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Introduction

PR-Tracker will help you to manage the development of your product by focusing development effort on the tasks required to bring your project to completion. PR-Tracker does this by recording the defects of a product during the development and maintenance cycle as problem reports and by tracking the process of correcting those defects.

PR-Tracker helps you to manage your project by assisting you to perform these tasks:

- Records problem reports in a network database.

- Supports simultaneous access to the database by multiple users.

- Supports multiple projects.

- Supports configuration of data collection for each project.

- Supports configuration of workflow for each project.

- Redundant data storage for speed and backup.

- Classifies problems according to priority, type, and other properties.

- Supports sort and search operations on the database or problem reports.

- Assign personnel to perform the tasks required to correct defects.

- Tracks the tasks of problem investigation, resolution, and verification.

- Estimates personnel work load.

- Determine which testing methods are most efficient in detecting defects.

- Help estimate the time required to complete the projects.

In addition you may also configure PR-Tracker to suit your company's data collection and workflow needs.

Installation

To install PR-Tracker you will need to perform two steps:

1. Install the PR-Tracker database on the network.
2. Install the PR-Tracker program on each workstation that will use it.

Installing the PR-Tracker Database on the Network

The PR-Tracker database should be installed on a network directory that can be accessed by all the users that will be using PR-Tracker. Before installing the database you will need to know where you want to install the database. You can move the location of the database later if you wish. To install the PR-Tracker database do these steps.

1. Run the SETUP.EXE program.
2. Select the command button Install Database and respond to the prompts.

The Install Database operation also installs the PR-Tracker program. Unlike the database, the program should be installed in a directory on a local hard drive.   The Install Database operation also copies all the PR-Tracker setup files to the network.   This way other users can install PR-Tracker from the network.

Installing the PR-Tracker Program on Workstations

Before installing the PR-Tracker program you should know where on the network the PR-Tracker database was installed. Once you know the drive and path connecting your computer to the database, install the program by performing these steps:

1. Run the program SETUP.EXE.   The Setup PR-Tracker dialog will appear.
2. Choose Install Program and respond to the prompts.

Note: The license agreement permits you to install the PR-Tracker program on as many computers as you like provided that only authorized users use the program.

Registering PR-Tracker

If you have not registered PR-Tracker, the License Setup dialog will be displayed each time PR-Tracker is started to remind you to register. Once you have registered the PR-Tracker License Setup dialog will no longer appear, provided that your license covers all the users that you have authorized to use PR-Tracker.

To register PR-Tracker, print the order form from the License Setup dialog, fill in the requested information and send it to us by FAX or postal mail. We will send you a registration number and license code. Enter these into the License Setup dialog to complete the registration. After you have registered PR-Tracker, you can add to your license at any time by upgrading your license

Upgrading Your License

You can increase the number of users licensed to use PR-Tracker by purchasing an upgrade to your license. When you purchase a license upgrade, we will send you a new *license code* which you enter at the License Setup dialog. When ordering a license upgrade, please use to PR-Tracker Order Form which you can print from the License Setup dialog. This way we will know your current registration number and license code. When you have recieved you new license code, complete the upgrade by doing these steps:

1. From Setup menu select License. The Setup License dialog will appear. Note: If you do not have setup privilege you will not be able to do this.

2. Enter your new license code and choose Ok.

3. A message box will appear to confirm the number of users licensed to use PR-Tracker. Choose Ok.

Viewing the Problem List

When PR-Tracker is started a summary of the problem reports is listed on the screen. There is one problem report summary per line. A problem report summary contains the following information listed from left to right.

- The problem report number.

- A single letter which specifies the status of the problem report. The status may be <u>N</u>ew, <u>A</u>ssigned, <u>P</u>ostponed, <u>I</u>nvestigated, <u>R</u>esolved, <u>V</u>erified, <u>F</u>ailed, or <u>C</u>losed.

- An integer indicating the priority of the problem report.

- The title of the problem report.

- The last field is the date that the problem report was last modified.

The Problem List is sorted according to the problem report number. You can change the problems that are listed in the Problem List, and how they are sorted, by making a query.

In the Problem List, one problem report is highlighted. The highlighted problem report will be referred to as the *selected* problem. You can change the selected problem in the following ways.

- Press the ↓ or key to select the next or previous problem report in the list.

- Press PGUP or PGDN to see the next or previous page of problem reports.

- Press HOME or CTRL-PGUP to move to the first problem report, and END or CTRL-PGDN to move to the last.

- Mouse click the problem report summary that you want to select (a double click will let you view the problem report).

Viewing Problem Reports

To view a problem report highlight it from the Problem List and double-click, or you can be more selective by using one of the View menu functions:

- View Selected Problem - takes you to the highlighted problem.

- Goto Problem - allows you to select a specific problem by entering its number.

- Range of Problems - allows you to select a range of problems by entering the first and last numbers.

- Set Maximum Problem List Size - allows you to set the number of the problems for the list.

When viewing a problem report, the top half of the problem report contains a menu bar, title, originator, problem type, subtype, priority, status, method, assignment and property boxes; the bottom half of the problem report form contains the problem description edit box.   The description box can be configured, for more information on configuring the description window see templates.

The problem report menu bar options:

- Edit - allows you to enter data during each stage, for more information see Editing Problem Reports.

- Next - allows you to view the next problem report in the problem list.

- Previous - allows you to see the previous problem in the list.

- Goto - will display a dialog box allowing you to enter the specific number of the report you want.

- Print - prints the problem report, for more information on printing to file see Printing Problem Reports.
- List - takes you back to the Problem List.

Configuring PR-Tracker

There are several ways that you may configure PR-Tracker to suit your company's needs. All of the configurable functions are accessible from the Setup menu. In order to perform setup operations you must have setup privilege. *The user who installs the PR-Tracker database has setup privilege by default.* Setup privilege can be given to other users, but only by someone with setup privilege.

Some of PR-Tracker's configurable functions apply to the entire PR-Tracker system, and some apply to each project separately. The functions configurable by PR-Tracker are listed below.

System Configuration

- <u>Add and delete users</u> from the authorized user list.

- <u>Set user privileges</u>.

- <u>Add and delete project</u> databases.

Project Configuration

- Specify the allowable problem report <u>priority values</u> for each project.

- Specify the allowable <u>problem types</u> for each project.

- Specify the allowable <u>detection methods</u> for each project.

- Specify the <u>property field</u> names for each project

- Specify data entry <u>templates</u> for each project.

- Specify the <u>workflow configuration</u> for each project.

- Specify the <u>custom fields</u> for each project.

When a new project is created, its initial configuration is the same as the current project's configuration. You can then customize them to fit the new project's requirements.

Authorizing Users

When you have installed the PR-Tracker database and program, you are ready to authorize people to use PR-Tracker. To authorize users do these steps:

1. From the Setup menu select Users. The User Setup dialog will appear. If you are the one who installed the database your name should appear in the User List.

2. Enter the name of a user you want to authorize in the User Name field, select the user privileges that you want to give them and select the Add command button.

3. Repeat these steps for each user that you want to authorize.

When you have authorized the all the users that you want, choose Ok.

To Delete Users

1. From the Setup menu select Users. The User Setup dialog will appear.

2. Highlight the user's name from the User List.

3. Select the Remove button. A Confirm User Removal dialog box will appear asking if you are sure you want to remove the user from the list. Select Yes.

4. The user will be removed from the list, choose Ok.

To Change user privileges

1. From the Setup menu select Users. The User Setup dialog will appear.

2. Highlight the user's name from the User List.

3. Check or uncheck the privileges that you want to change and press the Change Privileges button.

   New initials will appear after the name in the User List indicating the new privileges.

4. Choose Ok to save the new settings.

Adding and Deleting Projects

PR-Tracker allows you to organize your problem reports under multiple projects, each having their own database. When PR-Tracker is shipped, it comes with two project databases that you can use to learn PR-Tracker: DEMO1 and DEMO2. Once you are familiar with PR-Tracker, you are ready to add your own project.

To add a project :

1. From the Setup menu select Add | Delete Projects or from the File menu select New Project.

2. The Setup Projects dialog appears. Enter the name of   your project in the Project Name field.

   Tab to the Subdirectory field and create a directory name for your new project. Limit your subdirectory name to 8 characters in length. It can contain letters, numbers, or both, and can either be upper or lower case letters.

3. Select the Add command button. An information box will appear informing you that the project you have just created will have the same setup configurations as the current project and that you will need to reconfigure your new setup project settings before entering problems. Select Ok. Your project is added to the project list.

4. Select the Close command button. You will be returned to your current project.

To select your new project or another project:

From the File menu choose Open Project, highlight your project name and choose Ok.

PR-Tracker will open up into your new project's Problem Report List. You can keep the previous project's configurations or reconfigure your new project.   For more information on configuring your new project see Configuring PR-Tracker.

To delete a project:

1. From the Setup menu select Add | Delete Projects.

2. The Setup Projects dialog appears. Select the project that you want to delete from the Existing Projects list box.

3. Select the Delete command button. The project will be deleted from the list.

When a project is deleted the name is removed from the existing projects list; however, no files are removed. If you want to delete the project files you will have to do it manually. Locate your subdirectory file name in the directory specified by your PRTR_HOME environment variable.

Restoring a previously deleted project

If a project has been deleted you can restore the project as long as you have not manually deleted the project files. To restore a deleted project, do these steps:

1. From the Setup menu select Add | Delete Projects.

2. The Setup Projects dialog appears. If there exists a project that has been deleted, the Restore button will be enabled. Click it.

3. A list of deleted projects will apear. Select the project that you want to restore from the list

and click OK.

Renaming your project

1. From the Setup menu select Add | Delete Projects.

2. The Setup Projects dialog appears. You can rename your project at any time simply by clicking the project from the Existing Projects List and selecting the Rename button. A Rename dialog box will appear, delete the current name and reenter the new one.

3. Choose Ok.

Priority Setup

When entering problem reports you will want to specify the importance of a problem report by giving it a priority.   Pr-Tracker allows up to six priority categories. Examples of five recommended priority categories are as follows.

- Blocking   --   this is a problem that must be fixed immediately because it is blocking work on the project.

- Critical   --   this problem may result in damage such as loss of significant data or worse. It must be fixed before the product is shipped.

- Major   --   this problem is a major functional defect and must be fixed before the product is shipped.

- Minor --   this problem is a minor functional defect that should be fixed before the product is shipped; however, fixing this problem can be omitted in order to meet deadlines.

- Low --   anything less important than minor.

To configure the priorities perform these steps:

1. From the Setup menu select Configure Current Project

2. The Configure Project dialog will appear. Select the Priorities tab.

3. Enter a description into the text boxes for each priority number that you want to use. If you dont want to use a priority, leave the text box blank.

4. To enable the new priorities choose Ok.

Problem Type Setup

Problem types are used to classify problems into categories or problem types. Each main category can be further divided into subtypes. Several schemes can be used to classify problems depending on your company's personal terminology and needs.

To add problem types do these steps:

1. From the Setup menu select Configure Current Project

2. The Configure Project dialog will appear. Select the Problem Types tab.

2. Select the Add type button. A text dialog will appear. Enter your problem type name.

3. Choose Ok.

Your problem type will be added to the list. Continue until you have entered all desired problem types. After each individual problem type you may want to add subtypes.

To add subtypes perform these steps:

Highlight the desired problem type from the list. Select the Add type button. A text dialog will appear. Enter your subtype name. Press ok. Repeat these steps to add subsequent subtypes.

To delete problem types and subtypes do these steps:

1. From the Setup menu select Configure Current Project

2. The Configure Project dialog will appear. Select the Problem Types tab.

3. Highlight the name of the problem type that you want to delete from the Problem Type field.

4. Press the Delete command button. The problem type and it's subtypes will be deleted from the list of problem types.

4. To delete only a subtype, highlight the problem type containing the subtype from the Problem Type field. A list of subtypes will appear. Select the subtype you want to delete and press the Delete subtype button.

5. A dialog box confirming your request will appear. Choose Ok.

Detection Method Setup

Specifying how defects in your product are detected will help you to determine which validation methods are best suited for detecting bugs. PR-Tracker refers to the ways problems are detected as detection methods. PR-Tracker has default detection methods but you can change these to suit the needs of each project.

To add detection do these steps:

1. From the Setup menu select Configure Current Project

2. The Configure Project dialog will appear. Select the Detection Methods tab.

3. Press the Add Method command button. You will be prompted for a new detection method

To delete a detection method do these steps:

1. From the Setup menu select Configure Current Project

2. The Configure Project dialog will appear. Select the Problem Types tab.

3. Select the detection method that you want to delete and press the Delete command button. The detection method will be deleted from the list.

Property Field Setup

Property fields can be used to record true/false information. They appear on the problem report form as checkboxes if they are used. The DEMO1 project is setup with 3 property fields: Notify Customer, Notified, and Attahment. You can configure up to 4 different property fields.   To setup property fields for a project do these steps:

1. From the Setup menu select Configure Current Project

2. The Configure Project dialog will appear. Select the Properties tab.

3. Enter the names of the propeties you want into the text boxes. Property boxes left blank will not appear on the Problem Report form.

Template Setup

If you would like to collect standard data in problem reports for which PR-Tracker does not provide data entry fields, you can do this by using templates.   A template causes standard text to be automatically entered into the problem desciption edit box of a problem report each time a transaction is performed on the problem report.   Templates can be created for each transaction.

To create a template do these steps:

1. From the Setup menu select Configure Current Project

2. The Configure Project dialog will appear. Select the Templates tab.

2. The Template Setup dialog will appear.   The transactions that can be performed on a problem report will be listed on the left of the Template Setup dialog box.   String macros which can be used to build template will also be listed.

3. Select the Transaction (example: New, Assign, Postpone, Investigate, Resolve, etc...)   whose template you would like to customize.

4. The template for the selected transaction will appear in the edit box below.   Edit it to suit your needs.

5. Repeat steps 3 and 4 for each transaction.

6. Choose Ok to save your templates.

Workflow Setup

In default workflow configuration PRs are processed in 6 steps: originate (i.e. new), assign, investigate, resolve, verify and close -- with the investigate step being optional. This workflow configuration is intended for projects that need to be strictly monitored. Your project may not require as much control and it may be preferable to reduce the number of steps to process a problem report.

PR-Tracker allows you to configure the workflow of each project. You may setup the workflow configuration to require as few as 2 steps, or as many as 6 steps to process a problem report. Furthermore, you may change the workflow configuration for a project at any time.

To specify the workflow configuration do these steps:

1. From the Setup menu select Configure Current Project

2. The Configure Project dialog will appear. Select the Workflow tab.

2. Choose the desired workflow options in the dialog.

3. Choose Ok to activate your choices.

Workflow Options

Workflow Setup dialog allows you to specify the number of steps required to process a problem report by selecting workflow options. At the bottom of the dialog is the workflow steps that correlates to the selected options is show. Following is a description of the workflow options:

(·) Require PRs to be assigned when originated

If this option is selected all Problem reports must be assigned when they are originated. PR-Tracker will not allow the problem the be saved unless it is assigned. In other words origination and assignment are combined into a single step. The status of all new problems saved under this workflow configuration will be Assigned.

The option takes precedence over users privileges. In other words, when this workfow option is selected all users have assign privilege whether it was given to them in User Setup or not.

(·) Allow PRs to be assigned when originated

If this option is selected, users with assign privilege may assign problem reports when they are originated. If all assignements are made the problem will have status Assigned at the end of the step. Otherwise the status will be New.

(·) Always assign PRs in a separate step

If this option is selected, users are not allowed to assign problem reports when they are originated. The Assign to fields will be disabled for new problems so that data cannot be entered.

[X] Allow work on PRs before assignment

The default operation of PR-Tracker is to require problem reports to be assigned before work may progress in problem reports. If you want to allow work to progress before assignment, check this option.

(·) Require PRs to be Resolved, Verified and Closed in separate steps.

This is part of the default workflow configuration that requires that PRs be resolved, verified and closed in separate steps. This configuration is best for projects that require independent verification and sign-off by management.

(·) Automatically Close PRs when they are Resolved

When this option is in effect, problem reports may be resolved and closed in the same step. Depending on the Prompt user before closing the problem setting, the user may be prompted to close the problem report. If the user agrees, the problem report is closed; otherwise the problem report status will be Resolved and it will have to be verified in order to be closed. This workflow configuration is best for small projects where developers may be verifying the PRs that they fix. At the same time it allows a problem reports to be resolved and verified in separate steps on an individula basis.

(·) Automatically Close PRs when they are Verified

When this option is in effect, problem reports may be verified and closed in the same step Depending on the Prompt user before closing the problem setting, the user may be prompted to close the problem report. If the user agrees, the problem report is closed; otherwise the problem report status will be Resolved and it will have to be verified in order to be closed. This workflow configuration is best for small projects where independent test is required, but not sign-off from management.

[X] Prompt user before closing the problem

This option affects the Automatically Close PRs options. If this option is not selected, PRs are always closed when they are resolved (or verified). The additional optional steps are not available. Note, how the Workflow Steps description changes when this option is toggled.

[X] Allow problem status to be regressed when closing a problem report

When this option is selected, the Status field of problem reports may be modified when a problem report is modified using the EditPR | Modify function.   Problem report Status may not be advanced however; it can only be set to an earlier state.

If this option is not selected, the problem report Status field will be disabled so that it cannot be modified.

Custom Field Setup

With custom fields you can collect data about problems and then sort and search the problems depending on the value of the fields.   Fields may be of type number, date, text, text choice restricted or text choice unrestricted. You may define up to four custom fields. To setup custom fields for a project do these steps:

1. From the Setup menu select Configure Current Project

2. The Configure Project dialog will appear. Select the Custom Fields tab.

3.   Select the Add button. The Add Custom Field dialog appears.

4.   Enter the desired field properties and press a OK to save them.

Note that the field is shown both in the list and in the preview box below. The preview box shows how the field will look on the reserved area of the Problem Report form.   You can modify the properties of the custom field by double clicking the field in the listbox or by double clicking the field label in the preview box.

The following paragraphs discuss various aspects of field definition:

Field Name -- specifies the name of the field as it is stored in the Access database. You may not use names reserved by PR-Tracker for the base field set.

Field Label -- specifies how the field will be labeled on the Problem Report form. The field label may be the same as the field name but doesnt have to be.

Field Width -- specifies the width of the field according to the number of numeric characters that can fit in the field. However, since PR-Tracker uses a proportional font, width does not specify the maximum string length. The maximum string length is always 25.

Default Value -- specifies the default value that is entered into the field on the Problem Report form. The default value is not entered for the modify transaction, but is entered for all other transactions if the field is enabled for that transaction. Default value must match the type of the fields. For fields of date type, the default value may be a date or an offset from the current date. For example, a default value of +7 would always set the value of the field for the date seven days from the current date.

Index For Sorting -- specifies whether an index is created in the database to sort the field by. Since adding the index enlarges the database and therefore slows down access, you should only add the index if you plan to sort by it.   If you only plan to search on the field value, you dont need it.

Entry Required -- specifies if a value must be entered for the field on the Problem Report form. Required entry is enforced for all transactions that the field is enabled for except the Modify transaction.

Editing Problem Reports

To edit a problem report select EditPR from the menu. The EditPR menu item is available when viewing the Problem List or a problem report. A popdown menu will appear which shows the edit operations that can be performed.

You can either create a new problem report or you may assign, postpone, investigate, resolve, verify, fail, close or modify an existing problem report.

Note that some of the items on the popdown menu are gray and some are black. When a menu item is gray it means the operation is disabled. All operations in this submenu apply to the *selected* problem report except for New. The New operation is always enabled but the other operations will be enabled or disabled depending on the *selected* problem reports status and the project workflow configuration.

Creating a New Problem Report

To enter a new problem report from the EditPR menu select New. A problem report form will appear on the screen.

When the problem data form first appears on the screen the cursor will be positioned in the Title field. Type a brief description of the problem in this field. When you are done, tab to the next field. If you want to go back to the title field, press shift+tab or mouse click the title field with the mouse.

Your name should be automatically entered in the Originator field, tab past it unless you want to change it.

When you tab to the Priority field it will be automatically filled in with the first choice. Select the ↓ key to view the priority choices. When you have made your selection, tab to the next field.

The Problem Type, Subtype and Detection Method fields work the same way as the priority field. Once you are familiar with the choices, you may enter your choice quickly by typing the first character of your choice and it will be automatically entered. If there is more than one choice beginning with the same letter, type the letter repeatedly until you get to the choice. When you have made your selections, tab to the next field.

The Status field has automatically filled in with a *new* status, this box will be grayed.

Property boxes will be located in the bottom right hand corner depending on the template setup. Check one of these boxes if they apply to the problem. Tab to the next field.

Next, enter a brief description of the problem in the Problem Description Window. Some data may automatically be entered depending on the template setup for that stage.

When you have finished making your selection select Save and you will be returned to the Problem List.

Assigning Problem Reports

Before a problem report can be closed, there are three tasks that must be performed; *investigation, resolution, and verification.* This step assigns these tasks to different team members. To assign these tasks   select the problem report in the Problem List window. From the EditPR menu select Assign; the problem report data will be displayed and the cursor will be positioned in the *investigator field.*

Enter the name of the person that you want to investigate the problem. If   you would like to choose from a list of names, press the ↓ key and a list of names will appear. Make your selection and tab to the next field.

Next enter the number of hours you estimate it will take to investigate the problem. Tab to the next field.

Note that the resolution task was automatically assigned to the investigator. You can change this if you want. Tab to the next field.

Now enter the number of hours you estimate it will take to resolve the problem. This estimate can be refined later after the investigation step. Tab to the next field.

Note that the verification task was automatically assigned to the problem report originator, automatic assignment may not occur, depending on the workflow configuration. You can change this if you want. Tab to the next field.

Enter the number of hours you estimate it will take to verify the problem. Tab to the next field.

You may change the priority of the problem report at this time if you want. When you are satisfied with all your entries, save them in the database using the menu command Save.

Investigating Problem Reports

To investigate a problem first select the problem you want to investigate from the Problem List. From the EditPR menu select Investigate. The problem report data will appear with the cursor positioned on the Actual Hours field for the investigation task.

Enter the number of hours the investigation required. Tab to the next field.

During the course of investigation you may have developed a more accurate estimate of the amount of time required to fix the problem. If would like to change the estimated time required to resolve the problem report, do it. Tab to the next field.

If you want to change the estimated amount of time required for verification, do it. Tab to the next field.

Your cursor will appear in the Problem Description Window, scroll down to the investigation section and describe the information collected during your investigation. This may include whether or not the problem is reproducible in the current version and a list of the modules will have to be modified to resolve the problem.

When you are satisfied with all your entries, save them in the database using the menu command Save.

Resolving Problem Reports

To resolve a problem first select the problem you want to resolve from the Problem List. From the EditPR submenu select Resolve. The problem report data will appear with the cursor positioned on the Actual Hours field for the resolution task.

Enter the number of hours the resolution required. Tab to the next field.

If you want to change the estimated amount of time required for verification, do it. Tab to the next field.

Your cursor will appear in the Problem Description Window scroll down to the resolution description section and describe what you did to resolve the problem. This may include a list of the modules that changed and what revisions the changes were completed in. You should also specify what system version in which changes were incorporated so that the person verifying the software checks a version that has the changes.

When you are satisfied with all your entries, save them in the database using the menu command Save. Depending on the project workflow configuration, PR-Tracker may ask you if you want to close the problem report in addition to resolving it.   If you want to close the problem report, select Yes; if you want to verify and close the problem report with a separate transaction, select No.

For more information on setting up the workflow configuration see the section on *Workflow Setup*.

Verifying Problem Reports

To verify a problem first select the problem you want to verify from the Problem List. From the EditPR submenu select Verify. The problem report data will appear with the cursor positioned on the Actual Hours field for the resolution task.

Enter the number of hours the verification required. Tab to the next field.

In the Problem Verification edit window, describe what you did to verify that the problem was fixed. This may include the system version that was tested and a test case that failed.

When you are satisfied with all your entries, save them in the database using the menu command Save.   Depending on the project workflow configuration, PR-Tracker may ask you if you want to close the problem report in addition to verifying it.   If you want to close the problem report, select Yes; if you want to close the problem report with a separate transaction, select No.

For more information on setting up the workflow configuration see the section on *Workflow Setup*.

Closing Problem Reports

To close a problem report first select the problem report you want to close from the Problem List. From the EditPR menu select Close.   The problem report data will appear with the cursor positioned on the Closed by field.

The closer and close date are entered for you automatically, but you can change them if you want.

When you are satisfied with all your entries, save them in the database using the menu command Save.   If you dont want to close the problem report, Cancel the transaction and regress its status to the desired state using the EditPR operation Modify.

Modifying Problem Reports

If you want to modify a problem report without advancing its status, choose Modify from the EditPR menu. The problem report will be displayed.   During this edit operation you can modify any of the fields except the problem report number.   This includes the status. However, the status can only be modified to a regressed state.   You have to use the other EditPR operations to advance the status.

Query--Sorting and Searching

The Query function allows you to select a set of problem reports that have certain properties. You can create multiple queries and add them to the Query menu. You can also specify the query to be used when PR-Tracker is started.

The various query options are as follows:

• Establish a startup query

• Sort according to status, priority, or last modification date or any custom field.

• Select problem reports according to status, priority, type, detection method or other fields.

• Select specific problem reports by problem type and subtype.

• Select specific problem reports by using wild card matching.

Making and Naming your Query

1. From the Query menu select New Query.

2. The Make Query dialog box will appear. Your cursor will appear the Query Name field.

   The name of your query will be displayed in the Title bar. Save it by:

   Checking the box [ ] Add to Query Menu.   It will appear at the end of the Query Menu. You can access your query by highlighting it from the menu.

   Check [ ] Use for start up Query.   If you would like to view your selected options each time PR-Tracker is started.

3. Select the sorting feature that you would like PR-Tracker to sort your query options by: number;   status;   priority;   or last modification date.

Selecting problems according to status

To select problem reports according to status click the status checkboxes that correspond to problems that you want to select. For example, to list all   "new" problem reports,

Check [ ] New

Note that both [ ] New   and   [ ] PRs with status   are checked.

Choose Ok.   The Problem List will be displayed containing only new problem reports.

To list all problem reports except those that are closed, in the Make Query dialog do these steps:

Check [ ] Closed, choose Invert Status Selections, choose Ok.

Selecting problem reports according to assignment

To select problem reports that have been assigned to a specific person,

Check [ ] PRs assigned to,   Your name will be automatically filled in to the text field. If you want to change the name, do it. If you would like to choose from a list of names press ↓ key repeatedly; or type the first letter of the name you want repeatedly until it is selected; press enter.

Press Ok. All problem reports assigned to the selected person will be listed in the Problem List, whether the assignments have been completed or not.

To see only those problem reports that need work,

Check [   ]   and that need work,

Check [   ] Now,   This applies mostly to the user assigned to verify a problem. This will eliminate from the list problems which have not yet been resolved. Likewise, if the resolver is not the investigator,

Choose Ok.

Selecting problem reports that contain a string

To select problem reports that contain a certain string in a title,

Check [   ] PR contains string,   Tab to the text field and type the string.

Check [   ] or in text,   If you want to search the problem report description, investigation, resolution, and verification text for the string.

Check [   ] use wild card matching   to conduct a search using wild card matching.

Choose Ok. The Problem List will be displayed containing problems with your specified string or wild card match.

Searching for a string in problem report text can take a long time if there are lots of problem reports. You can speed up the search by specifying additional selection criteria.

Select problems that have been modified in the last 3 days.

1. Select Modification Date as the field, less than as the relation, and -3 as the value.

2. Choose Ok.

Selecting problem reports satisfying multiple criteria

You may reduce the subset of problem reports more by specifying more than one search criterion. If you specify multiple selection criteria then a problem report must match all of the selection criteria to be selected.

For example, to select all problem reports that are not closed and with priority of 1 or 2, do these steps.

1. Check [   ] Closed

2. Press command button Invert

3. Select Priority from a combo box at the bottom of the Query form.

4. Tab to next field and select less or equal

5. Tab to the next field and enter 2.

6. Choose Ok

Selecting all problem reports

From the Query menu select List all Problems.   The Problem List will be updated containing all

the problems entered on the project.

Edit Query

1. To edit an existing query, select Edit Query from the Query menu.

2. A Select Query to Edit dialog box will appear. All Queries will be listed in the box. Highlight the desired query and choose Ok. The Edit Query Menu Item dialog will be displayed. It will show the options that were specified for the selected query.

3. Make the desired changes to the query and choose Ok.

Delete Query

1. To delete a query from the Query menu, select Delete Query from the Query menu.

2. A Select Query to Delete dialog box will appear. Make your desired selection from the query menu items and choose Delete.

Set Startup Query

The startup query is the list of problems that is shown in the problem list when PR-Tracker is started.

1. To select or change the startup query, select Startup Query from the Query menu.

2. The Select Startup Query dialog box will appear. Make your desired selection from query menu items and choose Ok.

If you select the Query menu again, you will notice that the startup query is the first saved query listed in the menu.

Refresh Query

The function perfoms the current query again and updates the problem list. To perform this function, select Refresh from the Query menu.

Printing Problem Reports

Problem reports can be printed individually or in groups. To print an individual problem report, from the File menu choose Print Problem.   The printed sheet will contain the selected problem reports details.   To print the Problem List screen, from the File menu select Print List.   Your printed copy will contain only the list that is currently displayed on the Problem List screen.

To print a group of problem reports see the section on <u>generating reports.</u>

You can also Save your report in a Text file or export to Html format, to do that preform these steps:

1.   Select a problem or create a query containing the list of problems or a you want to save as text or save to html format.

2. From the File menu select Save Problems as Text, or Save problems as Html.... The Save As dialog box will appear.

3. Select the folder to which you want to store your data and type in your file name.

4. Choose Ok.

Generating Reports

PR-Tracker enables you to generate several useful reports.

The various report options are as follows:

- Status Summary
- Work Remaining Summary
- Work Remaining by User
- Transaction Log
- Transaction Summary
- Transaction Summary by Priority
- Detection Method Statistics
- Reports for a Range of Problems
- Reports for All Selected Reports
- List of Selected Reports

To generate one or more reports do these steps.

1. From the Report menu select the desired report.
2. The Report dialog will appear.
3. In the Send Report To option box select ( ) display, ( ) printer, ( ) Text file, ( ) or Html file, instructing PR-Tracker where you want to output the report. If the option is grayed it is not available for that report. If   you choose file, enter the file name that you want the reports sent to.
4. Choose Ok. The reports will be printed and you will be returned to the Problem List.

Status Summary Report

The Status Summary report provides statistics on the number of open problem reports. The open problem reports are broken down by status and priority.

Work Remaining Report

The Work Remaining report calculates the number of hours required to close all assigned problem reports. The work remaining is summarized according to the tasks of investigation, resolution, and verification and according to priority. Work remaining on problem reports with status new are not included in this report, so it is best if all new problem reports are assigned before generating this report.

Work Remaing Report by User

Provides a breakdown of the work remaining by for each user.

Transaction Log Report

The Transaction Log report is a list of all transactions that have occurred between two dates. Transactions include originating (creating a new), assigning, postponing, investigating, resolving, verifying, failing, closing, and modifying reports.

Each transaction entry lists the date, time, problem report number, transaction, and person performing the transaction. One thing that you can use this report for is to determine what work has been done this week.

Transaction Summary

The Transaction Summary report provides a summary of the transactions made for each day or for each week.

Transaction Summary by Priority

The Transaction Summary by Priority report provides a summary of the New and Close transactions by priority made for each day or for each week.

Detection Method Statistics Report

The Detection Statistics report lists how many problems were detected by each test method, and what the priority break down is. This report lets you know which test methods are most effective in detecting errors. If you track the number of hours spent doing each kind of testing you will have a better idea about how effective these methods are.

Reports for a Range of Problems

This report provides all the details of a consecutively numbered set of problem reports. When the Reports dialog is first displayed the first report number field is 1 and the last report number field is the total number of problem reports.

Reports of All Selected Reports

This report provides all the details for all the reports listed in the Problem List. The problems listed in the Problem List can vary depending upon the query selection. For more information on queries see section Query--Selecting and Searching.

List of Selected Reports

This report provides the summary information for all the problems listed in the Problem List. The summary information is the information shown in the Problem List. The problems listed in the Problem List can vary depending upon the query selection. For more information on queries see section Query--Selecting   and Searching.

Command Line Arguments

PR-Tracker supports the following command line arguments:

/i <initilazation file>

Normally PR-Tracker reads the PRTRACK.INI file to initialize program variables. This option allows you to specify an alternate initialization file.

This may be useful if you want to use a different set of queries for each project, if you have more than one user on the same computer, or if you want to use the same PR-Tracker settings on multiple computers.

    PRTRACK.EXE /i "TOM.INI"

    PRTRACK.EXE /i "\\TOM\PRTRACK\PRTRACK.INI"

    PRTRACK.EXE /i "PROJECT2.INI"

/u <user name>

Use this option to override the username specified in the initialization file. If there are blanks in the user name then the user name must be enclosed with quotes. For example:

    PRTRACK.EXE /u "Tom Tester"

/p <project subdirectory>

Use this option to override the project setting in the initialization file. Note that <project subdirectory> is not the project name. It is the subdirectory listed to the right of the project name in the Select Project dialog.

Example:

    PRTRACK.EXE /p "DEMO2"

Moving the Database

If you want to move the PR-Tracker database, you must move the whole database directory structure. The top level directory contains the PRTRACK.KEY file. It also contains one directory for each project. All files must be moved together.

After you move the database, each workstation using PR-Tracker must know how to find the new database. PR-Tracker uses the database_home variable in the PRTRACK.INI file to find the database.   You must use a text editor like Notepad to edit PRTRACK.INI to change the setting of the database_home variable to point to the new database directory.

If the PRTRACK.INI file is not modified after moving the database an error message will be issued when the PR-Tracker is started that says: *Error opening PR-Tracker key file.*

Importing Data

You can import data from another Windows problem tracking system using a Windows script language like MS-Test, QA-Partner or WinRunner to transfer the data.

Another way to import data is to user the Rebuild option of the Database Repair Utility. In order to do this you need to know a little about how PR-Tracker stores its data, which is explained in the next paragraph.

The data files for each project are stored in their own directory. They include an one .PR file for each problem report, an .MDB file, and a .CFG file.   The .PR files contain all the problem report data in text format. The .MDB file has all the data that is in the .PR files except the detailed description. The rebuild function creates the .MDB file from the .PR files.

To import the data do these steps:

1) Create a new project and configure it as desired. This creates the .CFG file and .MDB file.

2) Export your data to .PR files and put them in the project directory. You can use a text editor to view the .PR files and determine the format. The files should be named consecutively like 0001.PR, 0002.PR, etc.

3) Perform the Rebuild operation with the Database Repair Utility.   This writes over the .MDB file created in step (1).

After completing these steps the import will be complete.

Copying Problems From One Project To Another

Is some case you may want to copy a set of problems from one project to another. You may want to do this when you have a release or when the database gets so big that it begins to slow down. In either case you may want to copy all non-closed problem reports to another project. You can also use this feature to mearge projects or to divide a project in to multiple projects.

To copy a set of problems to another project do these steps.

1) Perform a query to select the problems that you want to copy.

2) From the File menu select Copy Problems To Project .... The dialog Copy All Problems In List To Another Project will appear

3) Enter the text that you want prepended to the beginning of each problem copied.

4) Select the project that you want to copy the problems to from the list of Projects.

5) Press OK. The problems will be copied to the selected project.

Note that this copy operation copies properties from one project to the other based on position, not name. So if the properties are not configured the same in both projects, the data in the property fields will not match.

The best way to assure a match between projects is to create one project while in the project that you want copy problems from. This way the new project will have the same configuration as the other.

Exporting Data

PR-Tracker can export problem reports (or a subset of problem reports) to HTML format or text files.   This feature is useful for companies that want to provide technical support over the internet.   PR-Tracker also uses Microsoft Access 2.0 formatted files to store problem data. Consequently, data can be read by Access 2.0 or grater and can be exported to any format supported by Access.

To export data in HTML format do these steps:

1)   Create or Select a Query containing the list of problems or a selected problem that you want to export to HTML format.

2)   From the File menu select Save problems as HTML.

3)   The Save as dialog box will appear, type in the file name and select the folder to which you want to store your HTML data.

4)   Choose Ok, the selected list and its problems will be saved in HTML format.

Maximums

Maximum number of problems per project = 9,999

Maximum number of problems that can be displayed in the problem list for Windows 3.1 and 3.11 is 800. Use a query or View | Range of Problems if you have more than 800 problems in a project.

The maximum number of problems that can be displayed on Windows 95 and NT is 9,999.   By default the maximum is set to 800. To increase it to 9,999 do menu View | Set Maximum Problems List Size.

Maximum number of projects = no pratical limit

Maximum number of users = 500 (if you have a site license, there is no limit)

Maximum number of Problem Types = 50

Maximum number of SubTypes per Problem Type = no pratical limit

Maximum number of Detection Methods = 30

Whats new in our Version Upgrades

[Whats new in version 2.04](#)

[Whats new in version 2.05](#)

[Whats new in version 2.06](#)

[Whats new in version 2.07](#)

[Whats new in version 2.08](#)

[Whats new in version 2.09](#)

What's new in version 2.04

No changes were made to the PR-Tracker database format.

The features added in the 2.04 update are two functions in the View menu.

- Menu item View | Goto Problem enables you to jump to any problem that you specify.   You can jump to problems whether they are displayed on the problem list or not.   If you jump to a problem that is not in the problem list, the problem summary is added to the list.

  This feature is also available while viewing a problem report.

  Menu item View | Range of Problem enables you to view the summary of a range of problems in the problem list.

Whats new in version 2.05

What's new in version 2.05

We made two major upgrades to PR-Tracker in the lastest release along with several minor enhancements.   Except for the change to Access 2.0 format, no changes were made to the PR-Tracker database in this release or any previous release.

1) PR-Tracker now stores all of its data in Microsoft Access 2.0 format.   This means you can use Access or Crystal Reports to make any custom reports not provided by PR-Tracker.

    note: You dont need Access 2.0 to use PR-Tracker.

2) PR-Tracker can export reports (or a subset of problem reports) to HTML format.   This feature is useful for companies that want to provide technical support over the internet.

3) Added ability to save a set of problems to text file.

4) The maximum number of problems that can be listed is configurable.

5)   Increase maximum number of saved queries from 10 to 30.

6) Incorporated use of database access by UNC paths.

7) Added File menu to provide alternate access to some functions and provide Printer Setup.

8) Several bug fixes, mostly in regard to error handling.

Whats new in version 2.06

What's new in version 2.06

    1) Comand line options were added for PRTRACK.EXE.

    2) Several workflow options were added.

    3) Several bug fixes

Except for the change to Access 2.0 format in v2.05, no changes were made to the PR-Tracker database in this release or any previous release.

Whats new in version 2.07

What's new in version 2.07

1) The project configuration user interface was reorganized into a tab dialog.

2) Save Problems as Text was added to the File menu. This saves multiple problem reports to multiple text files.

3) Enabled the Text output option to Reports for a range of problems. This saves multiple problem reports to a single text file.

4) Enabled the Text output option to Reports for all selected problems. This saves multiple problem reports to a single text file.

What's new in version 2.08

1) Work Remaining By User report

2) Transaction Summary report

3) Transaction Summary By Priority report

4) Queriers may sort by acsending and descending order.

5) The rebuild function of the database repair utility restores both the problem data and the transaction history. Previously, only the problem data was restored.

Whats new in version 2.09

What's new in version 2.09

1) Up to four custom fields may be created for each project. These fields may be of type number, date, text, text choice restricted, and text choice unrestricted. Each field may also be indexed for sorting and searching.

2) The query feature was enhanced. Queries can be written based on custom fields. You can query on equal, not equal, less than, greater than, contains and does not contain. Previously queries could only be based on the equals relation.

One particularly useful aspect of the new query functionality is the ability to query comparing date fields to a relative offset from the current date. This is handy if you create a Date Due field.

3) Copy a problem or a set of problems to another project.   This feature is useful for merging projects, dividing a project into multiple projects, or copying all open problems to another project after a release or when the number of problems in the database reaches the 9,999 limit or becomes too slow.

Registration

Each time PR-Tracker is started the License Setup dialog will be displayed if PR-Tracker is not yet registered.. This dialog has all the information needed for registration, including a Print Order Form button. You may also print the order form from the help About dialog.

Upon receipt of payment you will receive your *registration number* and *license code* which you enter into the License Setup dialog..

Wildcard Matching

Built in pattern matching provides a versatile tool for string comparisons. The pattern-matching features allow you to use wildcard characters, such as those recognized by the operating system, to match strings. The wild card characters and what they match are shown in the following table:

Character(s) in pattern	Matches in expression
?	Any single character
*	Zero or more characters
#	Any single digit (0-9)
[*charlist*]	Any single character in *charlist*
[!*charlist*]	Any single character not in *charlist*

A group of one or more characters (*charlist)* enclosed in brackets ([   ]) can be used to match any single character in *expression* and can include almost any characters in the <u>ANSI character set,</u> including digits.   The special characters, left bracket ([ ), question mark (?), number sign (#), and asterisk (*) can be used to match themselves directly only by enclosing them in brackets. The right bracket ( ]) cannot be used within a group to match a group to match itself, but it can be used outside a group as an individual character.

In addition to a simple list of characters enclosed in brackets, *charlist* can specify a range of characters by using a hyphen (-) to separate the upper and lower bounds of the range. For example, [A-Z] in uppercase letters in the range A through Z.   Multiple ranges are included within the brackets without any delimiting.   For example, [a-zA-Z0-9] matches any alphanumeric character.

Other important rules for pattern matching include the following:

- An exclamation point (!) at the beginning of *charlist* means that a match is made if any character except the ones in *charlist* are found in *expression. When used outside brackets, the exclamation point matches itself.*

- The hyphen (-) can appear either at the beginning (after the exclamation mark if one is used) or at the end of *charlist* to match itself.   In any other location, the hyphen is used to identify a range of <u>ANSI</u> characters.

  When a range of characters is specified, they must appear in ascending sort order (from lowest to highest).   [[A-Z] is a valid pattern, but [Z-A] is not.

  The character sequence [   ] is ignored; it is considered to be a zero-length string.

Postpone

To postpone the work process done on a problem is simply that. It may mean putting a problem on the back shelf until certain requirements are met. The postpone option is a convenient way to file them aside without neglecting them altogether.

Fail

To fail the process of a problem report is to return it to the developer letting them know that the bug or program hasn't passed the test.

Deleting Problem Reports

It is not possible to delete problem reports from the database. This is by design. However, you can do EditPR | Modify and write over the invalid problem report. Or you can simply Resolve the problem report as irrelavent, Close it, and ignore it.

You don't need to delete the Demonstration project problem reports to use PR-Tracker. Just add a new project by selecting Add/Delete Projects from the Setup menu.

Custom Reports

There is no built-in capability to allowing the user to create custom reports. However, PR-Tracker uses Microsoft Access 2.0 formated database files to store problem data. So if you need to make custom reports, you can use Microsoft Access or Crystal Reports to make them.