings.

type inheritance: See data type inheritance.

version control system (VCS): An application that maintains multiple versions of source files, controls who can read and update source files, and records information about changes to source files.

views: A specification for how data is displayed.

visible group layers: A list of all defined groups in the Workflow Editor.

volatility: A measure of the stability of code from one build to another, expressed as a percentage of the functions that changed between two builds.

WebMonitor: A monitoring component that maintains all currently active users sessions.

WebServer: An optional component that allows access to the TrackRecord database through a Web browser.

work area: Area where the workflow is created in the Workflow Editor.

workflow: A series of actions and the states resulting from these actions.

Workflow Editor: Creates and modifies the workflow and consists of these frames: available states, visible group layers, and work area.

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